Appendix D



Fowler, California - Neon at dusk

Program Environmental Impact Report (PEIR)

CONTENTS

Item 1: Draft PEIR
Item 2: Final PEIR
Item 3: Resolution of Certification

Appendix D Item 1:
Draft PEIR



Draft

Regional Transportation Plan & Sustainable Communities Strategy

Program Environmental Impact Report

March 21, 2014

Fresno Council of Governments

2014 - 2040

Draft Program Environmental Impact Report for the Fresno COG 2014 Regional Transportation Plan

March 21, 2014

Prepared For:

Fresno Council of Governments

2035 Tulare Street, Suite 201
Fresno, CA 93721
Ph: (559) 233-4148 Fax: (559) 233-9654

Prepared By:

VRPA TECHNOLOGIES, INC.

4630 W. Jennifer, Suite 105
Fresno, CA 93722
Ph: (559) 271-1200 Fax: (559) 271-1269

State Clearinghouse No. 2012081070

TABLE OF CONTENTS

SECTION 1.0 EXECUTIVE SUMMARY 1-1

1.1 INTRODUCTION 1-1
1.2 FORMAT AND SCOPE 1-3
1.3 PROJECT DESCRIPTION 1-4
1.4 SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVEL OF SIGNIFICANCE 1-5

SECTION 2.0 INTRODUCTION/PROJECT DESCRIPTION 2-1

2.1 PURPOSE 2-1
2.2 PROJECT LOCATION 2-5
2.3 ENVIORNENTAL IMPACT REPORT (EIR) OBJECTIVES 2-5
2.4 PROJECT CHARACTERISTICS 2-8
2.5 2014 REGIONAL TRANSPORTATION PLAN (RTP) PROVISIONS 2-10
2.6 RELATIONSHIP TO OTHER PLANS AND PROGRAMS 2-133
2.7 STREAMLINING THE CEQA PROCESS 2-134
2.8 EIR BASELINE TO DETERMINE SIGNIFICANCE 2-135
2.9 CRITERIA FOR SIGNIFICANCE 2-136
2.10 PROJECT ALTERNATIVES 2-136
2.11 EIR AND RTP APPROVAL PROCESS 2-137
2.12 CONTENTS OF THE RTP 2-138
2.13 INTENDED EIR USES 2-138
2.14 APPROVALS REQUIRED TO IMPLEMENT THE PROJECT 2-141
2.15 EIR DEVELOPMENT/APPROVAL PROCESS 2-141
2.16 ORGANIZATION OF THE EIR 2-141
2.17 EIR AND RTP AVAILABILITY 2-142

SECTION 3.0 ENVIRONMENTAL SETTING, IMPACTS, AND LEVEL OF SIGNIFICANCE 3-1

3.1 INTRODUCTION 3-1
3.2 AESTHETICS 3-06
3.3 AGRICULTURAL RESOURCES 3-22
3.4 AIR QUALITY 3-44
3.5 BIOTIC RESOURCES 3-114
3.6 CLIMATE CHANGE 3-150
3.7 CULTURAL RESOURCES 3-181
3.8 ENERGY & ENERGY CONSERVATION 3-204
3.9 GEOLOGY/SOILS/MINERALS 3-216
3.10 HAZARDOUS MATERIALS 3-237
3.11 HYDROLOGY & WATER RESOURCES 3-257
3.12 LAND USE & PLANNING 3-287
3.13 NOISE 3-311

3.14 POPULATION, HOUSING & EMPLOYMENTS 3-337
3.15 PUBLIC UTILITIES, OTHER UTILITIES, AND SERVICES SYSTEMS 3-352
3.16 SOCIAL AND ECONOMIC EFFECTS 3-377
3.17 TRANSPORTATION/TRAFFIC 3-393

SECTION 4.0 COMPARISONS OF PROJECT ALTERNATIVES 4-1

4.1 INTRODUCTION 4-1
4.2 OVERVIEW 4-3
4.3 PROJECT ALTERNATIVES 4-7
4.4 ENVIRONMENTALLY PREFERRED ALTERNATIVE 4-50

SECTION 5.0 CUMULATIVE EFFECTS 5-1

5.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL CHANGES 5-1
5.2 SIGNIFICANT IRREVERSIBLE IMPACTS 5-3
5.3 GROWTH INDUCING IMPACTS 5-3
5.4 CUMULATIVE IMPACTS 5-4

SECTION 6.0 LIST OF PREPARERS, ORGANIZATIONS, AND AGENCIES REFERENCED OR CONSULTED 6-1

6.1 LIST OF PREPARERS 6-1
6.2 ORGANIZATIONS AND AGENCIES REFERENCED OR CONSULTED 6-2

APPENDICES

A. NOTICE OF PREPARATION A-1
B. NOTICE OF PREPARATION COMMENT LETTERS B-1

LIST OF FIGURES

2-1 LOCATION OF FRESNO COUNTY IN CALIFORNIA 2-7
2.2 PREFERRED 2014 REGIONAL TRANSPORTATION PLAN SCS SCENARIO 2-14
2-3 INTERMODAL TRANSPORTATION NETWORK 2-30
2-4 REGIONALLY SIGNIFICANT ROAD SYSTEM - METRO AREA 2-38
2-5 REGIONALLY SIGNIFICANT ROAD SYSTEM - RURAL AREA 2-39
2-6 CAPACITY INCREASING PROJECTS (2008-2013) 2-45
2-7 CAPACITY INCREASING PROJECTS (2014-2025) 2-46
2-8 CAPACITY INCREASING PROJECTS (2026-2040) 2-47
2-9 FAX AND CLOVIS TRANSIT SERVICE AREAS 2-51
2-10 FRESNO COUNTY RURAL TRANSIT SERVICES 2-67
2-11 REGIONAL AIRPORTS 2-74
2-12 RURAL BIKEWAYS 2-88
2-13 URBAN BIKEWAYS 2-89

2-14 URBAN RAIL SYSTEM 2-93
2-15 RURAL RAIL SYSTEM 2-94
2-16 CONCEPTUAL ALIGNMENT OF THE PROPOSED BNSF/UP RAIL CONSOLIDATION 2-95
2-17 TOTAL FEDERAL, STATE AND LOCAL TRANSPORTATION FUNDING PROGRAMS AND THEIR PROJECTED REVENUES RTP REVENUES (2010 - 2040) 2-130

3-1 ELIGIBLE SCENIC HIGHWAYS 3-9
3-2 AGRICULTURAL LAND 3-25
3-3 CONVERTED FARMLAND 3-36
3-4 PROJECT ENCROACHMENT OF WILLIAMSON ACTS LAND 3-38
3-5 AIR BASINS IN CALIFORNIA 3-48
3-6 AIR QUALITY MONITORING SITES 3-54
3-7 NATIONAL MSAT EMISSION TRENDS 1999-2050 3-95
3-8 BIOTIC REGIONS IN FRESNO COUNTY 3-119
3-9 WILDLIFE AREAS IN FRESNO COUNTY 3-131
3-10 GEOLOGIC PROVINCES IN FRESNO COUNTY 3-221
3-11 SEISMIC ZONES IN FRESNO COUNTY 3-222
3-12 DEVELOPMENT BY SOIL TYPE 3-233
3-13 HYDROLOGIC REGIONS IN FRESNO COUNTY 3-264
3-14 FEMA FLOOD ZONE DEVELOPMENT – PREFERRED PROJECT 3-283
3-15 COMMON ENVIRONMENTAL SOUND LEVELS 3-319
3-16 ENVIRONMENTAL JUSTICE AREAS – TASK FORCE 3-383
3-17 ENVIRONMENTAL JUSTICE AREAS - FHWA 3-384
3-18 YEAR 2008 –FCMA AM PEAK HOUR LEVEL OF SERVICE 3-402
3-19 YEAR 2008 –FCMA PM PEAK HOUR LEVEL OF SERVICE 3-403
3-20 YEAR 2008 –RURAL AREA AM PEAK HOUR LEVEL OF SERVICE 3-404
3-21 YEAR 2008 –RURAL AREA PM PEAK HOUR LEVEL OF SERVICE 3-405
3-22 YEAR 2040 BUILD –FCMA AM PEAK HOUR LEVEL OF SERVICE 3-422
3-23 YEAR 2040 BUILD –FCMA PM PEAK HOUR LEVEL OF SERVICE 3-423
3-24 YEAR 2040 BUILD –RURAL AREA AM PEAK HOUR LEVEL OF SERVICE 3-424
3-25 YEAR 2040 BUILD –RURAL AREA PM PEAK HOUR LEVEL OF SERVICE 3-425

4-1 PREFERRED PROJECT ALTERNATIVE LAND USE PATTERN 4-8
4-2 YEAR 2040 NO PROJECT – FCMA AM PEAK HOUR LEVEL OF SERVICE 4-17
4-3 YEAR 2040 NO PROJECT – FCMA PM PEAK HOUR LEVEL OF SERVICE 4-18
4-4 YEAR 2040 NO PROJECT – RURAL AREA AM PEAK HOUR LEVEL OF SERVICE 4-19
4-5 YEAR 2040 NO PROJECT – RURAL AREA PM PEAK HOUR LEVEL OF SERVICE 4-20
4-6 YEAR 2040 PREFERRED PROJECT – FCMA AM PEAK HOUR LEVEL OF SERVICE 4-21
4-7 YEAR 2040 PREFERRED PROJECT – FCMA PM PEAK HOUR LEVEL OF SERVICE 4-22
4-8 YEAR 2040 PREFERRED PROJECT – RURAL AREA AM PEAK HOUR LEVEL OF SERVICE 4-23
4-9 YEAR 2040 PREFERRED PROJECT – RURAL AREA PM PEAK HOUR LEVEL OF SERVICE 4-24
4-10 SCENARIO A LAND USE PATTERN 4-28
4-11 SCENARIO A FARM LAND CONSUMPTION 4-30
4-12 YEAR 2040 SCENARIO A – FCMA AM PEAK HOUR LEVEL OF SERVICE 4-35
4-13 YEAR 2040 SCENARIO A – FCMA PM PEAK HOUR LEVEL OF SERVICE 4-36
4-14 YEAR 2040 SCENARIO A – RURAL AM PEAK HOUR LEVEL OF SERVICE 4-37
4-15 YEAR 2040 SCENARIO A – RURAL PM PEAK HOUR LEVEL OF SERVICE 4-38
4-16 SCENARIO C LAND USE PATTERN 4-40

4-17 SCENARIO C FARMLAND CONSUMPTION....4-41
4-18 YEAR 2040 SCENARIO C – FCMA AM PEAK HOUR LEVEL OF SERVICE....4-46
4-19 YEAR 2040 SCENARIO C – FCMA PM PEAK HOUR LEVEL OF SERVICE....4-47
4-20 YEAR 2040 SCENARIO C – RURAL AM PEAK HOUR LEVEL OF SERVICE....4-48
4-21 YEAR 2040 SCENARIO C – RURAL PM PEAK HOUR LEVEL OF SERVICE....4-49

LIST OF TABLES

1-1 IMPACTS, MITIGATION MEASURES, AND SIGNIFICANCE....1-9

2-1 DEMOGRAPHIC FORECASTS FRESNO COUNTY YEARS 2008-2040....2-12
2-2 DEMONSTRATION OF GHG EMISSION REDUCTION TARGETS....2-13
2-3 TOTAL FEDERAL, STATE AND LOCAL TRANSPORTATION FUNDING PROGRAMS AND THEIR PROJECTED REVENUES RTP REVENUES (2010 - 2040)....2-129
2-4 REQUIRED CONTENTS OF AN EIR....2-143

3-1 IMPORTANT FARMLAND BY TYPE IN FRESNO COUNTY....3-24
3-2 LANDS ENROLLED IN WILLIAMSON ACT PRESERVE 2011....3-33
3-3 SCS IMPACT TO IMPORTANT FARMLAND BY TYPE IN FRESNO COUNTY....3-35
3-4 PROJECT IMPACT TO IMPORTANT FARMLAND BY TYPE IN FRESNO COUNTY....3-37
3-5 AMBIENT AIR QUALITY STANDARDS....3-49
3-6 ON-ROAD MOTOR VEHICLE CO EMISSIONS BUDGETS....3-56
3-7 ON-ROAD MOTOR VEHICLE BUDGETS....3-57
3-8 ON-ROAD MOTOR VEHICLE PM-10 EMISSIONS BUDGETS....3-57
3-9 ON-ROAD MOTOR VEHICLE PM 2.5 EMISSIONS BUDGETS....3-57
3-10 SJVAB AMBIENT AIR QUALITY MONITORING DATA SUMMARY 2009-2012....3-63
3-11 SJVAB AMBIENT AIR QUALITY MONITORING DATA SUMMARY PM2.5 2009-2012....3-63
3-12 SJVAB AMBIENT AIR QUALITY MONITORING DATA SUMMARY PM10 2009-2012....3-64
3-13 MAXIMUM POLLUTANT LEVELS AT CLOVIS' NORTH VILLA AVE MONITORING STATION....3-65
3-14 MAXIMUM POLLUTANT LEVELS AT FRESNO'S FIRST STREET MONITORING STATION....3-65
3-15 MAXIMUM POLLUTANT LEVELS AT FRESNO'S DRUMMOND ST MONITORING STATION....3-66
3-16 MAXIMUM POLLUTANT LEVELS AT FRESNO'S SKY PORT #2 MONITORING STATION....3-66
3-17 MAXIMUM POLLUTANT LEVELS AT FRESNO'S PARLIER MONITORING STATION....3-67
3-18 MAXIMUM POLLUTANT LEVELS AT TRANQUILITY'S 32650 WEST ADAMS MONITORING STATION....3-67
3-19 FRESNO COUNTY ATTAINMENT STATUS....3-68

3-20 RECOMMENDATIONS ON SITING NEW SENSITIVE LAND USES SUCH AS RESIDENCES, SCHOOLS, DAYCARE CENTERS, PLAYGROUNDS, OR MEDICAL FACILITIES....3-78
3-21 SCREENING LEVELS FOR POTENTIAL ODOR SOURCES....3-80
3-22 SAN JOAQUIN VALLEY CONFORMITY ANALYSIS YEARS....3-84
3-23 CONFORMITY RESULTS FOR RTP PROJECTS CONFORMITY RESULTS SUMMARY....3-85
3-24 OZONE, ROG, AND NOX EMISSIONS TEST....3-89
3-25 PM10 EMISSIONS 2020 BUDGET....3-89
3-26 PM2.5 EMISSIONS....3-89
3-27 PM10 EMISSIONS (ANNUAL TONS PER DAY)....3-90
3-28 SJVAPCD AIR QUALITY THRESHOLDS OF SIGNIFICANCE....3-92
3-29 CITY OF FRESNO FIRST STREET MONITORING SITE (1, 3, BUTADIENE MEASURMENTS)....3-96

3-30 CITY OF FRESNO FIRST STREET MONITORING SITE (BENZENE MEASUREMENTS).....3-97
3-31 CITY OF FRESNO FIRST STREET MONITORING SITE (FORMALDEHYDE MEASUREMENTS).....3-98
3-32 CITY OF FRESNO FIRST STREET MONITORING SITE (ACROLEIN MEASUREMENTS).....3-99
3-33 CITY OF FRESNO FIRST STREET MONITORING SITE (BENZO (a) PYRENE-10 MEASURE.)....3-100
3-34 CITY OF FRESNO FIRST STREET MONITORING SITE (BENZO (b) FLUORANTHENE – 10 MEASUREMENTS).....3-101
3-35 CITY OF FRESNO FIRST STREET MONITORING SITE (BENZO (g, h, i) PERYLENE – 10 MEASUREMENTS).....3-102
3-36 CITY OF FRESNO FIRST STREET MONITORING SITE (BENZO (k) FLUORANTHENE – 10 MEASUREMENTS).....3-103
3-37 CITY OF FRESNO FIRST STREET MONITORING SITE (DIBENZ (a, h) ANTHRACENE -10) PERYLENE – 10 MEASUREMENTS).....3-104
3-38 CITY OF FRESNO FIRST STREET MONITORING SITE (INDENO (1, 2, 3 – cd) PYRENE - 10 MEASUREMENTS).....3-105
3-39 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 99 – 50,000 ADT 3-107
3-40 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 99 – 100,000 ADT 3-107
3-41 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 99 – 150,000 ADT 3-107
3-42 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 41 – 50,000 ADT 3-108
3-43 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 41 – 100,000 ADT 3-108
3-44 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 41 – 150,000 ADT 3-108
3-45 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 180 – 50,000 ADT 3-109
3-46 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 180 – 100,000 ADT 3-109
3-47 2040 BUILD (2014 RTP/SCS) MOBILE SOURCE EMISSIONS SR 180 – 150,000 ADT 3-109
3-48 MAXIMUM HUMAN HEALTH RISK ASSESSMENT RESULTS.....3-111
3-49 RUNNING EMISSIONS SUMMARY.....3-112
3-50 HABITATS IN THE VALLEY AND FOOTHILL REGIONS OF FRESNO COUNTY 3-120
3-51 SPECIAL STATUS PLANTS KNOWN OR SUSPECTED TO OCCUR IN FRESNO COUNTY 3-122
3-52 SPECIAL STATUS ANIMALS KNOWN OR SUSPECTED TO OCCUR IN FRESNO COUNTY 3-132
3-53 STATE OF CALIFORNIA GREENHOUSE GAS (GHG) INVENTORY (2000-2011).....3-165
3-54 FUTURE VMT AND GHG EMISSIONS.....3-170
3-55 GHG EMISSIONS (GOODS MOVEMENT TONS/DAY) 3-171
3-56 POPULATIONS OF FRESNO COUNTY (2008-2040) PROJECT (SCENARIO B) 3-172
3-57 HISTORIC SITES IN FRESNO COUNTY 3-189
3-58 MUSEUMS IN FRESNO COUNTY 3-192
3-59 HISTORICAL LANDMARKS IN FRESNO COUNTY 3-193
3-60 FRESNO COUNTY VEHICLE FUEL CONSUMPTION (2008-2040) 3-210
3-61 MODIFIED MERCALLI INTENSITY SCALE.....3-223
3-62 HAZARDOUS WASTE SITES IN FRESNO COUNTY.....3-245
3-63 ADOPTED AND PROPOSED GENERAL PLANS.....3-294
3-64 EXISTING ACREAGE BY LAND USE TYPE IN FRESNO COUNTY 3-297
3-65 EXISTING ACREAGE BY COMMUNITY TYPE IN FRESNO COUNTY.....3-298
3-66 HOUSING GROWTH FROM YEAR 2008 TO YEAR 2040 3-299
3-67 EMPLOYMENT GROWTH FROM YEAR 2008 TO YEAR 2040.....3-299
3-68 DEVELOPMENT TYPES FOR PROPOSED PROJECT 3-300
3-69 NOISE ABATEMENT CRITERIA 3-313
3-70 TYPICAL LEVELS OF GROUND-BORNE VIBRATION 3-323
3-71 SR 99 AND SR 41 NOISE ANALYSIS.....3-327

3-72 VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT 3-329
3-73 POPULATION OF FRESNO COUNTY 1970-2040 3-343
3-74 POPULATION ESTIMATES FRESNO COUNTY JURISDICTIONS 1970 – 2013 3-344
3-75 FRESNO COUNTY POPULATION, HOUSING, AND EMPLOYMENT FORECASTS 3-344
3-76 POPULATION DEMOGRAPHICS 3-380
3-77 LOW INCOME POPULATION DEMOGRAPHICS 3-381
3-78 FRESNO COUNTY POPULATION TRENDS AND PROJECTIONS 3-381
3-79 ACCESSIBILTY TO MAJOR JOB CENTERS 3-386
3-80 ACCESSIBILTY TO PARKS 3-387
3-81 ACCESSIBILTY TO SCHOOLS 3-387
3-82 ACCESSIBILTY TO MEDICAL FACILITIES 3-388
3-83 URBAN FUNCTIONAL CLASSIFICATION DEFINITIONS 3-400
3-84 RURAL FUNCTIONAL CLASSIFICATION DEFINITIONS 3-400
3-85 SEGMENT LEVEL OF SERVICE DEFINITIONS (HIGHWAY CAPACITY MANUAL) 3-401
3-86 TRAFFIC MODEL SUMMARY PERFORMANCE MEASURE – 2008 REGIONAL TRAFFIC MODEL RESULTS 3-407
3-87 TRAFFIC MODEL SUMMARY PERFORMANCE MEASURES 2014 REGIONAL TRANSPORTATION PLAN PROJECT 3-413

4-1 2014 RTP AND SCS PERFORMANCE MEASURES 4-5
4-2 SCS ALTERNATIVE COMPARISON 4-7
4-3 YEAR 2012, NO PROJECT AND PROJECT VMT AND AIR QUALITY EMISSIONS 4-12
4-4 YEAR 2035 NO PROJECT GHG EMISSIONS VS YEAR 2035 PREFERRED PROJECT GHG EMISSIONS 4-13
4-6 2040 TRAFFIC MODEL SUMMARY PERFORMANCE MEASURES 2014 RTP NO PROJECT 4-25
4-7 2040 TRAFFIC MODEL SUMMARY PERFORMANCE MEASURES 2014 RTP PREFERRED PROJECT ALTERNATIVE 4-26

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that a Draft Environmental Impact Report (EIR) be prepared and distributed for review by regulatory and other affected agencies and persons, prior to preparation of the Final EIR. The Draft EIR provides the opportunity for comments on the proposed project and the Draft EIR. Once comments are received following the review period, comments will be considered and responses will be incorporated in the Final EIR to address any changes or additions necessary to clarify and/or supplement the information contained in the document. This Draft EIR, therefore, represents the culmination of all environmentally related issues raised during review of the Notice of Preparation (NOP) (reference Appendix A) and during development of the Fresno Council of Governments (Fresno COG) 2014 Regional Transportation Plan (RTP).

The EIR prepared for the 2014 RTP and Sustainable Communities Strategy (SCS) is a "Program" EIR (PEIR). In accordance with Section 15168(a) of the CEQA Guidelines: A PEIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) geographically; (2) as logical parts in a chain of contemplated actions; (3) in connection with issuance of rules, regulations, plans, or other general criteria, to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

For purposes of reviewing the environmental impacts associated with the Fresno COG 2014 RTP and SCS, this Draft PEIR has been prepared because Fresno COG cannot know all the details or have all the information it would need regarding each and every transportation improvement project identified in the RTP, or the detailed information regarding the specific type of future land use development that will occur in each local jurisdiction between 2012 (NOP release) and the year 2040. Fresno COG's role as the Regional Transportation Planning Agency (RTPA) for the Fresno region is to prepare a long-range RTP and SCS that reflects consistency with federal and state mandates, including Senate Bill (SB) 375. As an RTPA, Fresno COG does not have any land use authority. This right is held by the local agencies that make up the membership of the Fresno COG Policy Board, which include the County of Fresno and the fifteen incorporated cities within the County, and are commonly referred to as Fresno COG's "member agencies".

Fresno COG works in partnership with its member agencies, Caltrans, and other agencies with land use authority to plan the future transportation system, taking into consideration future growth estimates and potential development and land use patterns outlined in each of the adopted or draft general plans prepared by these agencies. Throughout this document, the term "implementing agency" is used to refer to Fresno COG's partnership agencies that have land use authority, and/or legal standing to plan, design, implement, build, operate and maintain transportation infrastructure, including those projects referred

to in the RTP and SCS. The agencies most associated with implementing the transportation improvement projects and approving future land use developments reflected in the 2014 RTP and SCS will be the Fresno COG member agencies. Caltrans, as the owner/operator of the state highway system, will also have a major role in implementing transportation improvement projects along highways throughout the Fresno region. It will be these and other implementing agencies that will plan for, approve, design, construct, and implement the transportation improvement projects referenced in the RTP and SCS. These agencies will also plan for, review and approve the individual land use developments proposed within their individual jurisdictions over the duration of the planning period that were considered to develop RTP and SCS.

This Draft PEIR is considered the "first tier" CEQA document for future second-tier CEQA documents (commonly referred to as project-level analysis) reflective of the various transportation improvement projects and future land use development projects represented in the 2014 RTP and SCS. The SCS only shows how future growth and development would be allocated to planned growth areas consistent with the general plans of the cities and the County of Fresno together with the planned transportation system. As growth and development occurs, it will be the cities and the County that review and approve development proposals and also determine consistency with their plans, programs, and policies - not Fresno COG.

This Draft PEIR presents a "regional" review and analysis of impacts associated with the 2014 RTP and SCS. While some of the transportation improvement projects are reflected in current federal and regional transportation improvement programs over the short-term or within the next four to five years, the majority of transportation improvement projects are not defined to a level that would allow for "project-level" analysis. As such, it is understood that the RTP transportation improvement projects and future land use development projects will be implemented by implementing agencies such as Caltrans, each of the fifteen cities, the County of Fresno, transit agencies, Native American Tribes, and other agencies responsible for the construction and/or operation of transportation facilities, land use development, and other services.

Implementing agencies will prepare the "project-level" environmental documents for the individual transportation improvement projects and future land use developments included in or consistent with the 2014 RTP and SCS. According to Section 15161 of CEQA, a "project-level" environmental document is the most common type of EIR and examines the environmental impacts of a specific improvement project or development project. This type of EIR should focus primarily on the changes in the environment that would result from the project and examine all phases of the project including planning, construction, and operation.

The implementing agencies would also prepare "project-level" environmental documents that incorporate by reference the appropriate information from this Draft PEIR regarding secondary effects,

cumulative impacts, project alternatives, and other relevant factors. Where subsequent environmental review is required, such review would focus on project-specific significant effects specific to the project, or its site, that have not been considered in this Draft PEIR.

1.2 FORMAT AND SCOPE

The purpose of this Draft PEIR is to provide local decision-makers and the public with an objective analysis of the potential environmental consequences of implementation of the regional transportation system outlined in the Draft Fresno COG 2014 RTP and SCS. The information presented in this document is intended to provide a full disclosure of the potential impacts and to increase public awareness and participation in the regional transportation planning process.

The 2014 RTP is the first to include an SCS, which is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from autos and light trucks (see Chapter 4 of the 2014 RTP for the Fresno COG SCS Development Process, incorporated by reference).

The SCS encourages changes to the urban form that improve accessibility to transit, and create more compact development, thereby yielding a number of transportation and air quality benefits to the region. These include reductions in travel time, vehicle miles traveled (VMT), vehicle hours traveled (VHT), vehicle hours of delay, and a resulting reduction in transportation-related air quality emissions. Concurrently, the plan yields increased transit use and an increase in other modes of transportation such as walking and biking, all of which can lead to both mobility and air quality improvements. The SCS only shows how future growth and development could be allocated to planned growth areas consistent with the general plans of the cities and the County of Fresno. As growth and development occurs, it will be the cities and the County that review and approve development proposals and determine consistency with their plans, programs, and policies through the appropriate environmental process; not Fresno COG. Fresno COG has no land use authority to approve future growth development as it occurs over the life of the RTP (Year 2040).

CEQA requires that a Draft EIR be prepared and distributed for review by regulatory and other affected agencies and persons, prior to preparation of the Final EIR. The Draft EIR provides the opportunity for comments on the proposed project and the Draft EIR. Once comments are received following the review period, comments will be considered and responses will be incorporated in the Final EIR to address any changes or additions necessary to clarify and/or supplement the information contained in the document. This Draft EIR, therefore, represents the culmination of all environmentally related issues raised during review of the NOP (reference Appendix A) and during development of the Fresno COG 2014 RTP.

This document has been prepared to address written comments received from interested individuals and agencies regarding the NOP prepared for the RTP and to comply with requirements of CEQA. Typically, a

45-day public review period is associated with an EIR of this nature. However, the newly included SCS carries a requirement that this portion of the plan have a public review period of 55 days. To ensure the best possible transparency and opportunity for public review and comment, Fresno COG has decided to extend the review and comment periods of all associated documents to match the 55-day period. As such, this Draft PEIR review and comment period will begin on March 21, 2014 and will end on May 15, 2014.

1.3 PROJECT DESCRIPTION

The project, as defined by CEQA Statutes, Section 21065, is the preparation of the 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Fresno COG has prepared the RTP and SCS as required by Section 65080 et seq., of Chapter 2.5 of the California Government Code as well as federal guidelines pursuant to the requirements of the Moving Ahead for Progress in the 21st Century Act (MAP-21). The RTP must also meet Transportation Conformity for the Air Quality Attainment Plan per 40 CFR Part 51 and 40 CFR Part 93. The conformity regulation applies nationwide to "all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan" (40 CFR 93.102). Currently, the San Joaquin Valley (or portions thereof) is designated as nonattainment with respect to Federal air quality standards for ozone, and particulate matter under 2.5 microns in diameter (PM2.5); and has a maintenance plan for particulate matter under 10 microns in diameter (PM-10), as well as a maintenance plan for carbon monoxide (CO) for the urbanized/metropolitan areas of Kern, Fresno, Stanislaus and San Joaquin Counties. Therefore, transportation plans and programs for the nonattainment areas for the Fresno County area must satisfy the requirements of the Federal transportation conformity regulation. In addition, the RTP must address requirements set forth in Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 and SB 375, which introduced the Sustainable Communities Strategy concept into the RTP process. Finally, the California Transportation Commission has prepared guidelines (most recently adopted by the Commission in 2010 plus an Addendum addressing Climate Change and Greenhouse Gas Emissions adopted by the Commission on May 29, 2008) to assist in the preparation of RTPs pursuant to Section 14522 of the Government Code.

As the designated RTPA, Fresno COG is mandated by state and federal law to update the RTP every four (4) years. The last comprehensive EIR on the RTP was adopted in July 2010, which addressed transportation improvement projects, programs, and funding reflected in the 2011 RTP together with additional funding from the proposed (now approved) ½ Cent Sales Tax Measure Extension (Measure "C"). Measure "C" did receive the 2/3^{rds} voter approval required in order to pass in the November 2006 election. The 2014 revision to the RTP has been prepared to address possible environmental impacts resulting from its implementation and sources of funding that are available for programming.

The RTP is used to guide the development of the Regional Transportation Improvement Program (RTIP). The RTIP is the programming document used to plan the construction of regional transportation projects and requires State Department of Transportation (Caltrans) approval. No project-level assessments of environmental impacts will be addressed by this PEIR. The RTP is also used as a transportation planning document by each of the sixteen member jurisdictions of Fresno COG. The members include the County of Fresno and the cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, and Selma.

The RTP identifies the region's transportation needs and issues, sets forth an action plan of projects and programs to address the needs consistent with the adopted policies, and documents the financial resources needed to implement the plan. Additional areas of emphasis and policy initiatives in the 2014 RTP include a Congestion Management Process, Environmental Justice, Goods Movement, and Sustainable Communities Strategy planning. In addition, the 2014 RTP includes updated project lists and updated performance measures.

The RTP consists of required elements referenced in the enabling legislation and is organized into various sections. A description of each section follows.

- ✓ **Chapter 1.** Building the RTP: Putting the Pieces Together
- ✓ **Chapter 2.** Public Participation: Working Together for a Better Plan
- ✓ **Chapter 3.** Environmental Justice Report: Ensuring Meaningful Involvement for All People
- ✓ **Chapter 4.** Sustainable Communities Strategy: People. Choices. Community.
- ✓ **Chapter 5.** Actions: Assessing Our Transportation Investment Needs
- ✓ **Chapter 6.** Policies: Foundation of the Plan
- ✓ **Chapter 7.** Financing Mobility: Funding Our Transportation Future
- ✓ **Appendices.**

1.4 SUMMARY OF IMPACTS, MITIGATION MEASURES, AND LEVEL OF SIGNIFICANCE

As stated in the State CEQA Guidelines §15123(a), "[a]n EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." State CEQA Guidelines §15123(b) states, "[t]he summary shall identify: (1) each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; (2) areas of controversy known to the Lead Agency, including issues raised by agencies and the public; and (3) issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects." Accordingly, this summary includes a brief synopsis of the proposed project and project alternatives, environmental impacts and mitigation, areas of known controversy, and issues to be

resolved during environmental review. Table 1-1 (at the end of this section) presents the summary of potential environmental impacts, their level of significance without mitigation measures, mitigation measures, and levels of significance with mitigation measures. Chapter 3 of this Draft PEIR provides further detail regarding the impacts, mitigation measures, and the environmental determination associated with each of the environmental areas included in the NOP. The NOP determined that a PEIR is required for the RTP or "Project" because it could result in significant environmental impacts.

This Draft PEIR analyzes the RTP's effects on the following environmental issue areas:

- ✓ Aesthetics;
- ✓ Agricultural Resources;
- ✓ Air Quality;
- ✓ Biotic Resources;
- ✓ Climate Change;
- ✓ Cultural Resources;
- ✓ Energy and Energy Conservation;
- ✓ Geology/Soils/Mineral Resources;
- ✓ Hazards & Hazardous Materials;
- ✓ Hydrology & Water Resources;
- ✓ Land Use & Planning;
- ✓ Noise;
- ✓ Population, Housing & Employment;
- ✓ Public Utilities, Other Utilities & Services Systems;
- ✓ Social and Economic Effects; and
- ✓ Transportation/Traffic.

After review of the NOP responses, it was determined that this Draft PEIR should focus on the same environmental issues referenced in the NOP and listed above.

To assist in the understanding of this report and Table 1-1 below, which summarizes the impacts of the project, presents the identified mitigation measures, and the level of significance after mitigation, the following descriptions, as found in Article 20 of the State CEQA Guidelines, are provided:

- ✓ **Project** means the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment directly or ultimately.

- ✓ **Significant effect on the environment** means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

- ✓ **Environment** means the physical conditions that exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of

historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

- ✓ **Effects and impacts** as used in these Guidelines are synonymous. Effects include direct or primary effects that are caused by the project and occur at the same time and place, and indirect or secondary effects that are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems. Effects analyzed under CEQA must be related to a physical change.

- ✓ **Mitigation** includes: 1) avoiding the impact altogether by not taking a certain action or parts of an action; 2) minimizing impacts by limiting the degree or magnitude of the action and its implementation; 3) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; 4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and 5) compensating for the impact by replacing or providing substitute resources or environments.

- ✓ **Cumulative impacts** refers to two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts.

- ✓ A **less-than-significant impact** is an impact that is adverse but that does not exceed the defined standards of significance. Less-than-significant impacts do not require mitigation.

- ✓ A **potentially significant impact** is an impact for which there is not enough information to make a finding of less-than-significant impact; however, for the purpose of this Draft EIR, the impact is considered significant. A potentially significant impact is equivalent to a significant impact and requires the identification of feasible mitigation measures or alternatives.

- ✓ A **significant impact** is an impact that exceeds the defined standards of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.

- ✓ A **significant and unavoidable impact** is an impact that exceeds the defined standards of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

Based on findings identified in Chapter 4 of this Draft PEIR, SCS Scenario B is reflected in the 2014 RTP and SCS as the Preferred Project Alternative. This alternative was analyzed considering congestion levels and

historical growth rates in vehicle miles traveled (VMT) and vehicle trips (VT), as well as anticipated growth in the use of other forms of transportation such as transit, rail, aviation, and non-motorized.

Improvement projects evaluated and identified under this alternative are "financially constrained" in accordance with Map-21 and air quality conformity requirements. Further, this alternative focuses on designation of planned growth and development consistent with established land use density policies. This includes the designation of urban development consistent with adopted local agency General Plans.

Table 1-1 below summarizes impacts, mitigation measures, and levels of significance for each of the environmental issue areas listed above.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
3.2 AESTHETICS		
3.2.1 Obstruction of Views	✓ Implement design guidelines, local policies, and programs aimed at protecting views of scenic corridors and avoiding visual intrusions. ✓ To the extent feasible, noise barriers that will not degrade or obstruct a scenic view will be constructed. Noise barriers will be well landscaped, complement the natural landscape and be graffiti-resistant.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.2.2 Altered Appearance of Scenic Resources	✓ Avoid construction of transportation facilities and new development in state and locally designated scenic highways and vista points. ✓ If transportation facilities and new development are constructed in state and locally designated scenic highways and/or vista points, design, construction, and/or operation of the transportation facility or new development will be consistent with applicable guidelines and regulations for the preservation of scenic resources along the designated scenic highway.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.2.3 Development of Previously Undeveloped Sites with Visual Qualities	✓ Where appropriate, encourage the development of design guidelines for each type of transportation facility and land use that make elements of proposed projects visually compatible with surrounding areas. Visual guidelines will, at a minimum, include setback buffers, landscaping, color, texture, signage, and lighting criteria. The following methods will be employed whenever possible: ➢ Transportation systems and new development will be designed in a manner where the surrounding landscape dominates. ➢ Transportation systems and new development will be developed to be compatible with the surrounding environment (i.e., colors and materials of construction material). ➢ If exotic vegetation is used, it will be used as screening and landscaping that blends in and complements the natural landscape. ➢ Trees bordering highways will remain or be replaced so that clear cutting is not evident. ➢ Grading will blend with the adjacent landforms and topography. ✓ Project implementation agencies should design transportation and new development projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Project implementation agencies should design projects to minimize their intrusion into important view sheds and use contour grading to better match surrounding terrain. To the maximum	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	extent feasible, landscaping along highway corridors should be designed to add significant natural elements and visual interest to soften the hard-edged, linear travel experience that would otherwise occur. ✓ Project implementation agencies should use natural landscaping to minimize contrasts between the Project (RTP and SCS) and surrounding areas. Wherever possible, interchanges and transit lines should be designed at the grade of the surrounding land to limit view blockage. Edges of major cut and- fill slopes should be contoured to provide a more natural looking finished profile. Project implementation agencies should replace and renew landscaping to the greatest extent possible along corridors with road widenings, interchange projects, and related improvements. New corridor landscaping should be designed to respect existing natural and man-made features and to complement the dominant landscaping of surrounding areas. ✓ Project implementation agencies should construct sound walls of materials whose color and texture complements the surrounding landscape and development and to the maximum extent feasible, use color, texture, and alternating facades to "break up" large facades and provide visual interest. Where there is room, project sponsors should landscape the sound walls with plants that screen the sound wall, preferably with either native vegetation or landscaping that complements the dominant landscaping of surrounding areas.	
3.2.4 New Sources of Light and Glare	✓ Where appropriate, encourage the development of design guidelines for each type of transportation facility and land use development that make light elements of proposed facilities visually compatible with surrounding areas. The following methods will be employed whenever possible: ➢ Transportation systems and new development areas will be designed in a manner where the surrounding landscape dominates. ➢ Transportation systems and new development areas will be developed to be compatible with the surrounding environment. ➢ Lighting devices will be employed such as downward facing light, light shields, and amber lumens.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.3 AGRICULTURAL RESOURCES		
3.3.1 Conversion of Important Farmland or Forest/Timber Lands	✓ As part of the RTP and SCS formulation process; and at the request of a collection of community based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on agricultural mitigation measures for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	➢ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects. Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities. ✓ Implementing agencies should encourage in-fill development, in place of development in rural and environmentally sensitive areas. Agencies should seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. ✓ Implementing agencies should consider resource lands when considering project designs. Prior to the design approval of RTP and SCS projects, the implementing agency should assess the project area for agricultural resources and constraints. For federally funded projects, implementing and local agencies are required to follow the rules and regulations of Farmland Protection Policy Act including determining the impact by completing the Farmland Conversion Impact Rating form (AD- 1006). For non-federally funded projects, implementing and local agencies should assess projects for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance), and if present, perform a Land Assessment and Site Evaluation (LESA). ✓ Implementing agencies should consider agricultural resources in all projects, and seek to avoid or minimize the encroachment and/or impact on these areas. Agencies should consider measures such as, but not limited to, relocation or redesign of site features, reduction of the project footprint, or compensation and/or preservation activities to lessen the overall impact on resource lands. Prior to final approval of each individual transportation improvement project, the implementing agency should establish inclusion into a conservation easement program, or arrange for the enrollment of agricultural lands into the Williamson Act program.	encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.3.2 Conflict with Existing Zoning for Agriculture Use, or a Williamson Act Contract	✓ As part of the RTP and SCS formulation process; and at the request of a collection of community based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on agricultural mitigation measures for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to: ➢ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	➢ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities. ✓ Implementing agencies should encourage in-fill development, in place of development in rural and environmentally sensitive areas. Agencies should seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. ✓ Implementing agencies should consider agricultural resource lands when considering project designs. Prior to the design approval of RTP and SCS projects, the implementing agency should assess the project area for agricultural resources and constraints. For federally funded projects, implementing and local agencies are required to follow the rules and regulations of Farmland Protection Policy Act including determining the impact by completing the Farmland Conversion Impact Rating form (AD- 1006). For non-federally funded projects, implementing and local agencies should assess projects for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance), and if present, perform a Land Assessment and Site Evaluation (LESA). ✓ Implementing agencies should consider agricultural resources in all projects, and seek to avoid or minimize the encroachment and/or impact on these areas. Agencies should consider measures such as, but not limited to, relocation or redesign of site features, reduction of the project footprint, or compensation and/or preservation activities to lessen the overall impact on resource lands. Prior to final approval of each individual transportation improvement project, the implementing agency should establish inclusion into a conservation easement program, or arrange for the enrollment of agricultural lands into the Williamson Act program. ✓ Individual projects will be consistent with federal, state, and local policies that preserve agricultural lands and support the economic viability of agricultural activities, as well as policies that provide compensation for property owners if preservation is not feasible. ✓ For projects in agricultural areas, project implementation agencies should contact the California Department of Conservation and the Agricultural Commissioner's office to identify the location of prime farmlands and lands that support crops considered valuable to the local or regional economy. ✓ Prior to final approval of each individual improvement project, the implementing agency should avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy.	
3.3.3 Other Changes in the Existing Environment	✓ As part of the RTP and SCS formulation process; and at the request of a collection of community based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on agricultural mitigation measures for inclusion into the transportation planning process at Fresno COG.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to: ➢ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects. ➢ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities. ✓ Implementing agencies should encourage in-fill development, in place of development in rural and environmentally sensitive areas. Agencies should seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. ✓ Implementing agencies should consider agricultural resource lands when considering project designs. Prior to the design approval of RTP and SCS projects, the implementing agency should assess the project area for agricultural resources and constraints. For federally funded projects, implementing and local agencies are required to follow the rules and regulations of Farmland Protection Policy Act including determining the impact by completing the Farmland Conversion Impact Rating form (AD- 1006). For non-federally funded projects, implementing and local agencies should assess projects for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance), and if present, perform a Land Assessment and Site Evaluation (LESA). ✓ Implementing agencies should consider agricultural resources in all projects, and seek to avoid or minimize the encroachment and/or impact on these areas. Agencies should consider measures such as, but not limited to, relocation or redesign of site features, reduction of the project footprint, or compensation and/or preservation activities to lessen the overall impact on resource lands. Prior to final approval of each individual transportation improvement project, the implementing agency should establish inclusion into a conservation easement program, or arrange for the enrollment of agricultural lands into the Williamson Act program. ✓ Individual projects will be consistent with federal, state, and local policies that preserve agricultural lands and support the economic viability of agricultural activities, as well as policies that provide compensation for property owners if preservation is not feasible. ✓ For projects in agricultural areas, project implementation agencies should contact the California Department of Conservation and the Agricultural Commissioner's office to identify the location of prime farmlands and lands that support crops considered valuable to the local or regional economy.	avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Prior to final approval of each individual improvement project, the implementing agency should avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy.	
AIR QUALITY		
3.4.1 Conflict with or obstruct implementation of an applicable air quality plan	✓ None required	✓ Not applicable
3.4.2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation	✓ Project implementation agencies will ensure implementation of mitigation measures to reduce PM and NOx emissions from construction sites, including: ➢ Maintain on-site truck loading zones. ➢ Configure on-site construction parking to minimize traffic interference and to ensure emergency vehicle access. ➢ Provide temporary traffic control during all phases of construction activities to improve traffic flow. ➢ Use best efforts to minimize truck idling to not more than two minutes during construction. ➢ Apply non-toxic soil stabilizers (according to manufacturers' specifications) to all inactive construction areas. ➢ During construction, replace ground cover in disturbed areas as quickly as possible. ➢ During construction, enclose, cover, water twice daily or apply non-toxic soil binders (according to manufacturers' specifications) to exposed piles with 5 percent or greater silt content and to all unpaved parking or staging areas or unpaved road surfaces. ➢ During the period of construction, install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. ➢ During the period of construction, assure that traffic speeds on all unpaved roads be reduced to 15 mph or less. ➢ Pave all construction access roads at least 100 feet on to the site from permanent roadways. ➢ Cover all haul trucks. ✓ Project implementation agencies will require that construction sites employ a balanced cut/fill ratio to the extent possible, thus reducing haul-truck trip emissions.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.4.3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	✓ None required	✓ Not applicable

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
3.4.4 Expose sensitive receptors to substantial pollutant concentrations.	✓ As air toxics research continues, implementing agencies should utilize the tools and techniques that are developed for assessing health outcomes as a result of lifetime MSAT exposure. The potential health risks posed by MSAT exposure should continue to be factored into project-level decision making in the context of environmental review. Specifically, at the project level, implementing agencies shall require or perform air toxic risk assessments to determine mobile source air toxic impacts.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.4.5 Create Objectionable Odors Affecting a Substantial Number of People	✓ Implementing agencies should require assessment of new and existing odor sources for transportation improvement projects and future land use development projects to determine whether sensitive receptors would be exposed to objectionable odors and apply recommended applicable mitigation measures as defined by the applicable local air district and best practices.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.5 BIOTIC RESOURCES		
3.5.1 Removal or Degradation of Sensitive Natural Communities	✓ When applicable to federally-funded projects, responsible and implementing agencies should commit to improved interagency coordination and integration of the National Environmental Policy Act (NEPA) and the Clean Water Act Section 404 procedures during three stages: transportation planning, project programming, and project implementation. Affected State and local agencies should commit to ensuring the earliest possible consideration of environmental concerns pertaining to U.S. water bodies, including wetlands, at each of the three stages identified above. In addition, the agencies should place a high priority on the avoidance of adverse impacts to waters of the U.S. and associated sensitive species, including threatened and endangered species. Implementation of NEPA-404 requirements will expedite construction of necessary transportation projects, with benefits to mobility and the economy at large. The process will also enable more street and highway projects to proceed on budget and on schedule. Finally, the process will improve cooperation and efficiency of governmental operations at all levels, thereby better serving the public. ✓ Construction and operational Best Management Practices (BMPs) will be identified, installed and maintained by implementing agencies in order to prevent silt and other pollutants from entering jurisdictional waters and wetlands thereby degrading or destroying wildlife and/or natural habitat.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	BMPs may include straw bales and/or mats, temporary sedimentation basins, silt fence, sand bag check dams, dry season construction, etc. ✓ Native soils in construction areas will be removed, stockpiled separately, and replaced by implementing agencies in those areas where onsite revegetation of the native habitat is planned. ✓ Any disturbed natural areas will be replanted by implementing agencies with appropriate native vegetation following the completion of construction activities. ✓ During the individual improvement or future land use development project design phase, impacts to jurisdictional waters and wetlands will be minimized by implementing agencies to the greatest extent feasible. ✓ Implementing agencies will obtain and comply with appropriate regulatory requirements prior to construction.	
3.5.2 Direct Impacts on Rare, Threatened, or Endangered Plant & Wildlife Species	✓ Each proposed individual transportation improvement project and future land use development will consider the displacement of sensitive habitat, sensitive species, and non-native habitat. ✓ When avoidance of native vegetation removal is not possible, each transportation improvement project and future land use development shall replant disturbed areas with commensurate native vegetation of high habitat value adjacent to the project (i.e., as opposed to ornamental vegetation with relatively less habitat value). ✓ Focused sensitive plant and wildlife species and non-native habitat surveys will be conducted within suitable habitat to determine the distribution of sensitive species within the biological impact area of each transportation improvement project and future land use development. Sensitive plant and nonnative habitat surveys will be conducted during the appropriate flowering season for sensitive plant species with the potential to occur within the individual transportation improvement project or future land use development area. In all cases, impacts on special-status species and/or their habitat shall be avoided during construction to the extent feasible. ✓ If sensitive plant or wildlife species and non-native habitat are identified within the biological impact area, a Biological Resource Management Plan (BRMP) will be developed to address appropriate avoidance and minimization measures. These measures may include seed collection and salvage measures for sensitive plant species and non-native habitat, silt fencing, exclusion fencing and/or appropriate compensation where impacts cannot be fully avoided. ✓ Individual transportation improvement projects and future land use developments shall include offsite habitat enhancement or restoration to compensate for unavoidable habitat losses from the project site. ✓ Locations of sensitive species, sensitive habitat, and non-native habitat will be mapped and shown on construction drawings and identified as Environmentally Sensitive Areas (ESAs). Prior to construction, these areas will be flagged and/or fenced to prevent unnecessary impacts from machinery and foot traffic.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Temporary access roads and staging areas will not be located within areas containing sensitive plant, sensitive wildlife species or non-native habitat wherever feasible, so as to avoid or minimize impacts to these species. ✓ Construction activities will be scheduled, as appropriate and feasible, to avoid sensitive times that have a greater likelihood to affect significant resources such as spawning periods for fish, nesting season for birds and/or the rainy season for riparian habitat and sediment/erosion control. ✓ All vegetation (including tall grasses) will be removed between August 16th and February 14th, if possible, to avoid potential conflicts with nesting birds. If it is not possible to remove vegetation during that time frame, a nest clearance survey will be completed prior to vegetation clearing. Any detected nests will be mapped and provided with an appropriate buffer as recommended by a qualified biologist. Construction activities within the buffer area will not be allowed until after September 15 or until fledglings have abandoned the nest. ✓ A Worker Awareness Program (environmental education) shall be developed and implemented to inform project workers of their responsibilities in regards to avoiding and minimizing impacts on sensitive biological resources. ✓ An Environmental Inspector shall be appointed to serve as a contact for issues that may arise concerning implementation of mitigation measures, and to document and report on adherence to these measures. ✓ A qualified wetland scientist shall review construction drawings as part of each project-specific environmental analysis to determine whether wetlands will be impacted, and if necessary perform a formal wetland delineation. Appropriate State and federal permits shall be obtained, but each project EIR will contain language clearly stating the provisions of such permits, including avoidance measures, restoration procedures, and in the case of permanent impacts compensatory creation or enhancement measures to ensure a no net loss of wetland extent or function and values. ✓ Sensitive habitats (native vegetative communities identified as rare and/or sensitive by the CDFW) and special-status plant species (including vernal pools) impacted by projects shall be restored and augmented, if impacts are temporary, at a 1.1:1 ratio (compensation acres to impacted acres). Permanent impacts shall be compensated for by creating or restoring habitats at a 3:1 ratio as close as possible to the site of the impact. ✓ When work is conducted in identified sensitive habitat areas and/or areas of intact native vegetation, construction protocols shall require the salvage of perennial plants and the salvage and stockpile of topsoil (the surface material from 6 to 12 inches deep) and shall be used in restoring native vegetation to all areas of temporary disturbance within the project area. ✓ If specific project area trees are designated as “Landmark Trees” or “Heritage Trees”, then approval for removals shall be obtained through the appropriate entity, and appropriate mitigation measures shall be developed at that time, to ensure that the trees are replaced. Due to the close proximity of these areas to sensitive wildlife habitats, all mitigation trees will use only locally-collected native species.	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
3.5.3 Impacts on Rate, Threatened, or Endangered Species from Project Noise, Lighting and Deterrents	✓ The height, spacing, number and type of light fixtures will be selected and installed to minimize intrusive light escaping from the physical boundaries of the site. ✓ Road noise minimization methods, such as native brush and tree planting adjacent to heavy noise producing transportation facilities, will be incorporated where feasible.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.5.4 Temporary and Permanent Impacts to Terrestrial and Aquatic Wildlife Movement	✓ During final design, implementing agencies will design, construct, and maintain terrestrial wildlife crossings in order to minimize barrier effects and habitat fragmentation created by individual transportation projects and future land use developments. ✓ During final design, implementing agencies will design, construct, and maintain any structure/culvert placed within a stream where endangered or threatened fish occur/may occur. The structure/culvert will not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.5.5 Siltation Impacts	✓ For Individual transportation and future land use development projects near water resources should implement Best Management Practices (BMPs) at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport. ✓ Individual transportation and future land use development projects, implementing agencies should schedule construction activities to avoid sensitive times for biological resources (e.g., steelhead spawning periods during the winter and spring) and to avoid the rainy season when erosion and sediment transport is increased.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.5.6 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	✓ Implementing agencies should require project applicants to prepare biological resources assessments for specific projects proposed in areas containing, or likely to contain, protected trees or other locally protected biological resources. The assessment should be conducted by appropriately trained professionals pursuant to adopted protocols, and standards in the industry. Mitigation should be implemented when significance thresholds are exceeded. Mitigation should be consistent with the requirements of CEQA and/or follow applicable plans promulgated to protect species/habitat.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Implementing agencies should design projects such that they avoid and minimize direct and indirect impacts to protected trees and other locally protected resources where feasible, defined in section 15364 of the CEQA Guidelines. ✓ As part of project-level environmental review, implementing agencies will ensure that projects comply with the most recent general plans, policies, and ordinances, and conservation plans. Review of these documents and compliance with their requirements will be demonstrated in project-level environmental documentation. Review of these documents and compliance with their requirements should be demonstrated in project-level environmental documentation.	analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.6 CLIMATE CHANGE		
3.6.1 Increased Transportation GHG Emissions May Contribute to Climate Change	✓ Through Implementation of the Regional Blueprint and the RTP SCS, and in coordination with implementation agencies, the following mitigation measures will result in reduced GHG emissions: ➢ Develop land use patterns, consistent with the 2024 RTP SCS, which encourage people to walk, bicycle, or use public transit for a significant number of their daily trips. ▪ Use comprehensive community plans and specific plans to ensure development is consistent and well connected by alternative transportation modes. ▪ Adopt transit-oriented or pedestrian-oriented design strategies and select areas appropriate for these designs in the general plan. ▪ Support higher density development in proximity to commonly used services and transportation facilities. ➢ Develop in a compact, efficient form to reduce vehicle miles traveled and to improve the efficiency of alternatives to the automobile consistent with the 2014 RTP and SCS. ▪ Use the control of public services to direct development to the most appropriate locations. ▪ Promote infill of vacant land and redevelopment sites. ➢ Encourage project site designs and subdivision street and lot designs that support walking, bicycling, and transit use. ▪ Adopt design guidelines and standards promoting plans that encourage alternative transportation modes. ▪ Require certain sites to be created to allow convenient access by transit, bicycle, and walking. ✓ Intelligent Transportation ➢ Develop an Intelligent Transportation Systems strategy, consistent with the updated ITS Strategic Plan, to implement the Integrated Performance Management System Network that will: ▪ Interconnect the region's local transportation management centers, including the use of cameras, and computer hardware and software to detect and clear accidents ▪ Use technology to improve traffic signal timing in order to optimize traffic flow and transit service ▪ Involve new equipment to improve on-time transit performance and provide real-time transit information at stops and stations.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Continue Development of a GHG Reduction Funding Program Fresno COG will continue to develop a GHG Reduction Funding Program to reduce GHG emissions from transportation projects. Fresno COG member agencies (the cities and the County) will be eligible to apply for the funding through a formal funding application process. ✓ Continue the Public Education Program on Individual Transportation Behavior and Climate Change Through the Valley Planners' Network and in conjunction with key partners such as local air districts, public utility providers, area chambers of commerce and others, Fresno COG will continue the public information program to educate the public about the connection between individual transportation behavior and global climate change, including transportation behavior modifications the public can make to reduce their GHG emissions over time. Fresno COG shall continue to include information on its website that is focused on global climate change. The website shall continue to identify actions the public can take to reduce their carbon footprint, and provide web links to sources of information designed to promote alternative mode use (carpools, vanpools, public transit, bicycling, walking, and telecommuting) and other travel demand management strategies. ✓ Provide Funding for Workshop on Global Climate Change for Local Government Officials and Include in the Blueprint Toolkit Fresno COG will provide funding for a workshop on global climate change for local government officials that will focus on practical techniques that local governments can implement to reduce greenhouse gas emissions at the city and county level. Workshop topics shall include, but are not limited to the following: ➢ The basic science behind climate change and its effects on the Fresno County Region ➢ Addressing the California Environmental Quality Act (CEQA) and the effects of AB 32 ➢ What cities and counties are doing to address climate change and CEQA ➢ Cost effective actions cities can take to reduce greenhouse emissions ➢ Actions being taken in the Fresno County area to advance and support innovative 'green" business Fresno COG shall work closely with its member agencies to help them participate in the statewide Active Transportation Program (ATP) as well as develop a MPO-Level Active Transportation Program at Fresno COG. ✓ Continue to Work with the SCS Implementation Committee Fresno COG will continue to work with the SCS implementation committee or a Policy Advisory Committee (PAC) subcommittee as directed by the Fresno COG Policy Board to develop SCS implementation policies and strategies, and identify appropriate funding mechanisms. Stakeholders will be invited to attend the meetings; however, only committee members (member agencies) will have voting authority. ✓ Project level environmental documents	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	Project level environmental documents shall analyze construction and maintenance and land use development project Greenhouse Gas (GHG) emissions.	
3.7 CULTURAL RESOURCES		
3.7.1 Impacts on Historic Resources	✓ As part of the appropriate environmental review of individual projects, the project implementation agencies will identify potential impacts to historic resources. A record search at the appropriate Information Center will be conducted to determine whether the individual transportation improvement project or future land use development area has been previously surveyed and whether resources were identified. ✓ As necessary, prior to construction activities, the implementing agencies will obtain a qualified architectural historian to conduct historic architectural surveys as recommended by the Archaeological Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the individual transportation improvement project or future land use development area for cultural resources. ✓ Implementing agencies will comply with Section 106 of the National Historic Preservation Act if federal funding or approval is required. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register of Historic Places. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. These mitigation measures may include, but are not limited to the following: ➢ Carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, relocation, or reconstruction of any impacted historic resource, which will be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. ✓ In some instances, the following mitigation measure may be appropriate in lieu of the previous mitigation measure: ➢ Secure a qualified environmental agency and/or architectural historian, or other such qualified person to document any significant historical resource(s), by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of a resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.7.2 Construction Impacts on Archaeological Resources	✓ As part of the appropriate environmental review of individual projects, the implementation agencies will consult with the Native American Heritage Commission to determine whether known sacred sites are in the project area, and identify the Native American(s) to contact to obtain information about the project site. ✓ Prior to construction activities, the implementation agencies will obtain a qualified archaeologist to conduct a record search at the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ As necessary prior to construction activities, the implementation agencies will obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources. ✓ If the record search indicates that the project is located in an area rich with cultural materials, the implementing agencies will retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property. ✓ Construction activities and excavation will be conducted to avoid cultural resources (if found). If avoidance is not feasible, further work may need to be done to determine the importance of a resource. The implementation agencies will obtain a qualified archaeologist familiar with the local archaeology, and/or an architectural historian should make recommendations regarding the work necessary to determine importance. If the cultural resource is determined to be important under State or federal guidelines, impacts on the cultural resource will be mitigated. ✓ The project implementation agencies will stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine the importance of these resources.	encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.7.3 Construction Impacts on Paleontological Resources	✓ As part of the appropriate environmental review of individual projects, the project implementation agencies will obtain a qualified paleontologist to identify and evaluate paleontological resources where potential impacts are considered high; the paleontologist will also conduct a field survey in these areas. ✓ Construction activities will avoid known paleontological resources, especially if the resources in a particular lithic unit formation have been determined through detailed investigation to be unique. If avoidance is not feasible, paleontological resources will be excavated by the qualified paleontologist and given to a local agency, State University, or other applicable institution, where they can be displayed.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.7.4 Impacts on Human Remains	✓ If the remains are of Native American origin, the coroner will contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner will make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ If the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission, in which case: ➢ The landowner or his authorized representative will obtain a Native American monitor - and an archaeologist, if recommended by the Native American monitor - and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following conditions occur: ▪ The Native American Heritage Commission is unable to identify a descendent. ▪ The descendant identified fails to make a recommendation. ▪ The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.	encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.8 ENERGY AND ENERGY CONSERVATION		
3.8.1 Energy Consumption and Conservation Impacts	✓ Implementing agencies shall review energy impacts as part of any CEQA-required project-level environmental analysis and specify appropriate mitigation measures for any identified energy impacts. ✓ During the design and approval of transportation improvements and future land use development projects, the following energy efficiency measures shall be incorporated when applicable: ➢ The design or purchase of any lighting fixtures shall achieve energy reductions beyond an estimated baseline energy use for such lighting. ➢ LED technology shall be used for all new or replaced traffic lights, rail signals, and other new development lighting features compatible with LED technology. ✓ Implementing agencies should consider various best practices and technological improvements that can reduce the consumption of fossil fuels such as: ➢ Expanding light-duty vehicle retirement programs ➢ Increasing commercial vehicle fleet modernization ➢ Implementing driver training modules on fuel consumption ➢ Replacing gasoline powered mowers with electric mowers ➢ Reducing idling from construction equipment ➢ Incentivizing alternative fuel vehicles and equipment ➢ Developing infrastructure for alternative fueled vehicles ➢ Implementing truck idling rules, devices, and truck-stop electrification ➢ Requiring electric truck refrigerator units ➢ Reducing locomotives fuel use ➢ Modernizing older off-road engines and equipment ➢ Encouraging freight mode shift ➢ Limit use and develop fleet rules for construction equipment ➢ Requiring zero-emission forklifts ✓ Implementing agencies should include energy analyses in environmental documentation and general plans with the goal of conserving energy through the wise and efficient use of energy. For any identified	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	energy impacts, appropriate mitigation measures should be developed and monitored. Fresno COG recommends the use of Appendix F, Energy Conservation, of the *CEQA Guidelines.* ✓ Project and land use development implementing agencies should streamline permitting and provide public information to facilitate accelerated construction of solar and wind power. ✓ Project and land use development implementing agencies should adopt a "Green Building Program" to promote green building standards. Green buildings can reduce local environmental impacts, regional air pollutant emissions and global greenhouse gas emissions. Green building standards involve everything from energy efficiency, usage of renewable resources and reduced waste generation and water usage. For example, water-related energy use consumes 19 percent of the state's electricity. The residential sector accounts for 48 percent of both the electricity and natural gas consumption associated with urban water use. While interest in green buildings has been growing for some time, cost has been a main consideration as it may cost more up front to provide energy efficient building components and systems. Initial costs can be a hurdle even when the installed systems will save money over the life of the building. Energy efficiency measures can reduce initial costs, for example, by reducing the need for over-sized air conditioners to keep buildings comfortable. Undertaking a more comprehensive design approach to building sustainability can also save initial costs through reuse of building materials and other means. A comprehensive study of the value of green building savings is the 2003 report to California's Sustainable Building Task Force. In the words of the report: "While the environmental and human health benefits of green building have been widely recognized, this comprehensive report confirms that minimal increases in upfront costs of about 2% to support green design would, on average, result in life cycle savings of 20% of total construction costs -- more than ten times the initial investment. For example, an initial upfront investment of up to $100,000 to incorporate green building features into a $5 million project would result in a savings of $1 million in today's dollars over the life of the building." ✓ Where identified, local governments should alter zoning to improve jobs/housing balance, create communities where people live closer to work, and bike, walk, and take transit as a substitute for personal auto travel consistent and in support of the SCS. Creating walkable, transit oriented modes would generally reduce energy use and greenhouse gas emissions. Residential energy use (electricity and natural gas) accounts for 7 percent of California's greenhouse gas emissions. It is estimated that households in transit-oriented developments drive 45 percent less than residents in auto-dependent neighborhoods. In addition, mixed land uses (i.e., residential developments near work places, restaurants, and shopping centers) with access to public transportation have been shown to save consumers up to 512 gallons of gasoline per year. Furthermore, studies have shown that the type of housing (such as multi-family) and the size of a house have strong relationships to residential energy use. Residents of single-family detached housing consume over 20 percent more primary energy than those of multifamily housing and 9 percent more than those of single-family attached housing. ✓ Project and land use development implementing agencies should increase the number of AFVs (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in publically owned vehicles, as well as	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	those owned by franchisees of these agencies, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers. ✓ Bid solicitations for construction of projects should preference the use of alternative formulations of cement and asphalt with reduced GHG emissions to the extent that such cement and asphalt formulations are available at a reasonable cost in the marketplace. Solicitations should also preference the recycling of construction waste and debris if market conditions permit. ✓ Fresno COG shall continue to develop, in coordination with the California Air Resources Board, a data and information collection and analysis system that provides an understanding of the energy demand and greenhouse gas emissions in the Fresno region. ✓ All mitigation measures listed in Chapter 3, Section 3.6 (Climate Change) of this EIR, are incorporated by reference and shall be implemented by implementing agencies to address energy conservation impacts.	
3.9 GEOLOGY/SOILS/MINERAL RESOURCES		
3.9.1 Damaged Transportation Infrastructure and other Land Use Development Structures from Seismic Activity	✓ Implementing agencies will be responsible for ensuring that transportation improvement projects and future land use development projects are built to the seismic standards contained in the most recent edition of the Uniform Building Code (UBC). ✓ Implementing agencies will ensure that transportation improvement projects and future land use development projects located within or across active fault zones comply with design requirements, published by the CGS, as well as local, regional, state, and federal design criteria for construction of projects in seismic areas. ✓ Implementing agencies will guarantee that geotechnical analysis is conducted within construction areas to establish soil types and local faulting prior to the construction of transportation improvements and future land use developments is subject to geotechnical analysis.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.9.2 Slope Failure and Erosion Due to Project Construction	✓ Implementing agencies will ensure that individual transportation improvement projects and future land use developments provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion. ✓ Transportation improvement project and future land use development design features will include measures to reduce erosion from storm water. ✓ Road cuts will be designed to maximize the potential for revegetation. ✓ Implementing agencies will ensure that transportation improvement projects and future land use developments avoid landslide areas and potentially unstable slopes wherever feasible. ✓ Where practicable, transportation improvement project and future land use development designs that would permanently alter unique geologic features will be avoided.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.9.3 Subsidence and Presence of Expansive Soils	✓ Implementing agencies will ensure that geotechnical investigations are conducted by a qualified geologist to identify the potential for subsidence and expansive soils.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Implementing agencies should take corrective measures, such as structural reinforcement and replacing soil with engineered fill, will be implemented in individual transportation improvement project and future land use development site designs, where applicable. ✓ Implementing agencies will ensure that, prior to preparing individual transportation improvement project and future land use development site designs, new and abandoned wells are identified within construction areas to ensure the stability of nearby soils.	responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.9.4 Loss of Availability of a Designated Mineral Resource that would be of Value to the Region and the Residents of the State	✓ The implementing agency should protect against the loss of availability of a designated mineral resource through identification of locations with designated mineral resources and adoption and implementation of policies to conserve land that is most suitable for mineral resource extraction from development of incompatible uses. ✓ Where possible, transportation improvement project and future land use development sites will be designed by responsible agencies to limit potential impacts on mineral resource lands.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.9.5 Loss of Availability of a Locally-Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan, or Other Land Use Plan	✓ The implementing agency should protect against the loss of availability of a locally-important mineral resource recovery site through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection of mineral resource production and extraction activities.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.10 HAZARDOUS MATERIALS		
3.10.1 Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials	✓ The implementation agency and project sponsors shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
		encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.10.2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	✓ Implementing agencies shall encourage the USDOT, the Office of Emergency Services, and Caltrans to continue to conduct driver safety training programs and encourage the private sector to continue conducting driver safety training. ✓ Implementing agencies shall encourage the USDOT and the CHP to continue to enforce speed limits and existing regulations governing goods movement and hazardous materials transportation. ✓ The implementing agencies and project sponsors shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.10.3 Disturb contaminated property during the construction of new transportation or future land use developments or the expansion of existing transportation facilities or land use developments.	✓ Prior to approval of any improvement project or future land use development project, the project implementation agency shall consult all known databases of contaminated sites and undertake a standard Phase 1 Environmental Site Assessment in the process of planning, environmental clearance, and construction for projects included in the 2014 RTP and SCS. If contamination is found the implementing agency shall coordinate clean up and/or maintenance activities. ✓ Where contaminated sites are identified, the project implementation agency shall develop appropriate mitigation measures to assure that worker and public exposure is minimized to an acceptable level and to prevent any further environmental contamination as a result of construction. ✓ Local agencies should contact the Chevron Environmental Management Company (CEMC) to determine whether an improvement or future land use development project may be in the vicinity of the Tidewater Oil Company or Standard Oil Company historical pipeline alignments.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.10.4 Emit Hazardous Materials within One-Quarter Mile of a School	✓ The implementing agencies shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.10.5 For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport	✓ Implementing agencies should comply with ALUC plans as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within an airport land use plan, or where such a plan has	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
or public use airport, result in a safety hazard for people residing or working in the project area.	not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.	monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.10.6 For a project located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.	✓ Implementing agencies should analyze and adhere to all safety and compatibility issues as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.10.7 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	✓ Implementing agencies should adhere to all emergency plans as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.10.8 Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands.	✓ Implementing agencies should analyze and adhere to all safety and compatibility issues as a part of their design and construction of transportation facilities and their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within wild land areas.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
3.11 HYDROLOGY & WATER RESOURCES		
3.11.1 Violate Regional Water Quality Control Board water quality standards or waste discharge requirements	✓ Improvement projects and new development will include upgrades to storm water drainage facilities to accommodate increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce velocity. ✓ Transportation network improvements and future land use developments will comply with local, state and federal floodplain regulations. Proposed transportation improvements and applicable new developments will be engineered by responsible agencies to accommodate storm drainage flow. ✓ Responsible agencies should ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are provided to prevent water quality degradation. Responsible agencies implementing projects requiring continual water removal facilities should provide monitoring systems including long-term administrative procedures to ensure proper operations for the life of the Project. ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.11.2 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level	✓ Transportation network improvements and future land use developments will comply with local, state and federal floodplain regulations. Proposed transportation improvements and applicable new developments will be engineered by responsible agencies to accommodate storm drainage flow. ✓ Responsible agencies should ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are provided to prevent water quality degradation. Responsible agencies implementing projects requiring continual water removal facilities should provide monitoring systems including long-term administrative procedures to ensure proper operations for the life of the Project.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.11.3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site	✓ Prior to construction within the vicinity of a watercourse, the project sponsor can and should obtain all necessary regulatory permits and authorizations from the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), California Department of Fish and Game, California Coastal Commission, and local jurisdictions, and should comply with all conditions issued by applicable agencies. Required permit approvals and certifications may include, but not be limited to the following: ➢ U.S. Army Corps of Engineers (Corps): Section 404. Permit approval from the Corps should be obtained for the placement of dredge or fill material in Waters of the U.S., if any, within the interior of the project site, pursuant to Section 404 of the federal Clean Water Act. ➢ Regional Walter Quality Control Board (RWQCB): Section 401 Water Quality Certification. Certification that the project will not violate state water quality standards is required before the Corps can issue a 404 permit, above.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	➢ California Department of Fish and Game (CDFG): Section 1602 Lake and Streambed Alteration Agreement. Work that will alter the bed or bank of a stream requires authorization from CDFG. A qualified environmental consultant can and should be retained and paid for by the project sponsor to make site visits as necessary; and as a follow-up, submit to the Lead Agency a letter certifying that all required conditions have been instituted during the grading activities. ✓ Project sponsors can and should comply with the State-wide construction storm water discharge permit requirements including preparation of Storm Water Pollution Prevention Plans for transportation improvement construction projects. Roadway construction projects can and should comply with the Caltrans storm water discharge permit. BMPs can and should be identified and implemented to manage site erosion, wash water runoff, and spill control. ✓ Project sponsors can and should implement BMPs to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. Plans demonstrating BMPs should be submitted for review and approval by the lead agency. At a minimum, the project sponsor can and should provide filter materials deemed acceptable to the lead agency at nearby catch basins to prevent any debris and dirt from flowing into the local storm drain system and creeks. ✓ Project sponsors can and should submit an erosion and sedimentation control plan for review and approval by the appropriate government agency. All work should incorporate all applicable BMPs for the construction industry, including BMPs for dust, erosion and water quality. The measures should include, but are not limited to, the following: ➢ On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the street, gutters, storm drains. ➢ In accordance with an approved erosion control plan, the project sponsor should implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent degradable erosion control fabric should be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas should be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. ➢ Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. ➢ Install filter materials acceptable to the appropriate agency at the storm drain inlets nearest to the project site prior to the start of the wet weather season; site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the storm drain system. Filter materials should be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. ➢ Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into water courses, street gutters, or storm drains.	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	➢ Direct and locate tool and equipment cleaning so that wash water does not discharge into the street, gutters, or storm drains. ➢ Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the storm drain system by the wind or in the event of a material spill. No hazardous waste material should be stored on-site. ➢ Gather all construction debris on a regular basis and place them in a dumpster or other container which is emptied or removed on a weekly (or other interval approved by the lead agency) basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. ➢ Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work. ➢ As appropriate, broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt should be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the street, gutter, and/or storm drains. ➢ All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management should be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the RWQB. ➢ All erosion and sedimentation control measures should be monitored regularly by the project sponsor. If measures are insufficient to control sedimentation and erosion then the project sponsor should develop and implement additional and more effective measures immediately.	
3.11.4 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	✓ Prior to construction, and when a potential drainage issue is known, a drainage study should be conducted by responsible agencies for new capacity-increasing projects and new land use developments, where applicable. Drainage systems should be designed to maximize the use of detention basins, vegetated areas, and velocity dissipaters to reduce peak flows where possible. Transportation and new development improvements will comply with federal, state and local regulations regarding storm water management. State-owned freeways must comply with Storm Water Discharge NPDES permit for Caltrans facilities. ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.11.5 Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or	✓ Project sponsors can and should ensure that new facilities include structural water quality control features such as drainage channels, detention basins, oil and grease traps, filter systems, and vegetated buffers to prevent pollution of adjacent water resources by polluted runoff where required by applicable urban storm water runoff discharge permits.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
provide substantial additional sources of polluted runoff	✓ Drainage of roadway runoff can and should comply with Caltrans' storm water discharge permit. Wherever possible, roadways can and should be designed to convey storm water through vegetated median strips that provide detention capacity and allow for infiltration before reaching culverts. ✓ Project sponsors can and should assure projects mitigate for changes to the volume of runoff, where any downstream receiving water body has not been designed and maintained to accommodate the increase in flow velocity, rate, and volume without impacting the water's beneficial uses. Pre-project flow velocities, rates, and volumes must not be exceeded. This applies not only to increases in storm water runoff from the project site, but also to hydrologic changes induced by flood plain encroachment. Projects should not cause or contribute to conditions that degrade the physical integrity or ecological function of any downstream receiving waters. ✓ Impacts can and should be reduced to the extent possible by providing culverts and facilities that do not increase the flow velocity, rate, or volume and/or acquiring sufficient storm drain easements that accommodate an appropriately vegetated earthen drainage channel. ✓ Project sponsors of improvement projects on existing facilities can and should include upgrades to stormwater drainage facilities to accommodate any increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce flow velocities, including expansion and restoration of wetlands and riparian buffer areas. System designs can and should be completed to eliminate increases in peak flow rates from current levels. ✓ Local jurisdictions can and should encourage Low Impact Development and incorporation of natural spaces that reduce, treat, infiltrate and manage storm water runoff flows in all new developments, where practical and feasible.	avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.11.6 Otherwise substantially degrade water quality	✓ Improvement projects along existing facilities and future land use developments will include upgrades to storm water drainage facilities to accommodate increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce velocity.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.11.7 Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map	✓ Prior to construction, and when a potential drainage issue is known, a drainage study should be conducted by responsible agencies for new capacity-increasing projects and new land use developments, where applicable. Drainage systems should be designed to maximize the use of detention basins, vegetated areas, and velocity dissipaters to reduce peak flows where possible. Transportation and new development improvements will comply with federal, state and local	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	regulations regarding storm water management. State-owned freeways must comply with Storm Water Discharge NPDES permit for Caltrans facilities. ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff. ✓ Letters of Map Revision (LOMR) will be prepared and submitted to FEMA (when applicable) by responsible agencies where construction would occur within 100-year floodplains. The LOMR will include revised local base flood elevations for projects constructed within flood-prone areas.	could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.11.8 Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam	✓ Fresno COG will encourage implementing and local agencies to conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with applicable federal, state, and local agency flood-control regulations. These studies should identify project design features or mitigation measures that reduce impacts to either floodplains or flood flows such that the project is consistent with federal, state, and local regulations and laws related to development in the floodplain. ✓ Fresno COG will encourage implementing and local agencies to, the extent feasible and appropriate, prevent development in flood hazard areas that do not have appropriate protections.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.11.9 Place within a 100-year flood hazard area structures which would impede or redirect flood flows	✓ Fresno COG will encourage implementing and local agencies to conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with applicable federal, state, and local agency flood-control regulations. These studies should identify project design features or mitigation measures that reduce impacts to either floodplains or flood flows such that the project is consistent with federal, state, and local regulations and laws related to development in the floodplain. ✓ Fresno COG will encourage implementing and local agencies to, the extent feasible and appropriate, prevent development in flood hazard areas that do not have appropriate protections.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.11.10 Inundation by seiche, tsunami, or mudflow	✓ Not applicable	✓ Not applicable
3.12 LAND USE & PLANNING		
3.12.1 Physically Divide a Community	✓ Individual transportation and future land use development projects will be consistent with local transportation system and land use plans and policies that designate areas for urban land use and transportation improvements, as identified by the agency with jurisdiction over said land(s). ✓ Prior to final approval of each individual transportation improvement project and future land use development project, the implementing agency will conduct the appropriate transportation improvement project-specific and future land use development-specific environmental review, to	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	address impacts from land use and transportation system projects that may physically divide a community.	could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.12.2 Land Use Impacts	✓ Individual transportation and future land use development projects will be consistent with local land use plans and policies that designate areas for urban and rural land use and preserve recreational, open space, and other lands. ✓ Prior to final approval of each individual improvement project and future land use development project, the implementing agency will conduct the appropriate transportation improvement project specific and future land use development-specific environmental review, including consideration of potential land use impacts.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.12.3 Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	✓ Project and future land use development implementation agencies will ensure that projects and future land use developments are consistent with federal, state, and local plans that preserve open space and recreation. ✓ Project and future land use development implementation agencies should identify open space and recreation areas that could be preserved and will include mitigation measures (such as dedication or payment of in-lieu fees) for the loss of open space. ✓ Prior to final approval of each individual improvement and future land use development project, the implementing agency will conduct the appropriate improvement project- and land use development-specific environmental review, including consideration of loss of open space and recreation. ✓ For projects that require approval or funding by the U.S. Department of Transportation, project implementation agencies will comply with Section 4(f) of the U.S. Department of Transportation Act.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.12.4 Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment	✓ Project and future land use development implementation agencies will ensure that projects and future land use developments are consistent with federal, state, and local plans that preserve open space and recreation. ✓ Project and future land use development implementation agencies should identify open space and recreation areas that could be preserved and will include mitigation measures (such as dedication or payment of in-lieu fees) for the loss of open space. ✓ Prior to final approval of each individual improvement and future land use development project, the implementing agency will conduct the appropriate improvement project- and land use development-specific environmental review, including consideration of loss of open space and recreation.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Project and future land use development implementation agencies should conduct the appropriate project-specific environmental review, including consideration of loss of open space. Potential significant impacts to open space shall be mitigated, as feasible. The project sponsors or local jurisdiction can and should be responsible for ensuring adherence to the mitigation measures prior to construction. ✓ For projects that require approval or funding by the U.S. Department of Transportation, project implementation agencies will comply with Section 4(f) of the U.S. Department of Transportation Act.	
3.13 NOISE		
3.13.1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	✓ As part of the implementing agency's appropriate environmental review of each project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented. ✓ Implementing agencies should employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses. ✓ Implementing agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities. ✓ Implementing agencies should construct sound reducing barriers between noise sources and noise sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors. ✓ Implementing agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. ✓ Implementing agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts. ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.13.2 Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels.	✓ As part of the implementing agency's appropriate environmental review of each project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented. ✓ Implementing agencies should employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Implementing agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities. ✓ Implementing agencies should construct sound reducing barriers between noise sources and noise sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors. ✓ Implementing agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. ✓ Implementing agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts. ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.	encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.13.3 A substantial permanent increase in ambient noise levels	✓ As part of the implementing agency's appropriate environmental review of each transportation or land use development project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented. ✓ Implementing agencies shall employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating uses. ✓ Implementing agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and future noise generating land uses. ✓ Implementing agencies should construct sound reducing barriers between noise sources and noise sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors. ✓ Implementing agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. ✓ Implementing agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts. ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
3.13.4 A substantial temporary or periodic increase in ambient noise levels	✓ Implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances. ✓ Implementing agencies will limit the hours of construction to between 6:00 a.m. and 8:00 p.m. on Monday through Friday and between 7:00 a.m. and 8:00 p.m. on weekends. ✓ Equipment and trucks used for construction will utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts. ✓ Impact equipment (e.g., jackhammers, pavement breakers, and rock drills) used for individual improvement project or land use development construction will be hydraulically or electrical powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves will be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used such as drilling rather than impact equipment whenever feasible. ✓ Implementing agencies will ensure that stationary noise sources will be located as far from sensitive receptors as possible. If they must be located near existing receptors, they will be adequately muffled. ✓ Implementing agencies will designate a complaint coordinator responsible for responding to noise complaints received during the construction phase. The name and phone number of the complaint coordinator will be conspicuously posted at construction areas and on all advanced notifications. This person will be responsible for taking steps required to resolve complaints, including periodic noise monitoring, if necessary. ✓ Noise generated from any rock-crushing or screening operations performed within 3,000 feet of any occupied residence will be mitigated by the individual improvement project proponent by strategic placement of material stockpiles between the operation and the affected dwelling or by other means approved by the local jurisdiction. ✓ Implementing agencies will direct contractors to implement appropriate additional noise mitigation measures including, but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources to comply with local noise control requirements. ✓ Implementing agencies will implement use of portable barriers during construction of subsurface barriers, debris basins, and storm water drainage facilities. ✓ No pile-driving or blasting operations will be performed within 3,000 feet of an occupied residence on Sundays, legal holidays, or between the hours of 8:00 p.m. and 8:00 a.m. on other days. Any variance	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	from this condition will be obtained from the individual improvement project or new land use development proponent and must be approved by the local jurisdiction. ✓ Wherever possible, sonic or vibratory pile drivers will be used instead of impact pile drivers, (sonic pile drivers are only effective in some soils). If sonic or vibratory pile drivers are not feasible, acoustical enclosures will be provided as necessary to ensure that pile-driving noise does not exceed speech interference criterion at the closest sensitive receptor. ✓ In residential areas, pile driving will be limited to daytime working hours. ✓ Engine and pneumatic exhaust controls on pile drivers will be required as necessary to ensure that exhaust noise from pile driver engines are minimized to the extent feasible. ✓ Where feasible, pile holes will be pre-drilled to reduce potential noise and vibration impacts.	
3.13.5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.	✓ Compliance with Occupational Safety and Health Administration's (OSHA) hearing conservation amendment. The Permissible Exposure Level (PEL) is defined as an 8-hour time-weighted average sound level of 90 dBA integrating all sound levels from at least 90 dBA to at least 140 dBA. Project implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.13.6 For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.	✓ Compliance with Occupational Safety and Health Administration's (OSHA) hearing conservation amendment. The Permissible Exposure Level (PEL) is defined as an 8-hour time-weighted average sound level of 90 dBA integrating all sound levels from at least 90 dBA to at least 140 dBA. Project implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.14 POPULATION, HOUSING & EMPLOYMENT		
3.14.1 Impacts on Regional Growth and Dispersion	✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect projects included in the 2014 RTP and future land use allocations reflected in the SCS.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
		avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.14.2 Impacts on Community Displacement	✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect projects included in the 2014 RTP and future land use allocations reflected in the SCS. ✓ For projects with the potential to displace homes or businesses, project and future development implementation agencies will evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses. An iterative design and impact analysis would help where impacts to persons or businesses are involved. Potential impacts will be minimized to the extent feasible. ✓ Project implementation agencies should identify businesses and residences to be displaced. As required by law, relocation and assistance will be provided to displaced residents and businesses, in accordance with the federal Uniform Relocation and Real Property Acquisition Policies Act of 1970 and the State of California Relocation Assistance Act, as well as any applicable City and County policies. ✓ Project implementation agencies will develop a construction schedule that minimizes potential neighborhood deterioration from protracted waiting periods.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.14.3 Disrupt or Divide Communities	✓ Project implementation agencies will design new transportation facilities that protect access to existing community facilities. During the design phase of the individual improvement project, community amenities and facilities should be identified and access to them considered in the design of the individual improvement project. ✓ Project implementation agencies will design roadway improvements, in a manner that minimizes barriers to pedestrians and bicyclists. During the design phase, pedestrian and bicycle routes will be determined that permit easy connections to community facilities nearby in order not to divide the communities.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.15 PUBLIC UTILITIES, OTHER UTILITIES & SERVICES SYSTEMS		
3.15.1 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant	✓ Prior to construction, the project implementation agency will ensure that all necessary local and state permits are obtained. The project implementation agency also will comply with all applicable conditions of approval. As deemed necessary by the governing jurisdiction, road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans should include the following requirements: ➢ Identify all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, and other public facilities	➢ Develop circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. ➢ Schedule truck trips outside of peak morning and evening commute hours. ➢ Limit lane closures during peak hours to the extent possible. ➢ Use haul routes, minimizing truck traffic on local roadways, to the extent possible. ➢ Include detours for bicycles and pedestrians in all areas potentially affected by individual improvement project construction. ➢ Install traffic control devices as specified in the Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones. ➢ Develop and implement access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. Access plans will be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions will be asked to identify detours for emergency vehicles, which will then be posted by the contractor. The facility owner or operator will be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures. ➢ Store construction materials only in designated areas. ➢ Coordinate with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary. ✓ Transportation and future land use development projects requiring police protection, fire service, and emergency medical service will coordinate with the local fire department and police department to ensure that the existing public services and utilities would be able to handle the increase in demand for their services. If the current levels of service at the individual improvement project or future land use development site are found to be inadequate, infrastructure improvements and personnel requirements for the appropriate public service will be identified in each individual improvement project's CEQA documentation. ✓ The growth inducing potential of individual transportation and future land use development projects will be carefully evaluated so that the full implications of the 2014 RTP and SCS are understood. Individual environmental documents will quantify indirect impacts (growth that could be facilitated or induced) on public services and utilities. Lead and responsible agencies should then make any necessary adjustments to the applicable general plan. ✓ As part of transportation project-specific or future land use development project-specific environmental review, implementing agencies will evaluate the impacts resulting from the potential for severing underground utility lines during construction activities. Appropriate mitigation measures will be identified for all impacts. The implementing agencies will be responsible for ensuring adherence to mitigation measures. Fresno COG will be provided with documentation indicating compliance with mitigation measures. ✓ Prior to construction, the implementing agency or contractor will identify the locations of existing utility lines. All known utility lines will be avoided during construction.	analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
3.15.2 Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	✓ During the CEQA review process for individual facilities, implementing agencies should apply necessary mitigation measures to reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.15.3 Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	✓ Projects requiring wastewater service, solid waste collection, or potable water service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation. ✓ Reclaimed water will be used for landscaping purposes instead of potable water wherever feasible. ✓ Recently, the Governor declared an emergency drought declaration for the State. Long-term water supply documents anticipate that drought (including severe single-year drought) are regular occurrences within the State. Because the 2014 RTP and SCS do not propose or approve development of any water demand projects, the Governor's drought declaration does not indicate that there is a significant water supply impact associated with the RTP and SCS. ✓ Each of the proposed transportation improvement projects or future land use developments will comply with applicable regulations related to solid waste disposal. ✓ The construction contractor will work with Recycling Coordinators to ensure that source reduction techniques and recycling measures are incorporated into individual transportation improvement or future land use development project construction. ✓ The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal sites will be identified and utilized.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.15.4 Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	✓ During the CEQA review process for individual RTP and SCS projects, implementing agencies with responsibility for the construction of new storm water drainage facilities or the expansion of existing facilities to adequately meet projected capacity needs should apply necessary mitigation measures, including actions set forth in regional watershed management plans, to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. ✓ As part of transportation project-specific and future land use development project-specific environmental review, implementing agencies will evaluate the impacts resulting from soil accumulation during construction of the transportation projects and future land use developments. Appropriate mitigation measures will be identified for all impacts. The implementing agencies will be responsible for ensuring adherence to the mitigation measures. Fresno COG will be provided with documentation indicating compliance with mitigation measures. ✓ Implementing agencies should implement appropriate measures, such as the washing of construction vehicles undercarriages before leaving the construction site or increasing the use of street cleaning machines, to reduce the amount of soil on local roadways as a result of construction.	analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.15.5 Have sufficient water supplies available to serve the project from existing entitlements and resources, or the need for new or expanded entitlements	✓ Projects requiring potable water service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation. ✓ Reclaimed water will be used for landscaping purposes instead of potable water wherever feasible. ✓ Recently, the Governor declared an emergency drought declaration for the State. Long-term water supply documents anticipate that drought (including severe single-year drought) are regular occurrences within the State. Because the 2014 RTP and SCS do not propose or approve any development of any water demand projects, the Governor's drought declaration does not indicate that there is a significant water supply impact associated with the RTP and SCS.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.15.6 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	✓ Projects requiring wastewater service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.15.7 Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	✓ Projects requiring solid waste collection will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	identified in each individual transportation improvement or future land use development project's CEQA documentation. ✓ Each of the proposed transportation improvement projects or future land use developments will comply with applicable regulations related to solid waste disposal. ✓ The construction contractor will work with Recycling Coordinators to ensure that source reduction techniques and recycling measures are incorporated into individual transportation improvement or future land use development project construction. ✓ The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal sites will be identified and utilized.	monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.15.8 Comply with federal, state, and local statutes and regulations related to solid waste	✓ During the CEQA review process for individual facilities, implementing agencies should apply necessary mitigation measures to reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.16 SOCIAL & ECONOMIC EFFECTS		
3.16.1 Construction Impacts on Minority and Low-Income Populations	✓ Impact is considered less-than-significant; no mitigation is required.	✓ Not applicable
3.16.2 Operational Impacts on Low-Income and Minority Populations	✓ Impact is considered less-than-significant; no mitigation is required.	✓ Not applicable
3.17 TRANSPORTATION/TRAFFIC		
3.17.1 Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system	✓ Measures intended to reduce vehicle miles traveled (VMT) and reduce vehicle hours of delay (VHT) or congestion levels are part of the RTP and SCS. These include: increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use/transportation connection through increased densities, other Travel Demand Management measures described in the RTP and in local agency General Plans, and key transportation investments targeted to reduce congestion levels and improve LOS. ✓ Fresno COG will continue to score funding programs considering a projects ability to enhance complete streets objectives.	✓ The mitigation measures would require implementing agencies to avoid or mitigate impacts to all types of transportation facilities (multi-modal). Fresno COG does not have land use authority nor does it have the ability to design and construct transportation improvement projects and future land use developments included in the RTP and SCS. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies. Therefore the impact is considered significant and unavoidable.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Beyond the currently financially and institutionally feasible measures included in the 2014 RTP and SCS, Fresno COG will identify further reduction in VMT, and fuel consumption that could be obtained through land-use strategies, additional car-sharing programs, additional vanpools, and additional bicycle programs. ✓ Transportation Planning: Fresno COG will assist local jurisdictions to encourage new developments incorporate both local and regional transit measures into the project design that promote the use of alternative modes of transportation. ✓ Local jurisdictions can and should promote ride sharing programs e.g., by designating a certain percentage of parking spaces for high-occupancy vehicles, providing larger parking spaces to accommodate vans used for ride-sharing, and designating adequate passenger loading and unloading and waiting areas. ✓ The Plan includes measures intended to reduce vehicle hours of delay. These include: system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce delay. Fresno COG shall encourage local agencies to fully implement these policies and projects. ✓ The Plan includes measures intended to reduce daily heavy-duty truck vehicle hours of delay. These include: goods movement capacity enhancements, system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce heavy-duty truck delay. Fresno COG shall encourage local agencies to fully implement these policies and projects. ✓ Local jurisdictions can and should encourage the use of public transit systems by enhancing safety and cleanliness on vehicles and in and around stations, providing shuttle service to public transit, offering public transit incentives and providing public education and publicity about public transportation services. ✓ Local jurisdictions can and should encourage bicycling and walking by incorporating bicycle lanes into street systems in regional transportation plans, new subdivisions, and large developments, creating bicycle lanes and walking paths directed to the location of schools and other logical points of destination and provide adequate bicycle parking, and encouraging commercial projects to include facilities on-site to encourage employees to bicycle or walk to work. ✓ Transit agencies can and should encourage bicycling to transit facilities by providing additional bicycle parking, locker facilities, and bike lane access to transit facilities when feasible. ✓ Project sponsors can and should build or fund a major transit stop within or near the development.	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Local jurisdictions and transit agencies can and should provide public transit incentives such as free or low-cost monthly transit passes to employees, or free ride areas to residents and customers. ✓ Local jurisdictions and project sponsors can and should incorporate bicycle lanes, routes and facilities into street systems, new subdivisions, and large developments. ✓ Local jurisdictions can and should require amenities for non-motorized transportation, such as secure and convenient bicycle parking. ✓ Local jurisdictions can and should ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation. ✓ Local jurisdictions can and should connect parks and open space through shared pedestrian/bike paths and trails to encourage walking and bicycling. ✓ Local jurisdictions can and should create bicycle lanes and walking paths directed to the location of schools, parks and other destination points. ✓ Local jurisdictions can and should work with the school districts to improve pedestrian and bike access to schools and to restore or expand school bus service using lower-emitting vehicles. ✓ Local jurisdictions and transit agencies can and should provide information on alternative transportation options for consumers, residents, tenants and employees to reduce transportation related emissions. ✓ Local jurisdictions can and should educate consumers, residents, tenants and the public about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; vehicle performance and efficiency (e.g., keeping tires inflated); and low or zero-emission vehicles. ✓ Project Selection: Local jurisdictions can and should give priority to transportation projects that would contribute to a reduction in vehicle miles traveled per capita, while maintaining economic vitality and sustainability. ✓ System Interconnectivity: Local jurisdictions can and should create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car sharing, bicycling and walking, by incorporating the following: ➢ Ensure transportation centers are multi-modal to allow transportation modes to intersect; ➢ Provide adequate and affordable public transportation choices, including expanded bus routes and service, as well as other transit choices such as shuttles, light rail, and rail; ➢ To the extent feasible, extend service and hours of operation to underserved arterials and population centers or destinations such as colleges; ➢ Focus transit resources on high-volume corridors and high-boarding destinations such as colleges, employment centers and regional destinations; ➢ Coordinate schedules and routes across service lines with neighboring transit authorities;	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	➢ Support programs to provide "station cars" for short trips to and from transit nodes (e.g., neighborhood electric vehicles); ➢ Study the feasibility of providing free transit to areas with residential densities of 15 dwelling units per acre or more; ➢ Employ transit-preferential measures, such as signal priority and bypass lanes. Where compatible with adjacent land use designations, right-of-way acquisition or parking removal may occur to accommodate transit-preferential measures or improve access to transit. The use of access management should be considered where needed to reduce conflicts between transit vehicles and other vehicles; ➢ Provide safe and convenient access for pedestrians and bicyclists to, across, and along major transit priority streets; ➢ Use park-and-ride facilities to access transit stations only at ends of regional transit ways or where adequate feeder bus service is not feasible. ✓ Transit System Infrastructure: Local jurisdictions can and should upgrade and maintain transit system infrastructure to enhance public use, including: ➢ Ensure transit stops and bus lanes are safe, convenient, clean and efficient; ➢ Ensure transit stops have clearly marked street-level designation, and are accessible; ➢ Ensure transit stops are safe, sheltered, benches are clean, and lighting is adequate; ➢ Place transit stations along transit corridors within mixed-use or transit-oriented development areas at intervals of three to four blocks, or no less than one-half mile. ✓ Customer Service: Transit agencies can and should enhance customer service and system ease-of-use, including: ➢ Develop a Regional Pass system to reduce the number of different passes and tickets required of system users; ➢ Implement "Smart Bus" technology, using GPS and electronic displays at transit stops to provide customers with "real-time" arrival and departure time information (and to allow the system operator to respond more quickly and effectively to disruptions in service); ➢ Investigate the feasibility of an on-line trip-planning program. ✓ Transit Funding: Local jurisdictions can and should prioritize transportation funding to support a shift from private passenger vehicles to transit and other modes of transportation, including: ➢ Give funding preference to improvements in public transit over other new infrastructure for private automobile traffic; ➢ Before funding transportation improvements that increase roadway capacity and VMT, evaluate the feasibility and effectiveness of funding projects that support alternative modes of transportation and reduce VMT, including transit, and bicycle and pedestrian access. ✓ Transit and Multimodal Impact Fees: Local jurisdictions can and should assess transit and multimodal impact fees on new developments to fund public transportation infrastructure, bicycle infrastructure, pedestrian infrastructure and other multimodal accommodations.	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ System Monitoring: Local jurisdictions can and should monitor traffic and congestion to determine when and where new transportation facilities are needed in order to increase access and efficiency. ✓ Arterial Traffic Management: Local jurisdictions can and should modify arterial roadways to allow more efficient bus operation, including bus lanes and signal priority/preemption where necessary. ✓ HOV Lanes: Local jurisdictions can and should encourage the construction of high-occupancy vehicle (HOV) lanes or similar mechanisms whenever necessary to relieve congestion and reduce emissions. ✓ Ride-Share Programs: Fresno COG and local jurisdictions can and should promote ride sharing programs, including: ➢ Designate a certain percentage of parking spaces for ride-sharing vehicles; ➢ Designate adequate passenger loading, unloading, and waiting areas for ride-sharing vehicles; ➢ Provide a web site or message board for coordinating shared rides; ➢ Encourage private, for-profit community car-sharing, including parking spaces for car share vehicles at convenient locations accessible by public transit; ➢ Hire or designate a rideshare coordinator to develop and implement ridesharing programs. ✓ Employer-based Trip Reduction: Local jurisdictions can and should support voluntary, employer-based trip reduction programs, including: ➢ Provide assistance to regional and local ridesharing organizations; ➢ Advocate for legislation to maintain and expand incentives for employer ridesharing programs; ➢ Require the development of Transportation Management Associations for large employers and commercial/ industrial complexes; ➢ Provide public recognition of effective programs through awards, top ten lists, and other mechanisms. ✓ Ride Home Programs: Local jurisdictions can and should implement a “guaranteed ride home” program for those who commute by public transit, ride-sharing, or other modes of transportation, and encourage employers to subscribe to or support the program. ✓ Local Area Shuttles: Transit agencies can and should encourage and utilize shuttles to serve neighborhoods, employment centers and major destinations. ✓ Local jurisdictions and transit agencies can and should create a free or low-cost local area shuttle system that includes a fixed route to popular tourist destinations or shopping and business centers. ✓ Local jurisdictions can and should work with existing shuttle service providers to coordinate their services. ✓ Low- and No-Travel Employment Opportunities: Local jurisdictions can and should facilitate employment opportunities that minimize the need for private vehicle trips, including: ➢ Amend zoning ordinances and the Development Code to include live/work sites and satellite work centers in appropriate locations;	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	➢ Encourage telecommuting options with new and existing employers, through project review and incentives, as appropriate. ✓ Local jurisdictions can and should support bicycle use as a mode of transportation by enhancing infrastructure to accommodate bicycles and riders, and providing incentives. ✓ Development Standards for Bicycles: Local jurisdictions can and should establish standards for new development and redevelopment projects to support bicycle use, including: ➢ Amending the Development Code to include standards for safe pedestrian and bicyclist accommodations, by incorporating the following: ▪ "Complete Streets" policies that foster equal access by all users in the roadway design; ▪ Bicycle and pedestrian access internally and in connection to other areas through easements; ▪ Safe access to public transportation and other non-motorized uses through construction of dedicated paths; ▪ Safe road crossings at major intersections, especially for school children and seniors; ▪ Adequate, convenient and secure bike parking at public and private facilities and destinations in all urban areas; ▪ Street standards will include provisions for bicycle parking within the public right of way. ✓ Local jurisdictions can and should require new development and redevelopment projects to include bicycle facilities, as appropriate with the new land use, including: ➢ Construction of weatherproof bicycle facilities where feasible, and at a minimum, bicycle racks or covered, secure parking near the building entrances; ➢ Provision and maintenance of changing rooms, lockers, and showers at large employers or employment centers. ➢ Prohibit projects that impede bicycle and pedestrian access, such as large parking areas that cannot be safely crossed by non-motorized vehicles, and developments that block through access on existing or potential bicycle and pedestrian routes; ➢ Encourage the development of bicycle stations at intermodal hubs, with attended or "valet" bicycle parking, and other amenities such as bicycle rental and repair, and changing areas with lockers and showers; ➢ Conduct a connectivity analysis of the existing bikeway network to identify gaps, and prioritize bikeway development where gaps exist. ✓ Bicycle and Pedestrian Trails: Local jurisdictions can and should establish a network of multi-use trails to facilitate safe and direct off-street bicycle and pedestrian travel, and will provide bike racks along these trails at secure, lighted locations. ✓ Bicycle Safety Program: Local jurisdictions can and should develop and implement a bicycle safety educational program to teach drivers and riders the laws, riding protocols, routes, safety tips, and emergency maneuvers.	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Bicycle and Pedestrian Project Funding: Local jurisdictions can and should pursue and provide enhanced funding for bicycle and pedestrian facilities and access projects, including, as appropriate: ➢ Apply for regional, State, and federal grants for bicycle and pedestrian infrastructure projects; ➢ Establish development exactions and impact fees to fund bicycle and pedestrian facilities; ➢ Use existing revenues, such as State gas tax subventions, sales tax funds, and general fund monies for projects to enhance bicycle use and walking for transportation. ✓ Bicycle Parking: Local jurisdictions can and should adopt bicycle parking standards that ensure bicycle parking sufficient to accommodate 5 to 10 percent of projected use at all public and commercial facilities, and at a rate of at least one per residential unit in multiple-family developments. ✓ Local jurisdictions can and should implement measures to reduce employee vehicle trips and to mitigate emissions impacts from municipal travel. ✓ Pedestrian and Bicycle Promotion: Local jurisdictions can and should work with local community groups and downtown business associations to organize and publicize walking tours and bicycle events, and to encourage pedestrian and bicycle modes of transportation. ✓ Trip Reduction Program: Local jurisdictions can and should implement a program to reduce vehicle trips by employees, including: ➢ Providing incentives and infrastructure for vanpooling and carpooling, such as pool vehicles, preferred parking, and a website or bulletin board to facilitate ride-sharing; ➢ Providing subsidized passes for mass transit; ➢ Offering compressed work hours, off-peak work hours, and telecommuting, where appropriate; ➢ Offer a guaranteed ride home for employees who use alternative modes of transportation to commute. ✓ Bicycle Transportation Support: Local jurisdictions can and should promote and support the use of bicycles as transportation, including: ➢ Providing bicycle stations with secure, covered parking, changing areas with storage lockers and showers, as well as a central facility where minor repairs can be made; ➢ Providing bicycles, including electric bikes, for employees to use for short trips during business hours; ➢ Implementing a police-on-bicycles program; ➢ Providing a bicycle safety program, and information about safe routes to work. ✓ Transit Access to Municipal Facilities: Local jurisdiction and agency facilities can and should be located on major transit corridors, unless their use is plainly incompatible with other uses located along major transit corridors.	
3.17.2 Exceed, either individually or cumulatively, a level of service standard established by the county	✓ A number of local street and road and State Route segments along the regional street and highway will experience deficient LOS conditions by 2040. Mitigation measures for these segments have not been identified or programmed in the RTP. Intersection improvements and lane additions would improve deficient levels of service to acceptable levels consistent with minimum LOS policies identified in the	✓ While improved mobility will result from implementation of the projects contained in the RTP as well as the mitigation measures listed above, some significant unavoidable impacts, considering the regional minimum LOS policy of "D" will occur. LOS deficiencies will result along a number of regional street and highway segments and associated intersections

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
congestion management agency for designated roads or highways	RTP; however, funding to address the improvements is not available or the costs to mitigate the deficiencies are prohibitive. Fresno COG should coordinate efforts to identify appropriate strategies that would improve deficient levels of service along the affected streets and highways. Fresno COG should work continue to with local agencies and Caltrans, District 6 to identify alternative improvements, associated cost estimates, and an implementation plan and schedule as part of various Caltrans studies and during update of local general plans and other planning efforts. Various funding sources should be analyzed as part of implementation plans and findings should be incorporated into future RTPs. ✓ Project sponsors of a commercial use can and should submit to the Lead Agency (or other appropriate government agency) a Transportation Demand Management (TDM) plan containing strategies to reduce on-site parking demand and single occupancy vehicle travel. The sponsor should implement the approved TDM plan. The TDM should include strategies to increase bicycle, pedestrian, transit, and carpools/vanpool use. All four modes of travel should be considered. Strategies to consider include the following: ➢ Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement ➢ Construction of bike lanes per the prevailing Bicycle Master Plan (or other similar document) ➢ Signage and striping onsite to encourage bike safety ➢ Installation of pedestrian safety elements (such as cross walk striping, curb ramps, countdown signals, bulb outs, etc.) to encourage convenient crossing at arterials ➢ Installation of amenities such as lighting, street trees, trash and any applicable streetscape plan. ➢ Direct transit sales or subsidized transit passes ➢ Guaranteed ride home program ➢ Pre-tax commuter benefits (checks) ➢ On-site car-sharing program ➢ On-site carpooling program ➢ Distribution of information concerning alternative transportation options ➢ Parking spaces sold/leased separately ➢ Parking management strategies; including attendant/valet parking and shared parking spaces ✓ Project sponsors and construction contractors can and should meet with the appropriate Lead Agency (or other government agency) to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project sponsor should develop a construction management plan for review and approval by the Lead Agency (or other government agency as appropriate). The plan should include at least the following items and requirements: ➢ A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. ➢ Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.	because of the inability to widen such facilities due to funding and other constraints even with RTP projects. It is anticipated that even with implementation of the Project, significant LOS deficiencies will continue therefore; this impact would be considered significant and unavoidable. ✓ Congestion decreases and transit use increases with the Project are considered beneficial impacts. In addition, employment choices are increased for both automobile and transit users. Because one of the stated objectives of the 2014 RTP and SCS is to reduce congestion and improve mobility, this is considered a significant beneficial impact. ✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on the level of service standard established by the county congestion management agency for designated roads or highways, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	➢ Location of construction staging areas for materials, equipment, and vehicles at an approved location. ➢ A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager should determine the cause of the complaints and should take prompt action to correct the problem. The Lead Agency should be informed who the Manager is prior to the issuance of the first permit. ➢ Provision for accommodation of pedestrian flow. ➢ As necessary, provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on street spaces. ➢ Any damage to the street caused by heavy equipment, or as a result of this construction, should be repaired, at the project sponsor's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair should occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety should be repaired immediately. The street should be restored to its condition prior to the new construction as established by the Lead Agency (or other appropriate government agency) and/or photo documentation, at the sponsor's expense, before the issuance of a Certificate of Occupancy. ➢ Any heavy equipment brought to the construction site should be transported by truck, where feasible. ➢ No materials or equipment should be stored on the traveled roadway at any time. ➢ Prior to construction, a portable toilet facility and a debris box should be installed on the site, and properly maintained through project completion. ➢ All equipment should be equipped with mufflers. ➢ Prior to the end of each work-day during construction, the contractor or contractor should pick up and properly dispose of all litter resulting from or related to the project whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors. ✓ Project sponsors can and should ensure that prior to construction all necessary local and State road and railroad encroachment permits are obtained. As deemed necessary by the governing jurisdiction, the road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans should include the following requirements: ➢ Identification of all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow. ➢ Development of circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. ➢ Scheduling of truck trips outside of peak morning and evening commute hours. ➢ Limiting of lane closures during peak hours to the extent possible. ➢ Usage of haul routes minimizing truck traffic on local roadways to the extent possible.	

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	➢ Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction. ➢ Installation of traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones. ➢ Development and implementation of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. The access plans would be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions should be asked to identify detours for emergency vehicles, which will then be posted by the contractor. Notify in advance the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures. ➢ Storage of construction materials only in designated areas ➢ Coordination with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary. ✓ Local jurisdictions can and should implement traffic and roadway management strategies to improve mobility and efficiency, and reduce associated emissions. ✓ Signal Synchronization: Local jurisdictions can and should expand signal timing programs where emissions reduction benefits can be demonstrated, including maintenance of the synchronization system, and will coordinate with adjoining jurisdictions as needed to optimize transit operation while maintaining a free flow of traffic. ✓ Delivery Schedules: Local jurisdictions can and should establish ordinances or land use permit conditions limiting the hours when deliveries can be made to off-peak hours in high traffic areas.	
3.17.3 Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks	✓ Not applicable.	✓ Not applicable.
3.17.4 Substantially increase hazards due to a design feature or incompatible uses	✓ Implementing agencies should consider safety an objective in the design of RTP projects, and should plan to avoid, improve, or mitigate safety impacts in the course of project-level environmental review. ✓ Fresno COG shall conduct a forum where policy-makers can be educated and can develop consensus on regional transportation safety and security policies. ✓ Fresno COG shall work with local officials to assist with implementation of regional transportation safety and security policies.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.17.5 Result in inadequate emergency access	✓ Fresno COG shall support local agencies with the rapid repair of transportation infrastructure in the event of an emergency. This will be accomplished by Fresno COG, in cooperation with local and State	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	agencies, identifying critical infrastructure needs necessary for: a) emergency responders to enter the, region, b) evacuation of affected facilities, and c) restoration of utilities. In addition, Fresno COG shall establish transportation infrastructure practices that promote and enhance security.	transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.
3.17.6 Result in inadequate parking capacity	✓ Local jurisdictions can and should establish parking policies and requirements that capture the true cost of private vehicle use and support alternative modes of transportation. ✓ Parking Policy: Local jurisdictions can and should adopt a comprehensive parking policy to discourage private vehicle use and encourage the use of alternative transportation by incorporating the following: ➢ Reduce the available parking spaces for private vehicles while increasing parking spaces for shared vehicles, bicycles, and other alternative modes of transportation; ➢ Eliminate or reduce minimum parking requirements for new buildings; ➢ "Unbundle" parking (require that parking is paid for separately and is not included in the base rent for residential and commercial space); ➢ Use parking pricing to discourage private vehicle use, especially at peak times; ➢ Create parking benefit districts, which invest meter revenues in pedestrian infrastructure and other public amenities; ➢ Establish performance pricing of street parking, so that it is expensive enough to promote frequent turnover and keep 15 percent of spaces empty at all times; ➢ Encourage shared parking programs in mixed-use and transit-oriented development areas. ✓ Event Parking Policies: Local jurisdictions can and should establish policies and programs to reduce onsite parking demand and promote ride-sharing and public transit at large events, including: ➢ Promote the use of peripheral parking by increasing on-site parking rates and offering reduced rates for peripheral parking; ➢ Encourage special event center operators to advertise and offer discounted transit passes with event tickets; ➢ Encourage special event center operators to advertise and offer discount parking incentives to carpooling patrons, with four or more persons per vehicle for on-site parking; ➢ Promote the use of bicycles by providing space for the operation of valet bicycle parking service. ✓ Parking "Cash-out" Program: Local jurisdictions can and should require new office developments with more than 50 employees to offer a Parking "Cash-out" Program to discourage private vehicle use. ✓ Electric/Alternative Fuel Vehicle Parking: Local jurisdictions can and should require new commercial and retail developments to provide prioritized parking for electric vehicles and vehicles using alternative fuels.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

TABLE 1-1 – Summarization of Impacts, Mitigation Measures, and Significance

Impact(s)	Mitigation Measure (s)	Significance after Mitigation
	✓ Municipal Parking Management: Local jurisdictions can and should implement a Parking Management Program to discourage private vehicle use, including: ➢ Encouraging carpools and vanpools with preferential parking and a reduced parking fee; ➢ Institute a parking cash-out program; ➢ Renegotiate employee contracts, where possible, to eliminate parking subsidies; ➢ Install on-street parking meters with fee structures designed to discourage private vehicle use; establish a parking fee for all single-occupant vehicles. ✓ Local jurisdictions can and should adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation.	
3.17.7 Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)	✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect the current status of future 2014 RTP street and highway improvements and future land use allocations reflected in the SCS.	✓ The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

SECTION 2.0 INTRODUCTION / PROJECT DESCRIPTION

An EIR is required to provide a detailed project description. This description is to consist of:

- ✓ *The project's location.*
- ✓ *EIR objectives including an underlying project purpose, characteristics, and scope.*
- ✓ *A statement of the EIR's intended uses.*

See CEQA Guidelines, Section 15124.

2.1 PURPOSE

The purpose of this Draft Program Environmental Impact Report (Draft PEIR or PEIR) is to provide local decision-makers and the public with an objective program-level analysis of the potential environmental consequences of implementation of regional transportation system outlined in the Draft Fresno Council of Governments (Fresno COG) 2014 Regional Transportation Plan (RTP) and the Sustainable Communities Strategy (SCS). The information presented in this document is intended to provide a program-level disclosure of the potential impacts and to increase public awareness and participation in the regional transportation planning process.

Requirement to Prepare a Program EIR

According to CEQA, a Program EIR is an EIR, which may be prepared on a series of actions that can be characterized as one large project and are related either:

1. Geographically,
2. A logical parts in the chain of contemplated actions,
3. In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
4. As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

Use of a Program EIR can provide the following advantages. The Program EIR can:

- ✓ Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action.
- ✓ Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis.
- ✓ Avoid duplicative reconsideration of basic policy considerations.

- ✓ Allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts.
- ✓ Allow reduction in paperwork.

Subsequent activities in the program must be examined in the light of the Program EIR to determine whether an additional environmental document must be prepared.

- ✓ If a later activity would have effects that were not examined in the Program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration.
- ✓ If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the Program EIR, and no new environmental document would be required.
- ✓ An agency shall incorporate feasible mitigation measures and alternatives developed in the Program EIR into subsequent actions in the program.
- ✓ Where the subsequent activities involve site specific considerations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the Program EIR.
- ✓ A Program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the Program EIR, and no further environmental documents would be required.

A Program EIR can be used to simplify the task of preparing environmental documents on later parts of the program. The Program EIR can:

- ✓ Provide the basis in an Initial Study for determining whether the later activity may have any significant effects.
- ✓ Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole.
- ✓ Focus an EIR on a subsequent project to permit discussion solely of new effects which had not been considered before.

It should be noted that the RTP transportation improvement projects and future land use development projects will be implemented by implementing agencies such as Caltrans, each of the cities, the County of Fresno, transit agencies, Native American Tribes, and other agencies responsible for the construction and/or operation of transportation facilities, land use development, and other services. For purposes of reviewing the environmental impacts associated with the Fresno COG 2014 RTP and SCS, this Draft PEIR has been prepared because Fresno COG does not have the detailed information that would be required to provide a project-level analysis regarding the transportation improvement projects identified in the

RTP or the specific information regarding the specific type of land use development that will occur in each local jurisdiction between 2014 and 2040. The design of each transportation improvement project, as well as the sources and availability of funding are unknown. In addition, the specific impacts to resources such as biological resources and land use will vary widely from project to project if (and when) they are approved. It will be the implementing agencies (referenced above) that will approve, design, and implement the transportation improvement projects referenced in the RTP and SCS and that will approve the individual land use developments proposed over the duration of the planning period. These implementing agencies would be able to prepare subsequent environmental documents that incorporate by reference the appropriate information from this Program Draft EIR regarding secondary effects, cumulative impacts, project alternatives, and other relevant factors. If the lead agency for any particular implementing project finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, then that lead agency may determine that the activity would not require additional CEQA review. Where subsequent environmental review is required, such review would focus on project-specific significant effects specific to the project, or its site, that have not been considered in this Draft PEIR.

Furthermore, Fresno COG does not have the detailed information to prepare sub-regional analysis of the RTP and SCS. The Fresno COG traffic model provides a regional analysis of the existing and future transportation system and is not able to analyze specific geographic sub-regions in Fresno County due to model limitations. Furthermore, Fresno COG uses EMFAC (Emissions Factoring Model) to prepare its air quality conformity findings and to evaluate the impacts on air quality and global warming resulting from the RTP and SCS. EMFAC is only available from the California Air Resources Board (CARB) at the "county level" or for all of Fresno County, not for individual sub-regions within the County.

Fresno COG is a planning agency only responsible for the planning and programming of projects included in the 2014 RTP and SCS. Furthermore, the 2014 RTP now contains the SCS, which is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from autos and light trucks (see Chapter 4: "Sustainable Communities Strategy: People. Choices. Community." of the 2014 RTP for the Fresno COG SCS Development Process and incorporated by reference).

The SCS encourages changes to the urban form that improve accessibility to transit, and create more compact development, thereby yielding a number of transportation benefits to the region. These include reductions in travel time, vehicle miles traveled (VMT), vehicle hours traveled (VHT), and vehicle hours of delay. Concurrently, the plan yielded increased transit use and mode share, all of which lead to both mobility and air quality improvements. The SCS only shows how future growth and development could be allocated to planned growth areas consistent with the general plans of the cities and the County of Fresno. As growth and development occurs, it will be the cities and the County that review and approve development proposals and determine consistency with their plans, programs, and policies; not Fresno

COG. Fresno COG has no land use authority to approve future growth development as it occurs over the life of the RTP (Year 2040).

For purposes of reviewing the environmental impacts associated with the 2014 RTP and SCS, this Draft PEIR has been prepared because Fresno COG cannot know all the details or have all the information it would need regarding each and every transportation improvement project identified in the RTP, or the detailed information regarding the specific type of future land use development that will occur in each local jurisdiction between 2012 (Notice of Preparation - NOP release) and the year 2040. Fresno COG's role as the Regional Transportation Planning Agency (RTPA) for the Fresno region is to prepare a long-range RTP and SCS that reflects consistency with federal and state mandates, including SB 375. As an RTPA, Fresno COG does not have any land use authority. That right is held by the local agencies that make up the membership of the Fresno COG Policy Board, which include the County of Fresno and the fifteen incorporated cities within the County, and are commonly referred to as Fresno COG's "member agencies".

Fresno COG works in partnership with its member agencies, Caltrans, and other agencies with land use authority to plan the future transportation system, taking into consideration future growth estimates and potential development and land use patterns outlined in each of the adopted or draft general plans prepared by these agencies. Throughout this document, the term "implementing agency" is used to refer to Fresno COG's partnership agencies that have land use authority, and/or legal standing to plan, design, implement, build, operate and maintain transportation infrastructure, including those projects referred to in the RTP and SCS. The agencies most associated with implementing the transportation improvement projects and approving future land use developments reflected in the 2014 RTP and SCS will be the Fresno COG member agencies. Caltrans, as the owner/operator of the state highway system, will also have a major role in implementing transportation improvement projects along highways throughout the Fresno region. It will be these and other implementing agencies that will plan for, approve, design, construct, and implement the transportation improvement projects referenced in the RTP and SCS. These agencies will also plan for, review and approve the individual land use developments proposed within their individual jurisdictions over the duration of the planning period that were considered to develop RTP and SCS.

This Draft PEIR is considered the "first tier" CEQA document for future second-tier CEQA documents (commonly referred to as project-level analysis) reflective of the various transportation improvement projects and future land use development projects represented in the 2014 RTP and SCS. The SCS only shows how future growth and development would be allocated to planned growth areas consistent with the general plans of the cities and the County of Fresno together with the planned transportation system. As growth and development occurs, it will be the cities and the County that review and approve development proposals and also determine consistency with their plans, programs, and policies - not Fresno COG.

This Draft PEIR presents a "regional" review and analysis of impacts associated with the 2014 RTP and SCS. While some of the transportation improvement projects are reflected in current federal and regional transportation improvement programs over the short-term or within the next four to five years, the majority of transportation improvement projects are not defined to a level that would allow for "project-level" analysis. As such, it is understood that the RTP transportation improvement projects and future land use development projects will be implemented by implementing agencies such as Caltrans, each of the fifteen cities, the County of Fresno, transit agencies, Native American Tribes, and other agencies responsible for the construction and/or operation of transportation facilities, land use development, and other services.

Implementing agencies will prepare the "project-level" environmental documents for the individual transportation improvement projects and future land use developments included in or consistent with the 2014 RTP and SCS. According to Section 15161 of CEQA, a "project-level" environmental document is the most common type of EIR and examines the environmental impacts of a specific improvement project or development project. This type of EIR should focus primarily on the changes in the environment that would result from the project and examine all phases of the project including planning, construction, and operation.

The implementing agencies would also prepare "project-level" environmental documents that incorporate by reference the appropriate information from this Draft PEIR regarding secondary effects, cumulative impacts, project alternatives, and other relevant factors. Where subsequent environmental review is required, such review would focus on project-specific significant effects specific to the project, or its site, that have not been considered in this Draft PEIR.

2.2 PROJECT LOCATION

Fresno County (County) is located in California's Central San Joaquin Valley (reference Figure 2-1). Encompassing 5,963 square miles, the County is situated near the geographic center of the State along State Route (SR) 99, approximately 220 miles north of Los Angeles. The County has an altitude near Fresno of 365 feet above sea level to 14,000 feet above sea level in the Sierra Nevada. As of 2013, Fresno County had an estimated population of approximately 952,200.

2.3 EIR OBJECTIVES

The Policy Element for the 2014 RTP and SCS supports three broad overarching focus points:

- ✓ Preservation of existing facilities and services.
- ✓ Sound financial management leveraging of existing funding.

- ✓ Balancing Transportation needs with land use.

These overarching focal points are also considered as EIR objectives for purposes of this Draft PEIR. Specifics regarding each focus point or PEIR objective follows.

- ✓ **Preservation of existing facilities and services**

  Maintaining existing facilities and services is a responsibility that is primarily tasked to the local agencies, since the majority of state and federal funds that come to Fresno COG are mainly limited to capital improvements. Fresno COG supports multimodal uses and roadway maintenance and rehabilitation, which can be a cost-effective approach to delivering more complete streets. The transit system works to gain efficiency from coordinating diverse services, leading to better customer service and ridership. Potential improvements are investigated to make transit attractive to new users, while enhancing the experience for the transit-dependent population, inclusive of low-income and minority areas. Transportation demand management works to help residents find alternatives to single occupancy driving. Fresno COG continues to operate well-developed rideshare and senior taxi script programs.

- ✓ **Sound financial management leveraging of existing funding**

  The effects of the national recession continue to be felt in Fresno County. With the shortfalls in county and cities' budgets, it continues to be important for Fresno COG to provide support to local planning efforts while seeking additional funding. The decreased jobs and housing growth along with slower rates of population growth projections creates less money forecasted for investment.

- ✓ **Balancing Transportation needs with land use**

  The 2014 RTP and SCS was developed following Fresno COG member agency input, Transportation Technical Committee, Policy Advisory Committee, Policy Board direction, and state and federal requirements, along with input from the 2014 RTP Roundtable Committee and community stakeholder input. While continuing to build on the Blueprint Principles, the 2014 RTP and SCS integrates the transportation system with land use and more compact development. Mixed use development with better balance of jobs and housing will help meet the changing needs of our communities. Successful incorporation of this future development can lead to shorter commutes, fewer trips overall, and providing more transportation choices including bike/pedestrian and transit availability.

FIGURE 2-1
Location of Fresno County



2.4 PROJECT CHARACTERISTICS

The Regional Transportation Plan

The Project, as defined by CEQA Statutes, Section 21065, is the preparation of the 2014 revision of the RTP (incorporated by reference). Fresno COG has prepared the 2014 RTP as required by Section 65080 et seq., of Chapter 2.5 of the California Government Code as well as federal transportation reauthorizations and requirements including MAP-21 (Moving Ahead for Progress in the 21st Century Act), and the prior federal reauthorization bill SAFETEA-LU or the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users enacted in 2005. These acts require that RTPs include only those projects which can actually be delivered with funds expected to be available (i.e., financially constrained), and that those projects will help attain and maintain air quality standards consistent with the Clean Air Act Amendments of 1991 and other federal mandates noted below. MAP-21 funds surface transportation programs at over $105 billion for fiscal years 2013 and 2014 and is the first long-term highway authorization enacted since 2005. The RTP must also meet Transportation Conformity for the Air Quality Attainment Plan per 40 CFR Part 51 and 40 CFR Part 93 (reference Chapter 5: "Actions: Assessing Our Transportation Investment Needs" of the 2014 RTP). In addition, the RTP must address requirements set forth in Assembly Bill 32, the California Global Warming Solutions Act of 2006. The California Transportation Commission (CTC) has prepared guidelines (adopted by the Commission in April 2010 plus an Addendum addressing Climate Change and Greenhouse Gas Emissions adopted by the Commission on May 29, 2008) to assist in the preparation of RTPs pursuant to Section 14522 of the Government Code.

The 2014 RTP is an update of the 2011 RTP, which expires in December 2014. This RTP will be in effect upon its adoption, which is scheduled for June 2014. The 2014 RTP is different from the 2011 RTP in that it includes the Sustainable Communities Strategy (SCS) as required by Senate Bill 375 – the Sustainable Communities and Climate Protection Act of 2008 and also contains updates to planned improvement projects. As the designated Regional Transportation Planning Agency (RTPA), Fresno COG is mandated by state and federal law to update the RTP every four (4) years. For the 2011 Revision of the RTP, a Subsequent Environmental Impact Report (SEIR) was prepared and adopted in July 2010.

The Draft PEIR for the 2014 RTP and SCS has been prepared to focus on the evaluation of the environmental effects of the SCS, the newly required element of the RTP, and to analyze the other changes made to the 2011 RTP. In addition, the PEIR is also intended to address cumulative and growth inducing impacts and other issues resulting from the RTP and the SCS as required by CEQA. The SCS, found in Chapter 4 of the RTP, is further described below, and is incorporated by reference.

The RTP is used to guide the development of the Regional Transportation Improvement Program (RTIP). The RTIP is the programming document used to plan the construction of regional transportation projects and requires State Department of Transportation (Caltrans) approval. No project-level assessments of environmental impacts are feasible in this Draft PEIR due to the absence of site-specific information and

the inability to predict when and if particular projects will receive funding or approval. The RTP is also used as a transportation planning document by each of the sixteen member jurisdictions of Fresno COG. The members include the County of Fresno and the cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, and Selma.

The RTP and SCS identifies the region's transportation needs and issues, sets forth an action plan of projects and programs to address the needs consistent with the adopted policies, and documents the financial resources needed to implement the plan. Additional areas of emphasis and policy initiatives in the 2014 RTP include the Congestion Management Process, Environmental Justice, and Goods Movement Planning. In addition, the 2014 RTP and SCS includes updated project lists and updated performance measures. The 2014 RTP is the first to contain an SCS as required by California Senate Bill (SB) 375. SB 375, enacted in 2008, requires that each Metropolitan Planning Organization (MPO) include an SCS that provides an integrated land use and transportation plan for meeting emission reduction targets set forth by the California Air Resources Board (CARB). For Fresno COG, those greenhouse gas reduction targets are as set forth in Table 2-2.

Chapter 5 of the RTP sets forth plans of action for the region to pursue and meet identified transportation needs and issues. Planned investments must be consistent with the goals and policies of the Plan, and must be financially constrained (meaning that funding is available and has been committed by the appropriate agencies to implement the project). These projects are listed in the Constrained Program of Projects (reference the Appendix of the 2014 RTP) and are modeled in Section 3.18 of this Draft PEIR as well as the Air Quality Conformity Analysis[1].

Forecasting methods in the RTP and SCS primarily use the "market-based approach" based on demographic data and economic trends. For best results, the RTP also uses the "build out" method, providing the best estimates for growth in all areas of the County through the year 2040. Within each element of the RTP, assumptions are made that guide the goals, policies and actions. Those assumptions include: demographic projections, land use forecasts, air quality models, performance indicators, capital and operations costs, cost of alternatives, timeframe (short- and long-term), environmental resources and methodology.

Alternative scenarios are briefly discussed in the SCS; they are also addressed and analyzed for their feasibility in this PEIR, as required by California Environmental Quality Act (15126(d), 15125.6(a)). From the Draft PEIR, the alternatives are identified and described. The 2014 RTP and SCS only recommend one alternative scenario, which is the preferred alternative.

[1] The Air Quality Conformity Analysis is required by the Clean Air Act and U.S. Environmental Protection Agency transportation conformity regulations for all nonattainment and maintenance areas for transportation-related criteria pollutants. The Conformity Analysis is used to demonstrate that predicted emissions for the RTP pass both the emissions budget and interim emission tests.

The 2014 RTP and SCS promotes a "balanced" multi-modal transportation system. It calls for increased investments in alternative transportation modes, while accommodating a necessary amount of new highway capacity. The following section of this Introduction includes references to modal plans and constrained projects and a list of all constrained projects by mode is referenced in Chapter 7: "Financing Mobility: Funding Our Transportation Future" of the 2014 RTP.

The Unconstrained Program of Projects (reference Chapter 7 of the 2014 RTP) incorporates the region's unbudgeted "vision". These projects represent alternatives that could be moved to the constrained program if support for an individual project remains strong and if project funding is identified. Status as an unconstrained project does not imply that the project is not needed; rather, it simply cannot be accomplished given the fiscal constraints facing Fresno County. Fresno COG will be vigilant in its search for funding to support these projects.

Unconstrained projects are not included in the air quality conformity analysis. In the future, as the funding picture changes and community values and priorities for transportation projects become redefined and honed, unconstrained projects may be moved to the constrained program. Should this occur, the 2014 RTP would be amended and a new assessment of the Plan's conformity with state and federal air quality rules and standards would be undertaken. Only funded transportation improvement projects can be reflected in the RTP and analyzed in the associated conformity finding.

Each element in the RTP addresses proposed actions to implement the goals and policies identified in Chapter 6: "Policies: Foundation of the Plan" of the RTP. These actions outline specifically how the goals of the RTP and SCS will be accomplished.

2.5 2014 RTP PROVISIONS

Each mode available for the movement of people and goods in and through Fresno County is addressed in the 2014 RTP and SCS along with transportation/air quality strategies, as listed below:

1. Sustainable Communities Strategy: Chapter 4
2. Goals, Objectives, and Policies: Chapter 6
3. Multimodal: Section 5.2
4. Highway, Streets, and Roads: Section 5.3
5. Urban Mass Transportation: Section 5.4
6. Rural Area Public Transportation & Social Service Transportation: Section 5.5
7. Aviation: Section 5.6
8. Non-Motorized Transportation: Section 5.7
9. Rail: Section 5.8
10. Specific Transportation Strategies & Management Systems: Section 5.11
11. Air Quality: Section 5.10

12. Environmental Mitigation: Section 5.11
13. Financial Element: Chapter 7
14. Public Participation: Chapter 2

Each mode of transportation is presented in a separate section of Chapter 5 of the 2014 RTP, which includes an inventory of the existing system, accomplishments, an assessment of needs, and proposed actions. Highlights of these sections are also included in this Chapter by mode. The latter will be divided into short-range (0-4 years) and long-range (5-26 years). Proposed actions will be based upon projected travel demand and appropriate policy. The short-range measures will ultimately form the basis for the Regional Transportation Improvement Program (RTIP) and the Federal Transportation Improvement Program (FTIP).

Federal transportation legislation requires that long-range transportation plans must include only those projects which have a "reasonably available" source of funding. This financially "constrained" list will define those projects which are programmed between 2014/15 to 2017/18. The RTP and SCS also defines projects which are deemed necessary, but do not have identified funding sources, in order to show a complete picture of transportation systems which are needed for the future vitality of the region.

Transportation Conformity with the Clean Air Act Amendments of 1990

The Federal Clean Air Act (FCAA) requires states to improve coordination between transportation and air quality planning and set a firm schedule for attainment of air quality standards. Federal transportation legislation strengthens the reforms of the Federal Clean Air Act Amendments (FCAAA) by requiring that local and state plans in nonattainment areas, such as in the San Joaquin Valley, be consistent with, or conform to, the State Implementation Plans (SIP) for clean air. The financially constrained projects listed in the RTP, have been analyzed to assure that their implementation will contribute to the attainment of improved air quality consistent with adopted SIPs.

The 2014 Regional Transportation Plan's goals, objectives and policies are reflected in Chapter 6 of the RTP, as well as below, and have been developed to serve as the foundation for both short and long-term planning. For purposes of the RTP and SCS the following definitions will apply.

Sustainable Communities Strategy

Fresno COG updates its Regional Transportation Plan (RTP) every four years. Senate Bill 375 (SB 375), which went into effect in 2009, added statutes to the California Government Code to encourage planning practices that create sustainable communities. It calls for each Regional Transportation Planning Agency (RTPA) to prepare an SCS as an integrated element of the RTP. The SCS is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from autos and light trucks. Fresno COG is including the SCS for the first time in its 2014 RTP. Reference Chapter 4 of the 2014 RTP for a thorough description of the Fresno COG SCS Development Process.

Three demographic measures form the primary SCS or future year 2035 and 2040 forecasts: household population, housing units, and employment. The forecasts are shown in Table 2-1. It is important to note that the population and employment forecasts were held constant for each SCS scenario and were the basis for the spatial distribution of land use in each scenario.

TABLE 2-1
Demographic Forecasts - Fresno County Years 2008 – 2040
2014 RTP and SCS (Project)

Year	Household Population	Housing Units	Employment
2008	912,521	310,579	345,816
2012	948,790	325,662	350,214
2020	1,059,233	363,142	363,581
2035	1,272,410	434,519	427,727
2040	1,343,709	458,330	449,111

Source: Fresno COG and the *San Joaquin Valley Demographic Forecasts: 2010 to 2050*

The 2014 RTP and SCS seeks to guide the Fresno region toward a more sustainable future by coordinating land use, housing, and transportation planning to create communities that are more compact, walkable, and transit oriented. Sustainability is defined as simultaneously meeting current economic, environmental, and community needs, while ensuring that the ability of future generations to meet their needs is not jeopardized. A prosperous economy, a healthy environment, and social equity are described as the "Three Es" of sustainability.

The path toward living more sustainably is clear: focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, protect sensitive habitat and open space, invest in a transportation network that provides residents and workers with transportation options that reduce GHG emissions, and implement the plan through incentives and collaboration. Figure 2-2 shows Scenario B, the preferred land use scenario for the 2014 RTP and SCS. A total of four SCS land use scenarios were developed during preparation of the SCS through an open and engaging public process. Several transportation project scenarios were also initially created, which were eventually narrowed down to one project list and applied to all land use scenarios. The four alternative scenarios considered included:

- ✓ **Scenario A - Public input from November 2012 workshop.** Scenario "A" was based on public input from the November 2012 workshop conducted by the Fresno COG. Participants were asked to place chips at locations where growth is preferred. They also provided input about types of development at the preferred locations.
- ✓ **Scenario B (Preferred) – Current planning assumptions.** Scenario "B" follows current general and specific plan updates. Growth allocation follows historic trends. It includes development in Friant Ranch, Millerton, and the proposed pharmacy school.
- ✓ **Scenario C – Foothill growth to City of Fresno.** Scenario "C" was proposed by the RTP Roundtable largely at the request of a collection of community-based organizations who expressed their belief

that Fresno and Clovis plans were not 'ambitious' enough to make a significant impact on environmental issues. The Scenario would shift foothill growth from unincorporated Fresno County to the downtown and corridors in the City of Fresno.

- ✓ **Scenario D - Foothill growth to existing communities.** Scenario "D" was proposed by the Coalition of Community Organizations after Scenario's A, B and C were presented and vetted through the public process, and as such, was only reviewed by the Fresno COG committee. While Fresno COG Staff did work with the proposing group to model scenario results and discuss basic information in regards to this scenario, Scenario D is not formally analyzed within this PEIR, due to the lack of public process vetting.

Through the combined vision and efforts of the local agencies in Fresno County, significant strides are being made toward sustainable growth, walkable communities, and mixed-use development—values that are evident in their current planning assumptions and reflected in the RTP and SCS.

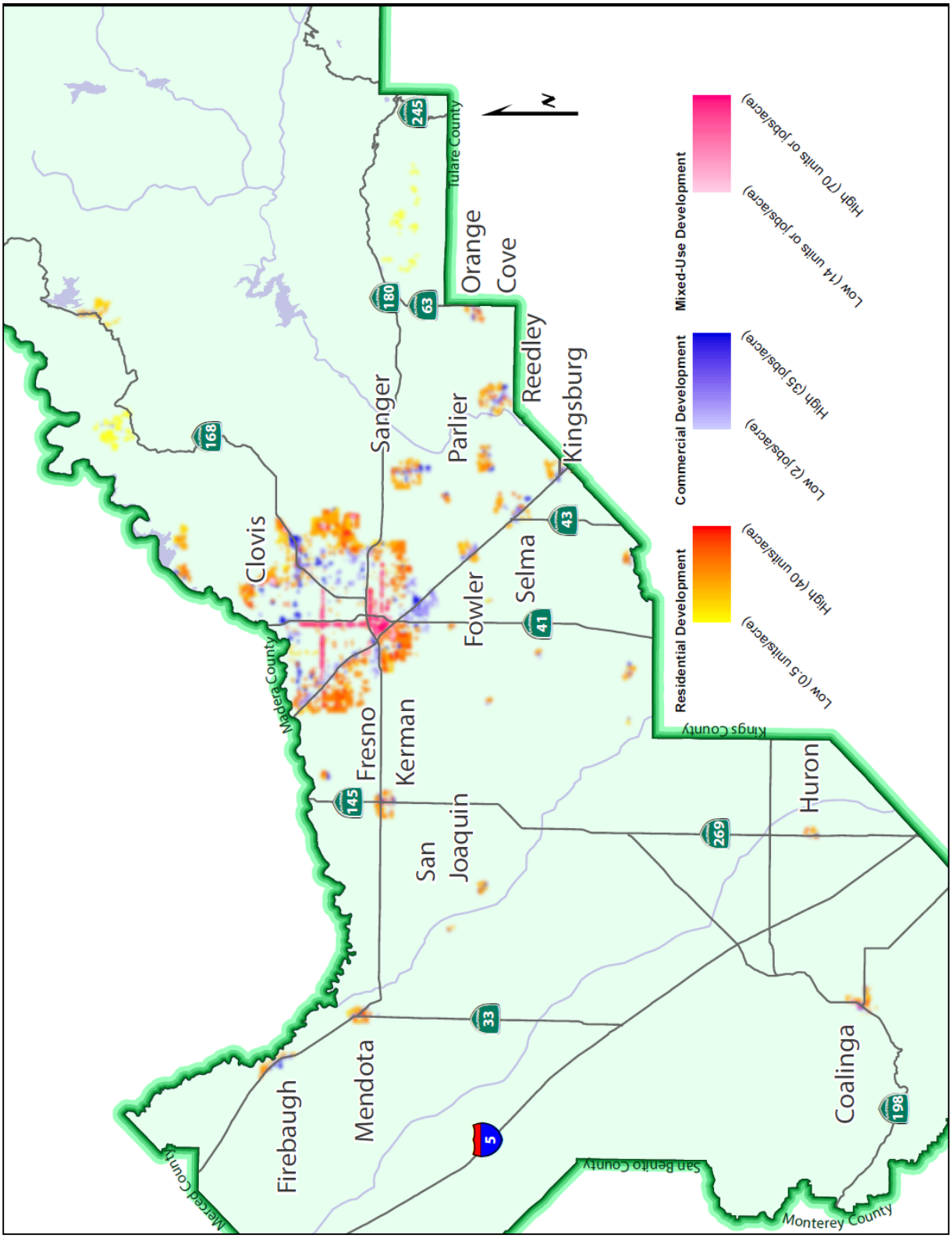
As part of its mandate under SB 375, in 2010, the California Air Resources Board (CARB) adopted specific GHG emission reduction targets for cars and light trucks for each of the state's 18 metropolitan planning organizations from a 2005 base year as detailed in CARB's Staff Report and Functional Equivalent Document dated August 2010. The GHG targets set for the Fresno region call for a 5 percent per capita reduction by 2020, and a 10 percent per capita reduction by 2035. SB 375 requires that Fresno COG demonstrate in its SCS that GHG emission reduction targets will be met for 2020 and 2035. If not, then an Alternative Planning Strategy (APS) shall be prepared to demonstrate how the targets can be met through the alternative strategies in the APS. Fresno COG will be able to meet the targets set by the ARB through its 2014 RTP/SCS as shown below in Table 2-2. The reduction identified for 2040 is a projection and not adopted by CARB.

TABLE 2-2
Demonstration of GHG Emission Reduction Targets

Year	GHG Per Capita Reduction Targets	Fresno COG Per Capita GHG Reduction
2020	5.0%	8.9%
2035	10.0%	11.0%
2040	NA	12.0%

Fresno COG will continually update modeling tools and planning assumptions to reflect the latest information available. Should the likely future development pattern change, this would be reflected in the next regional growth forecast, SCS land use pattern and RTP Update. Fresno COG will also continue to improve modeling capabilities and update modeling assumptions to reflect the most recent published and accepted data regarding changes in travel behavior and technological advances.

FIGURE 2-2
Preferred 2014 RTP SCS Scenario



It is important to note that the 2014 RTP and SCS addresses vehicle miles traveled from a broader range of vehicles than those addressed in SB 375 – such as public transit buses, heavy duty trucks, and school buses. The SCS focuses only on the requirements of SB 375 which call for travel related GHG reductions for the specific vehicle classes of cars and light trucks. Other performance metrics related to GHG emissions are addressed in the balance of the 2014 RTP chapters where appropriate. In terms of cars and light trucks, there are three primary GHG emissions reduction strategies developed by the State. The SB 375 SCS requirements address regional land use and housing accommodation in the context of transportation investments. In future years, the State will also require increased use of lower carbon fuels and increased fuel efficiency in vehicles.

Transportation strategies contained in the RTP and SCS – investing in public transit system, managing transportation demand, making transportation system improvements, and continuing to expand and improve bike and pedestrian facilities - are major components of the SCS. However, the SCS also focuses on the general land use growth pattern for the region, because geographical relationships between land uses—including density and intensity—help determine the need for travel.
In summary, under SB 375, an SCS must:

- ✓ Identify future land use patterns;
- ✓ Identify areas to accommodate long-term housing needs as well as 8-year housing needs;
- ✓ Consider resource areas and farmland;
- ✓ Identify transportation needs and the planned transportation network;
- ✓ Set forth a future land use pattern to meet GHG emission reduction targets

SCS requirements do not mean that the SCS creates a mandate for certain land use policies at the local level. SB 375 specifically states, "Neither a sustainable communities strategy nor an alternative planning strategy regulates the use of land, nor, except as provided by subparagraph (J), shall either one be subject to any state approval. Nothing in an SCS shall be interpreted as superseding the exercise of land use authority of cities and counties within the region." (Government Code Section 65080(b)(2)(K)). Rather, the SCS provides a regional policy foundation that local governments may build upon as they choose.

Thus, local jurisdictions maintain the discretion and will be solely responsible for determining consistency of any future projects with the SCS, including discretion in certifying the environmental review for a project, regardless of eligibility for streamlining.

Cities and Counties have and will continue to be involved in the SCS planning process and will be encouraged by Fresno COG to recognize the land use and transportation policies developed in the SCS. Federal and State transportation funds go through the MPOs to the jurisdictions, so there certainly is an implication for collaboration and working together. It should be noted; however, that as growth and development occurs in each of the cities and within the County, it will be the cities and the County that review and approve development proposals and determine consistency with their plans, programs, and

policies; not Fresno COG. Fresno COG has no land use authority to approve future growth development as it occurs over the life of the RTP (Year 2040).

Goals, Objectives, and Policies

The 2014 RTP and SCS contains the following goals, objectives, and policies to implement the RTP and SCS over the 25-year planning period. A definition of each is provided below:

- ✓ **Goal:** A "Goal" is the end toward which the overall effort is directed; it is timeless, general and conceptual. The intent of the overall goal is to provide a framework for subsequent objectives and policies

- ✓ **Objective:** An "Objective" provides clear, concise guidance to obtaining the goal. Objectives are successive levels of achievement in movement toward a goal. They are results to be achieved by a stated point in time. Individual objectives are capable of being quantified and realistically attained

- ✓ **Policy:** A "Policy" is a direction statement that guides present and future decisions on specific actions. Policies should support the attainment of objectives

General Transportation Goals, Objectives, and Policies

Goal: **An efficient, safe, integrated, multimodal transportation system.**

Objective: Develop an integrated multimodal transportation network that supports and enhances the region's economy and serves the needs of a growing and diverse population for transportation access to jobs, housing, recreation, commercial, and community services as well as goods movement.

Policies:

- *Develop a regional streets and highways system that has a balanced mix of high speed and local corridors which are functional and flexible for intermodal use, providing connectivity to the region, state and nation.*
- *Pursue development of strategies and methods to enhance the efficient movement of freight through the multimodal network.*
- *Work cooperatively with the private sector to ensure that the collected information accurately reflects existing and forecasted conditions that are of importance from a freight transportation perspective.*
- *Ensure that public and private transportation providers and other interested parties have an opportunity to provide input into the transportation planning process.*
- *Integrate transportation modes through a coordinated transportation systems management process.*
- *Provide for efficient, multi-destination trips through the coordination of urban and rural public transportation.*

- *Develop bicycle and pedestrian facilities as viable alternatives to single-occupancy vehicle use.*
- *Develop air transportation facilities and services that are complementary to other modes of transportation.*
- *Decisions on improvements to the transportation system shall take into account the effective use of all modes and facilities.*
- *Encourage and support the development of methods to expand and enhance transit services and to increase the use of such services.*
- *Encourage jurisdictions to ensure that the needs of pedestrians, bicyclists, and individuals with disabilities are included in the project review process.*
- *Support the coordination or consolidation (where appropriate) of transit and paratransit services to provide more effective, efficient and accessible transportation services.*
- *Encourage local jurisdictions to provide incentives to promote public transit, walking and bicycling.*
- *Encourage and promote ridesharing, including carpooling and vanpooling as an alternative to single-occupancy vehicle use.*
- *Fresno COG continues to encourage local jurisdiction's efforts to facilitate development of housing in all price ranges, to meet the housing needs of the local workforce and population, including low income residents. Fresno COG will develop the required Regional Housing Needs Allocation Plan to guide local agencies' assessments of housing supply and price ranges.*

Objective: Maintain and improve existing facilities as the basic system which will address existing and future travel demands.

Policies:

- *Manage the transportation system in a manner designed to increase operational efficiency, conserve energy and space, reduce air pollution and noise, and provide for effective goods movement, safety, personal mobility and accessibility.*
- *Continue support for the preservation of existing transportation facilities and, where practical, addressing transportation needs by using existing transportation modes efficiently.*
- *Maintain stringent safety requirements for all transportation modes, and identify problem (hazardous) locations and implement counter measures for anticipated problems wherever possible.*
- *Identify those transportation problems where transportation systems management can be effective.*

Objective: Manage the financial resources which are available from the government, the private sector, and users of the transportation system in a cost-effective manner to meet regional needs.

Policies:

- *Procure and leverage federal, state and local transportation funding to the maximum degree possible, in order to develop a regional transportation network which serves the residents of the region in the most economical, effective and efficient manner possible.*
- *Encourage new or reconstructed facilities to incorporate design standards which extend the life cycle and reduce maintenance costs.*
- *Pursue additional funding sources for development of major transportation programs and projects. Work with all interest groups to reach consensus and initiate an active public information program regarding transportation funds needed.*

Goal: **Improved mobility and accessibility for all regardless of race, income, national origin, age, or disability.**

Objective: To incorporate concern for environmental justice into transportation decisions.

Policies:

- *Seek to ensure fair distribution of the benefits and burdens of transportation projects.*
- *Seek to ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.*
- *Encourage local transportation agencies to leverage federal funding to address unique challenges of the low income, disabled and elderly populations.*

Goal: **Planning outcomes that are consistent with various planning efforts.**

Objective: Ensure consistency with emerging planning efforts.

Policies:

- *During planning processes, seek to ensure that planning efforts are as consistent as feasible with planning efforts such as: the Blueprint Planning Principles, Health in All Policies, the intent of SB375 (Senate Bill 375 also known as the Sustainable Communities Protection Act of 2008), Caltrans' Complete Streets Program, and statewide and federal air quality goals, etc.*
- *Planning and programming processes should incorporate performance measures and outcomes as integral components.*

Goal: **A regional transportation network consistent with the intent of SB375 (Senate Bill 375 also known as the Sustainable Communities Protection Act of 2008).**

Objective: Development of a regional transportation network which is environmentally sensitive and helps reduce greenhouse gas emissions wherever possible.

Policies:

- *Avoid or fully mitigate all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources, as feasible.*
- *Encourage infill development in areas that take advantage of remaining capacity in existing transportation facilities.*

- *Encourage energy conservation through alternatives to single occupancy vehicles, increased transportation efficiency and facility design.*
- *Project level decisions should give priority to safety, air pollution, noise and energy considerations.*
- *Support the implementation of Transportation System Management, Transportation Demand Management, and Transportation Control Measures that reduce emissions on the circulation system.*
- *Continue participation in the development of State Implementation Plans (SIP's) to attain the National Ambient Air Quality Standards (criteria pollutants) with the San Joaquin Valley Unified Air Pollution Control District.*
- *Continue to support coordinated transportation planning efforts between the eight Valley Metropolitan Planning Organizations (MPO's) located in the San Joaquin Valley nonattainment air basin.*
- *Endeavor to ensure the consistency of regional transportation planning efforts with applicable Federal, State, and local energy conservation programs, goals, and objectives.*

Goal: **Support cooperative efforts between local, state, federal agencies and the public to plan, develop and manage our transportation system.**

Objective: Strengthen intergovernmental organizational relationships and lines of communication which foster an understanding and awareness of the overall impacts of transportation/land use/air quality decision making.

Policies:

- *Coordinate with other public agencies to ensure that the overall social, health, economic, energy and environmental effects of transportation decisions are understood, and given opportunity for input, by the general public and groups that have been traditionally underrepresented in planning processes.*
- *Work closely with local land use agencies to ensure that land use planning is coordinated with transportation planning to fully mitigate the traffic impacts of new development to the greatest degree possible.*
- *Ensure that existing and future land use plans of the communities within the region are recognized in the formulation of transportation decisions.*
- *Work together with the appropriate public agencies to identify and potentially preserve rights-of-way for construction of future transportation projects.*
- *Communicate with local land use agencies on the likely impacts of transportation policy decisions on land use and development; and strive for consistency (where appropriate) between transportation plans and programs and applicable land use and development plans.*

Goal: **Attainment and maintenance of federal and state ambient air quality standards (criteria pollutants) as set by the Environmental Protection Agency and the California Air Resources Board.**

Objective: Participate in and support the coordinated transportation and air quality planning efforts between the eight San Joaquin Valley Metropolitan Planning Organizations, Caltrans, the San Joaquin Valley Air Pollution Control District, the Federal Highway Administration, Federal Transit Administration, the California Air Resources Board, and local agencies charged with land use planning.

Policies:

- *Participate in developing the transportation/air quality modeling protocol for State Implementation Plans (SIPs) with the San Joaquin Valley Air Pollution Control District.*
- *Work with community members and organizations, including those that have been traditionally underrepresented, to provide outreach and involvement in relevant air quality policies, programs and issues.*
- *Support the efforts of the San Joaquin Valley Air Pollution Control District to integrate appropriate policies and implementation measures identified in the Air Quality Guidelines for General Plans into local general plans.*
- *Support the air pollution enforcement and educational efforts of the San Joaquin Valley Air Pollution Control District.*
- *Continue Fresno COG's partnership with the San Joaquin Valley Air Pollution Control District as a Healthy Air Living Business Partner.*

Objective: Implement all appropriate Transportation System Management, Transportation Demand Management, and Transportation Control Measure strategies as technologically and economically feasible.

Policies:

- *Insure consistency between and among the goals, objectives, policies, and implementation measures of the Regional Transportation Plan, the Transportation Improvement Program, and State Implementation Plans (SIPs).*
- *Improve vehicular flow and efficiency of the region's circulation system using intelligent transportation systems where feasible.*

Objective: Integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources and to create a more healthy and livable environment.

Policies:

- *Consider the air quality impacts of mobile sources when planning transportation systems to accommodate expected growth in the community thereby reducing the consumption and dependence upon non-renewable energy resources used by mobile sources of emissions.*
- *Non-single occupancy and lower/zero emission vehicle modes shall be pursued as preferred alternatives where feasible.*

- *Support the development of infrastructure required for alternative fueled vehicles as well as zero emission vehicles.*
- *Continue Fresno COG's established policy to fund cost-effective projects that facilitate air quality improvement through emission reductions with Congestion Mitigation and Air Quality Improvement funds.*

Highways, Streets and Roads

Goal: **An integrated and efficient highways, streets and roads network.**

Objective: Develop and implement an integrated highways, streets and roads network that provides mobility for both urban and rural residents including the movement of goods.

Policies:

- *Improve the urbanized area circulation system, including the future urban freeway network.*
- *Prioritize transportation improvements that accommodate travel, while fostering the development of safety, maintenance and operational improvements on the streets and highways network within Fresno County.*
- *Continue work with member agencies to ensure that the inter- and intra-county movement of agricultural commodities remains a priority.*
- *Preserve and promote the use of existing transportation facilities where feasible.*
- *Promote development of a highways, streets and roads network that provides for connectivity of the metropolitan network with the system outside the metropolitan network.*
- *Preserve rights of way for construction of future street and highway projects where feasible.*
- *Develop a convenient, safe and efficient interface between transportation modes.*

Goal: **Efficient use of available transportation funding.**

Objective: Pursue all possible federal, state and local transportation funding related to development, maintenance and rehabilitation of the highways and streets network.

Policies:

- *Track overall transportation financing issues to ensure that Fresno County agencies are aware of, and able to react in a timely fashion to, any new or innovative financial strategies.*

Goal: **Acceptable level-of-service for the highways, streets and roads network.**

Objective: Maintenance of acceptable levels-of-service on the highways, streets and roads network that will allow for efficient movement of people and goods.

Policies:

- *Facilitate communication between Fresno COG and local land use agencies to analyze impacts on the regional transportation system during the decision making process.*

- *Enhance the development of a highways and streets network which will relieve current and future congestion.*
- *Monitor levels of service on the streets and highways network within Fresno County to ensure safe and efficient movement of people and goods.*
- *Work cooperatively with the private sector to ensure that the mobility needs of the business community within Fresno County are addressed.*
- *Continue to coordinate regional transportation network planning with the eight Valley Regional Planning Agencies.*
- *Manage the highways, streets and roads network in a manner designed to increase operational efficiency, reduce air pollution and provide adequate mobility for both people and goods.*

Mass Transportation

Goal: **An efficient, safe, and fiscally responsible public transportation mobility system.**

Objective: Continue to pursue expanded federal, state and local funding for both public and social service transportation, to provide mobility opportunities to the maximum number of people in the region.

Policies:

- *Provide a transit system that meets the public transportation needs of the service area.*
- *Provide transit services that serve low income, elderly, and disabled communities, and include those users in the project review process.*
- *Support the continued coordination and consolidation of social service transportation.*

Goal: **A quality, convenient, safe and reliable public transportation service.**

Objective: Encourage and prioritize safety, appropriate frequency of bus service, reasonable fares and the provision of adequate service to satisfy the transit needs which are reasonable to meet.

Policies:

- *Provide reliable and convenient public transit service.*
- *Provide clean, attractive and comfortable vehicles and facilities.*
- *Provide a safe system.*

Goal: **An efficient and effective public transportation system.**

Objective: Consider/evaluate advantages and disadvantages of projects, including economic, environmental and social factors.

Policies:

- *Maximize public transportation patronage.*
- *Minimize operating and capital expenses.*
- *Encourage the private sector to provide service when economically feasible.*

Goal: **Public transit's services with a positive public image in communities served.**

Objective: Provide complete and accurate information that makes public transportation "user friendly".

Policy:

- *Create and produce publications that promote the use of public transportation to all segments of the region.*

Goal: **An integrated multimodal transportation system which facilitates the movement of people and goods.**

Objective: Develop a seamless multimodal transportation network.

Policies:

- *Coordinate service to facilitate multimodal and inter-system transfers.*
- *Coordinate fare and transfer policies along with service information programs.*

Goal: **A coordinated policy for public transportation that complements land use and air quality policies.**

Objective: Support transportation investments that work toward accomplishing air quality goals, optimize utilization of land and encourage a stable economic base.

Policies:

- *Provide incentives to reduce dependency on single vehicle occupancy travel without compromising travel mobility.*

Aviation Goals

Goal: **A fully functional and integrated air service and airport system that is complementary to the regional transportation system.**

Objective: Maintain and improve the airport system in Fresno County.

Policies:

- *Provide for the orderly and timely development of a system of airports adequate to meet the air transportation needs of the region while minimizing airport-related land use, noise, and other environmental problems.*
- *Encourage air travel as an energy efficient mode of transportation for long-distance travel.*
- *Coordinate airport planning with airport owners and managers, the Airport Land Use Commission, the Federal Aviation Administration, Caltrans Division of Aeronautics and local agencies in the areas of transportation, land use, economic development and resource utilization.*
- *Administer the policies and procedures of the Fresno County Airport Land Use Commission as listed in the California Land Use Planning Handbook.*
- *Participate in efforts to promote airport land use planning such as the California Airport Land Use Consortium.*
- *Adopt the Basic Utility Stage 1 classification, as defined by the Federal Aviation Administration, as the minimum standard for public use airports.*
- *Prepare site selection studies for the location of new airports as appropriate.*

Non-Motorized Transportation Goals (includes bicycle, pedestrian, active transportation)

Goal: **Maximize bicycling and walking through their recognition and integration as valid and healthy transportation modes in transportation planning activities.**

Policies:

- *Include bicycle and pedestrian transportation planning as integral parts of the Fresno COG's transportation planning program.*
- *Maintain representation of the bicycling community on Fresno COG's Transportation Technical Committee.*
- *Encourage and assist member agencies to develop new or update existing bicycle and pedestrian transportation plans which are integrated with the regional bikeways system and which provide for bicycle use and walking as alternatives to the automobile for shorter trips.*
- *Encourage member agencies to include bicycling and pedestrian sections in all transportation-related documents including, but not limited to, circulation elements of general, community, and specific plans.*
- *Encourage and facilitate interagency cooperation and coordination in the development and implementation of bicycling and pedestrian plans and projects.*
- *Coordinate Fresno County's bikeways system with those of adjoining counties.*
- *Encourage member agencies to provide for bicycle- and pedestrian-friendly development, including bicycle travel and walking in new development plans and projects.*
- *Encourage member agencies to include bicycle parking requirements in all land-use/site development requirements that address automobile parking.*
- *Participate in efforts of member agencies and other groups and organizations to work with irrigation districts, railroads, and other owners of linear rights-of-way that have the potential to accommodate bicycle and pedestrian facilities, the development of which would strengthen the countywide bicycle transportation system.*
- *Encourage through educational and promotional efforts bicycling and walking as transportation modes which promote cleaner air, ease traffic congestion, conserve nonrenewable sources of energy, and promote health.*
- *Publicize bicycling and walking planning projects through the dissemination of articles, newsletters, reports and other appropriate methods.*
- *Provide information to the public on the regional bikeway system and its support facilities.*
- *Encourage member agencies to work with major employers to provide incentive programs for bicycling including shower facilities, guaranteed ride home programs and mileage reimbursement for work-related bicycling miles.*

Goal: **Safe, convenient, and continuous routes for bicyclists and pedestrians of all types which interface with and complement a multimodal transportation system.**

Policies:

- *Support the development of a countywide system of designated bikeways and pedestrian connections that link communities, activity centers (schools, libraries, community centers, colleges, universities, hospitals, medical offices, senior residences, parks, athletic facilities, governments services, employment centers, high-density residential areas, and commercial centers) and to regional and local public transit systems (including rail) at stops, stations and terminals and provides for all types of bicyclists and pedestrians.*
- *Encourage member agencies and Caltrans, to the extent feasible and practical, to maintain the regional bikeways system free of deterrents to bicycling such as debris, gravel, glass, leaves, and any other extraneous materials.*
- *Encourage member agencies to adopt policies or design standards to include accommodations for bicycle and pedestrian travel on all new construction, reconstruction, or capacity increasing projects on major roadways where reasonably feasible. Such accommodations may be made by a separate bike and pedestrian path, sidewalks, bicycle lanes, or a shared roadway. A shared roadway would include a wide outside lane or a paved shoulder.*
- *Encourage member agencies and Caltrans to develop, stripe and sign bikeways consistent with state design standards in order to develop a visually consistent, clear, simple and recognizable bikeways system with clearly defined travel areas and boundaries.*
- *Support member agency implementation of AB 1581, effective January 1, 2008, requiring that a traffic-actuated signal be installed and maintained so as to detect lawful bicycle traffic on the roadway.*
- *Encourage member agencies and Caltrans to install bicycle-safe drain grates.*
- *Encourage member agencies and Caltrans to give priority to bikeway and pedestrian projects that will link existing separated sections of the system and that will serve the highest concentration of bicyclists and pedestrians and destinations of highest demand.*
- *Encourage member agencies to provide bicycle parking facilities, including secured storage facilities where appropriate, at public and commercial areas, centers of employment, schools, recreational areas, health service facilities, air and bus terminals, major transit stops, and other places that attract large groups of people.*
- *Encourage member agencies and Caltrans to provide support facilities on appropriate bikeways, including rest stops with restrooms, water, and tables.*
- *Encourage member agencies and Caltrans to install, to the extent feasible and practicable, trees along trails, bikeways, and pedestrian facilities that will provide shade on summer afternoons.*

- *Encourage local agencies and Fresno County Rural Transit Agency to establish bicycle-to-transit connections throughout the County, including bicycle park-and-ride facilities at transit centers to serve regional route use and the accommodation of bicycles on public transit.*
- *Assist member agencies to implement the Complete Streets Act by incorporating complete street considerations in the Valley-wide Blueprint Implementation Roadmap.*

Goal: **Improved bicycle and pedestrian safety through education and enforcement.**

Policies:

- *Support the development and promotion of an education plan and program which increases awareness of the rights and behavior of bicyclists and pedestrians within the traffic environment.*
- *Support enforcement of traffic laws related to cyclist and pedestrian behavior and cyclist/pedestrian/motorist conflicts.*
- *Disseminate information to member agencies, school districts, and other appropriate agencies and organizations on model programs to increase bicycle helmet use and bicycle and pedestrian safety.*

Goal: **Increased development of the regional bikeways system, related facilities, and pedestrian facilities by maximizing funding opportunities.**

Policies:

- *Identify available and potential new bicycle and pedestrian funding sources and their requirements and provide this information to member agencies and other interested groups.*
- *Work with member agencies to define priorities for, and progress towards, implementation of the regional bikeway system.*
- *Provide favorable comments on reviews of grant applications for projects that seek to enhance bicycling and pedestrian facilities.*

Rail Goals

Goal: **A safe, efficient and convenient rail system which serves the passenger and freight needs of the region and which is integrated with and complementary to the total transportation system.**

Objective: Promote the growth of rail passenger and freight usage.

Policies:

- *Seek ways to either relocate all mainline Burlington Northern Santa Fe passenger and freight rail traffic to the Union Pacific alignment through the City of Fresno or relocate BNSF and/or UP freight rail traffic to an alignment west of the Fresno Metropolitan Area to assure smoother, faster and safer service.*
- *Consider development of a multimodal transportation terminal facility in, or in close proximity to, the Central Business District.*

- *Give high priority to grade separation construction programs.*
- *Close grade crossings of main lines with minor streets and alleys wherever possible to avoid unnecessary conflict.*
- *Protect grade crossings of main lines with automatic gates.*
- *Seek legislative changes to rail abandonment procedures to require that all lines proposed for abandonment be brought under public ownership as a precondition to abandonment.*
- *Consider all advantages and disadvantages of projects, including economic, environmental, and social factors.*
- *Endorse the following Amtrak San Joaquin Route passenger rail service improvements:*
  - *Additional train service for the San Joaquin Route.*
  - *Improved station facilities servicing the San Joaquins.*
  - *Additional direct train service to Sacramento.*
  - *Additional direct train service to the East Bay Area.*
  - *Direct train service to Los Angeles.*
- *Incorporate design awareness of multimodal transportation facilities in development of highway systems.*
- *Support planning for rail services at a similar level of detail as is currently done for roads.*
- *Support the planning and construction of a High-Speed Rail System in the San Joaquin Valley which directly connects the major population centers within the Valley.*
- *Support the location and development of the High-Speed Rail Heavy Maintenance Facility in Fresno County.*
- *Maintain representation of the rail community on Fresno COG's Transportation Technical Committee.*

Goal: **A transportation system that efficiently and effectively transports goods throughout Fresno County.**

Objective: Increase the use of air and rail transportation and the efficiency of the truck transportation system.

Policies:

- *Encourage the multimodal movement of goods through Fresno County where possible.*
- *Recognize freight rail service in Fresno County as a significant transportation mode, providing service to industry.*
- *Provide special consideration to transportation projects that improve the operational efficiency of goods movement and air quality.*

Multimodal Element

Transportation planning has relied heavily in the past upon the analysis of separate and discrete transportation modes. However, as we try to deal with congestion and the problems of air pollution, there is a growing awareness that solutions must be evaluated within the context of an integrated system, rather than by individual mode only.

This systematic look at our capabilities encourages analysis and planning which look at transportation systems that can be brought to the resolution of a need for travel or movement of goods. This approach is helped by looking at the characteristics of our County, which may affect travel demands, including but not limited to those which follow:

- ✓ Fresno is the major population center for the Valley.
- ✓ Fresno County contains Sequoia National Park and two national forests.
- ✓ Route 41 north out of the Fresno-Clovis Metropolitan Area (FCMA) is the primary corridor to Yosemite, one of the two most visited national parks in the nation.
- ✓ As the largest producer of farm commodities in the world, Fresno County has a strong "farm to market" travel demand affecting local roads and the state highway system. Movement of goods occurs throughout the County, as farm and other commodities are brought to market and to inter-regional routes.
- ✓ The county is crossed by two north-south corridors, State Route 99 and Interstate 5. Each of them is key to the statewide network.
- ✓ Recreational trips are served by several state highways: Routes 33, 41, 168, 180, 99, and 5.
- ✓ Fresno is served by Amtrak which has experienced increasing ridership, even though continuous rail service to Sacramento is limited and to southern California is yet to be developed.
- ✓ While the distances between destinations and generally low densities have encouraged automobile usage, there is a large rural and urban population in need of public transit service. The systems that are in place are in need of more stable financing.
- ✓ Fresno-Yosemite International Airport provides a hub airport service to its service area of six counties.
- ✓ The climate and terrain are compatible with bicycle use for short commutes and recreational trips.
- ✓ Existing rail lines offer potential for an expanding share of commodity movement.

Achievement of some ultimate state of multimodal transportation service would be a system in which a traveler could make a "seamless" journey with connections between modes, taking minimum effort and involving little delay. Currently, such an ideal state can be reached only in the country's largest and most advanced cities. In these areas, land use densities and developed systems of commuter rail lines, subways, transit buses, trolleys, airport shuttles, and taxis offer a variety of choice and scheduling flexibility that make travel times and accessibility reliable. In the Central Valley, where cities have experienced much of their growth since the invention of the automobile, residential densities tend to be comparatively low, with streets and land uses designed to facilitate the use and storage of the personal automobile.

During the hot summer days when upper temperatures can remain around the 100 degree mark, the attractiveness of the air-conditioned car is strong. It will require even stronger commitment to the goals of air quality and the quality of life in this County to make the changes needed to implement the "seamless" multimodal system. It involves people making conscious choices to use alternative transportation modes, and the provision of those alternate systems in a manner which encourages their use. To succeed, those efforts would have to focus on long-term changes:

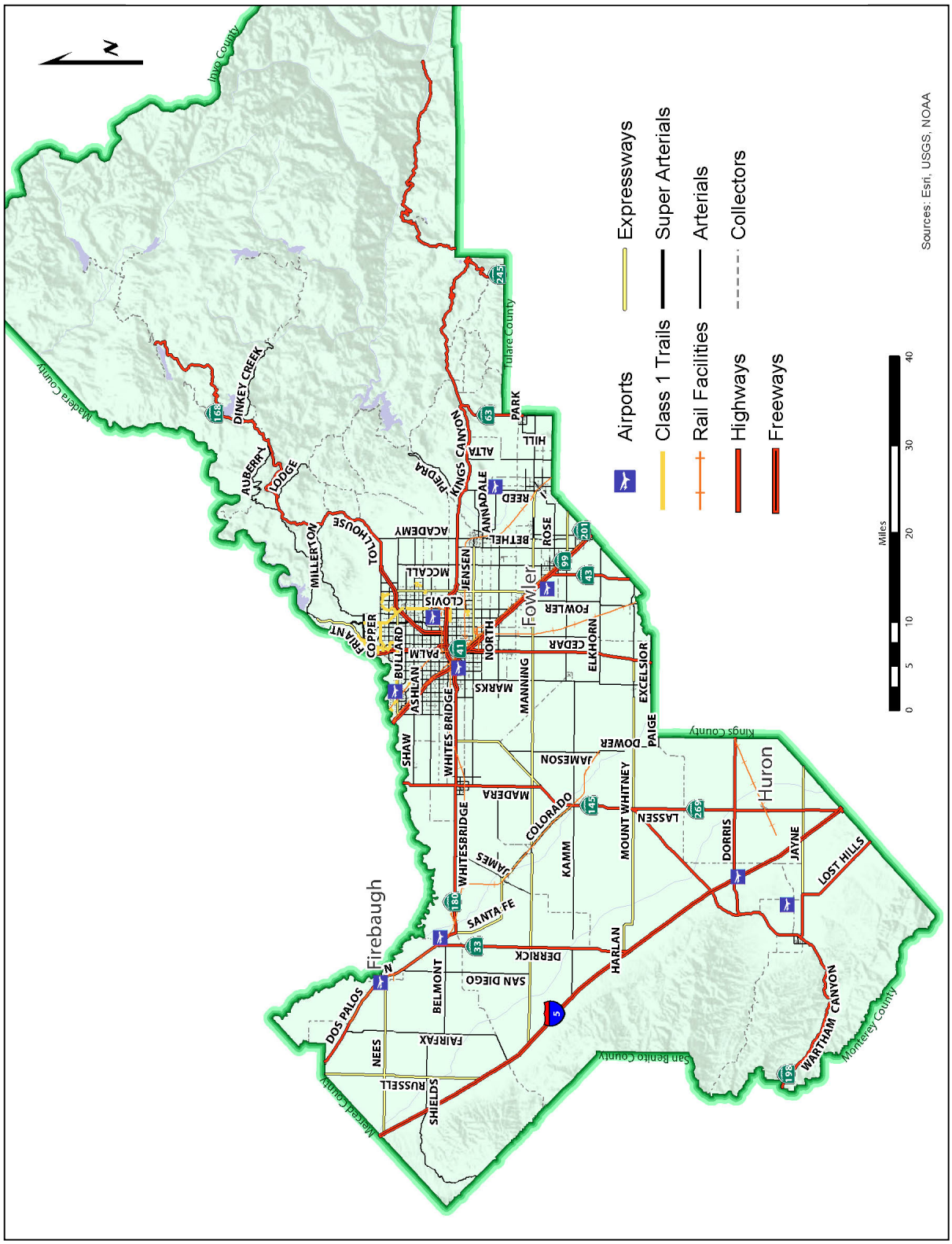
- ✓ Increasing land use intensity and residential densities, particularly along corridors used for transit or planned for future light rail systems.
- ✓ Facilitating the development of mixed land use districts which promote living, working, shopping and recreation accessible by foot or bicycle, and which are served by centrally located transit routes (the Tower District in Fresno, Clovis' Old Town, and many of the County's small cities serve as examples built more than 40 years ago).
- ✓ Expanding transit systems and the frequency of services.
- ✓ Developing connecting bikeway systems and facilitating and encouraging their use.
- ✓ Improving connectivity between transit and rail, transit and air travel, cycling and transit, etc.
- ✓ Reservation of future "park and ride" opportunities.
- ✓ An organized public education effort.
- ✓ Appropriate financing, including both operations and capital investment.

Accomplishments

Although transportation systems planning encourages us to look at the many ways in which trips can be made, only a select group of our trips as Californians are truly multimodal in the sense that we use more than one mode for a particular journey. These could include "park and ride" commuting trips where a private automobile or bicycle is driven to a vanpool site, or taking a car, bus or shuttle to the airport or train. Transportation corridors where right-of-way can be preserved and developed to accommodate more than one form of travel are also being evaluated. Most commonly, efforts are directed to improve existing facilities, maintain those options, and work to create the potential to make connections between systems in a manner that allows and facilitates a change to more environmentally favorable patterns of travel.

Figure 2-3 shows the intermodal network, illustrating mode options that frequently exist over the same corridor, as with transit and the regional roads, or in the SR 99 corridor, which has adjacent rail lines.

FIGURE 2-3
Intermodal Transportation Network



In the period since the adoption of the last RTP, progress has been made on further implementation of the planned regional transportation system, due largely to the resources provided from Measure "C", a local sales tax, and its reauthorization. Through the use of this local funding source, which has been extended for a twenty-year period, and federal and state participation, Caltrans continues to work on the completion of a metropolitan freeway system which will include State Routes 41, 168, and 180. Major improvements have been made to overcrossings and interchanges. Maintenance and improvements to the rural street system, connecting Fresno County to adjacent counties, have also come about through Measure "C" and its reauthorization.

The transit system continues to work to improve service to its existing ridership and to expand that ridership in spite of constrained funding. Ridership and marketing surveys show that there is a high level of satisfaction among Fresno Area Express (FAX) riders in all areas except for those related to waiting time and overcrowding. Changing attitudes about the environment, traffic congestion and population growth seem to be creating a marketplace of consumers who are more aware and more accepting of mass transit benefits.

Fresno COG joined the statewide effort to form an airport land use professional organization, the California Airport Land Use Consortium (Cal-ALUC), to address land use planning issues in and around airports in California. Fresno COG along with the Mendota Airport as the qualifying sponsor, applied for funding through the State Aeronautics program to develop a Fresno County Airports Compatibility Land Use Plan.

In continuing to foster efforts to improve intermodal transportation strategies, Fresno COG has sponsored a CMAQ funding request for transit service from Fresno, to the national parks in the Fresno Region, with a dedicated stop at the Fresno Yosemite International Airport (FAT). In 2012, the ALUC (Airport Land Use Commission) adopted and updated the Fresno Yosemite International Airport Land Use Compatibility Plan to take into consideration the $40 Million runway safety and improvement projects at FAT that were completed in 2013, and the 144th Fighter Wing's conversion from F-16 aircraft to F-15 aircraft. This effort changed the review area and associated maps, representing the airspace protection surfaces, noise and safety contours.

Highway access to FAT and Chandler Executive Airport has greatly improved. State Routes 168 and 180 provide much better access to FAT and connect the airport with the Fresno highway system and beyond. State Route 180 has been improved between Brawley Avenue west of State Route 99, providing freeway access to Chandler Executive Airport; and east of Academy Avenue to the City of Sanger, improvements continue to connect to the Sequoia National Park entrance. State Route 168 has been improved between State Route 180 and Tollhouse Grade. The braided ramp project, partially operational during the latter part of 2013 and scheduled to be fully operational in 2014, will improve the interchange system between 180, 168 and 41, providing safer and more efficient access to and from FAT.

Daily Amtrak service has increased to six round-trip trains, and can be expected to increase further if passenger train service is provided to Los Angeles. The historic Santa Fe Depot has been rehabilitated and

functions as the new passenger rail station. Freight rail service is provided by the Burlington Northern Santa Fe and Union Pacific Railroads, both Class 1 railroads, and the San Joaquin Valley Railroad, a short-line railroad. Retention of abandoned rail corridors for bikeways and future light rail options is under consideration by member agencies. FAX transit lines and an off-ramp from State Route 41 offer easy connections to the Amtrak station in downtown Fresno.

To protect the existing San Joaquin Rail Service and to promote its improvement, in 2012, local and regional agencies throughout most of the San Joaquin Corridor (Bakersfield-Fresno-Modesto-Stockton-Sacramento-Oakland) sponsored and supported Assembly Bill 1779 (AB 1779). This bill enabled regional government agencies to form the San Joaquin Joint Powers Authority (SJJPA) to take over the administration and management of the existing San Joaquin Rail Service from the state. AB 1779 was passed by the Legislature on August 30, 2012 with bi-partisan support, and was signed by Governor Brown on September 29, 2012. The first SJJPA Board meeting was held on March 22, 2013 in Merced.

The ten Member Agencies that make up the SJJPA are: Alameda County, Contra Costa Transportation Authority, Fresno Council of Governments, Kings County Association of Governments, Madera County Transportation Commission, Merced County Association of Governments, Sacramento Regional Transit, San Joaquin Regional Rail Commission, Stanislaus Council of Governments and Tulare County Association of Governments. The SJRRC was selected by the SJJPA Board to be the Managing Agency at the July 26, 2013 SJJPA Board Meeting in Fresno. As Managing Agency of the SJJPA, the SJRRC will provide all necessary administrative support for the SJJPA. The SJPPA along with its supporters and sponsors are working with other partner agencies to advocate for conventional intercity rail service improvements throughout California.

Needs Assessment

Corridor Preservation

- ✓ A concerted effort between the local jurisdictions, the regional transportation planning agency, Caltrans, and the public is needed to ensure the dedication of right-of-way to facilitate the planned ultimate corridors of State Highways, including interchanges, as well as major local arterial and collector streets. A region-wide approach is necessary for corridor preservation of transportation facilities, which cross jurisdictional boundaries.
- ✓ Clovis "Inner and Outer Beltways" are shown on the adopted Clovis General Plan, as a method of planning for the circulation needs of growth. As proposed, the outer beltway would approximate an alignment following and connecting Academy and Copper Avenues; the inner beltway would follow and connect McCall and Shepherd Avenues.
- ✓ Metropolitan agencies have encouraged the reservation of abandoned rail lines for either non-motorized trail or bikeway systems, or for retaining the options for eventual conversion to public transit or light rail systems.

- ✓ Eastside and Westside cities with an agricultural base need to maintain rail service options for the movement of crops to market.
- ✓ The State continues to plan for high-speed rail in California. Given population projections and air quality constraints, this RTP and SCS support the corridor alignment that provides service to major population centers within the Central Valley.

Ultimately, transit service must be extended to new growth areas, if we are to offer travel options for those residents and workers. Funding limitations continue to focus transit routes to those corridors in highest demand, for cost-efficiency.

Goods Movement

Shipment of raw materials and finished goods is a central feature of any economy. While the majority of freight is carried by the trucking industry, commodity movement can occur by road, rail, air and pipeline. Throughout the state, freight movement over State Highways has grown faster than capacity; Fresno County is no exception to this trend.

In its role as a federally designated Metropolitan Planning Organization (MPO), Fresno COG is charged with shaping public policy to facilitate the movement of both people and goods in Fresno County. In order to accomplish that objective, Fresno COG staff has established a Quad-County Freight Advisory Committee. This committee consists of Regional Transportation Planning Agency (RTPA) staff from Madera, Kings, Tulare, and Fresno counties working in collaboration with both the users (trucking industry, rail carriers, shippers, receivers, etc.) of the transportation system and the providers of that system (Caltrans, local agencies). The primary purpose of the Freight Advisory Committee is to identify problems and build consensus among public and private sector freight interests for improving the safety and efficiency of freight movement in the region. The Freight Advisory Committee meeting schedule varies. The importance of this Committee is expected to increase over the coming years as the ability to move an ever-growing amount of freight becomes more challenging and as state and federal governments devote more attention and funding to the issue. Some of the primary objectives to be accomplished with the Freight Advisory Committee include:

- ✓ Advise the Fresno COG and other public agencies about specific freight concerns, issues and priorities;
- ✓ Allow the Freight Advisory Committee to participate in Fresno COG's transportation planning and investment decision processes;
- ✓ Help identify, support and implement promising and effective strategies to improve freight mobility in the region.

The high volume of truck traffic within the Central Valley raises issues of highway maintenance, capacity, and safety, and has led Valley RTPAs to share a goal of finding ways to encourage a shift of some larger market share of commodity movement to rail. While the truck volumes on County roads and regional streets

will still be a major factor to be addressed, highway systems would be relieved. This would allow the use of existing capacity on that system, freeing up comparable capacity on State highways and lowering maintenance costs for the highway system. A map highlighting high truck volumes can be found in Chapter 5 of the RTP.

As discussed in Chapter 1: "Building the RTP: Putting the Pieces Together", and the Valleywide Chapter Appendix of the RTP, the eight RTPAs in the San Joaquin Valley in conjunction with Caltrans and the San Joaquin Valley Air Pollution Control District have undertaken a series of studies to improve the understanding of truck transportation of commodities within and through the Valley. The third phase culminated with the development of a truck model, intended to forecast truck trips and vehicle miles traveled, analyze air quality and emissions from heavy-duty trucks, impacts of congestion on major truck routes, and safety and road maintenance issues associated with truck activity. The third phase of the also provided improvements to the San Joaquin Valley truck model and integration with local models. This model will provide an analytical basis for evaluating the benefits of transportation investments that impact the movement of goods in the San Joaquin Valley.

In addition, in 2007, the San Joaquin Valley RTPAs developed the San Joaquin Valley Goods Movement Action Plan, 2007. The document is a coordinated strategic plan for system-wide, multi-modal goods movement planning in the San Joaquin Valley. The plan defines the linkages between the goods movement system in the Valley and the role it plays in the movement of goods throughout the rest of the State and Nation. The plan also identifies the crucial role the Valley plays in the State's and Nation's economy with its $20 billion dollar annual, agricultural economy.

In addition to the San Joaquin Valley Goods Movement Study, Fresno COG served as the project manager for a Caltrans-funded study focusing on the potential for a short-haul rail intermodal service that would connect the San Joaquin Valley with the Port of Oakland. The study, known as the California Interregional Intermodal Service (CIRIS), analyzed the potential for developing alternatives that would reduce the amount of truck traffic in the region by diverting some of the goods between the Valley and the Port of Oakland from the current truck operations to rail.

Recreational Travel

Fresno County contains many recreational destinations of regional significance, and includes routes to others in adjacent counties. Trips are made both by county residents and by travelers throughout the State for vacations and recreation to the following sites:

- ✓ Yosemite National Park
- ✓ Kings Canyon National Park
- ✓ Sequoia National Park
- ✓ John Muir Wilderness Area

- ✓ Millerton Lake Recreation Area
- ✓ San Joaquin River
- ✓ Kings River
- ✓ Shaver Lake
- ✓ Huntington Lake and the Kaiser Wilderness Area
- ✓ Pine Flat Reservoir
- ✓ Mendota Wildlife Area

The metropolitan area also contains the Fresno Convention Center, and is the destination point from outlying communities for theater, musical events, the Fresno County Fair, sports and other special interest events, and regional shopping. California State University, Fresno is a major attractor for football, baseball, basketball, track, and cultural events. The University itself currently serves approximately 20,000 students and employs approximately 950 faculty and 980 support staff. The State Center Community College has campuses in Fresno and Reedley, and has recently opened a third campus in Madera County north of the Fresno County border near State Route 99. The City of Fresno maintains two regional parks: Roeding and Woodward. Fresno County maintains Kearney Park and Lost Lake Park, which is situated along the San Joaquin River.

Transportation is one of the major issues facing many of the national parks today. This is particularly evident in Yosemite National Park, which has had as many as 4 million visitors in one year. The Yosemite Area Regional Transportation System (YARTS) is a regional joint powers authority formed among the counties of Mariposa, Merced, and Mono to implement transit service for visitors and employees into Yosemite National park from gateway communities.

YARTS entered into a Cooperative Agreement with the National Park Service for the purposes of coordinating the new transit service with in-Park shuttle transportation, cooperative transit planning, transit service visitor and employee education, and funding support. YARTS began providing transit service throughout the Yosemite Region on May 19, 2000 on a demonstration basis and has since been converted to a permanent transit service.

YARTS is comprised of an Authority Advisory Committee and a Board of Commissioners, comprised of a member of the Board of Supervisors of each of the three YARTS counties. YARTS contracts with the Merced County Association of Governments for staffing to administer and manage the transit service.

The mission of YARTS, to provide a positive alternative method of access to Yosemite National Park, is of particular interest to the Fresno COG. Fresno County's proximity to Yosemite, the location of Fresno Yosemite International Airport (FAT) here and the fact that State Route 41 is the busiest Park entrance during the peak season, all contribute to our interest in YARTS. In fact, the YARTS project includes elements that are directly related to our mission as a metropolitan planning organization. Consequently, the Fresno COG has retained a consultant to assist with a National Parks Transit Study that will focus on

operational and infrastructure issues related to the provision of public transit service between Fresno and Yosemite and Sequoia/Kings Canyon National Parks.

Highways, Streets, and Roads

Fresno County has an extensive planned system of streets and highways. The system is intended to provide an adequate level of traffic service within Fresno County in an effort to satisfy the transportation needs of the system users. The transportation system also plays an important role in the region's economy as it provides mobility for both people and goods within the region. As the number one agricultural county in the world with a total gross production value of agricultural commodities of nearly $6.6 billion in 2012, Fresno's economy is dependent upon efficient movement of agricultural goods from farm to market. In most cases, the first leg of the farm to market route is via the street and road network. In addition, while recognizing federal transportation legislation's shift to a more balanced multi-modal approach to transportation planning, the reality is that the majority of people and goods trips within Fresno County are made by trucks and the automobile and thus on the streets and highways network. Therefore, while recognizing and embracing the multi-modal approach it is important that a focus on the improved efficiency of the streets and highways network be maintained.

The purpose of this section is to identify the existing system and note streets and highways of regional significance and to describe the future streets and highways network noting both short-term improvements and the envisioned long-range system. In addition, this section will identify the various planning efforts taking place with regards to the regional transportation network. Within this process, policies, needs and major issues related to the highways, streets and roads network in Fresno County are addressed.

While the needs assessments and the planned highway improvements to meet those needs are presented in this document, a major remaining issue to be addressed is the financing required to implement the needed improvements. The people of Fresno County made a commitment in 2006 to the future transportation system by choosing to continue a sales tax over a 20 year period (Measure "C") aimed at providing funding for improvements to the regional and local transportation network. Unfortunately, this anticipated revenue still is not sufficient to finance the requisite long-range transportation improvement needs of Fresno County. A comprehensive discussion of the various alternative strategies for financing the regional transportation network is examined in the Financial Element of the RTP.

Existing System Inventory

- ✓ Regionally Significant Road System

  Fresno COG in conjunction with its member agencies and Caltrans has developed a "Regionally Significant Road System" for transportation modeling purposes which is based on the Federal Highways Administration (FHWA) Functional Classification System of Streets and Highways plus

additional facilities of regional significance. Figures 2-4 and 2-5 show the Regionally Significant Road System for the Fresno County region.

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classifications define the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network.

In general, the regionally significant system was selected to maintain and improve access between cities, accommodate a high level-of-service access to and within the Fresno-Clovis Metropolitan Area, and to link regionally significant commercial, educational, industrial and recreational facilities. The criteria used to establish the regionally significant system included factors such as functional classification, service to regional facilities, connection of regional facilities, and amount of current and projected use.

Environmental Protection Agency (EPA) regulatory guidance is very clear that all facilities shown on the regionally significant system require specific discussion and analysis as it relates to air quality conformity.

The Regionally Significant System in Fresno County functions to serve the travel needs of all county residents and not just the needs of urbanized areas. The rural highway system accommodates not only the movements of people but is a particularly vital aspect of the movement of goods.

As one of the prime agricultural counties in the nation, the intra-county road linkage of goods to processing plants and inter-county linkage of finished goods to other regions is essential.

Fresno COG, Caltrans and various local entities have made major efforts to understand the strengths and weaknesses of the streets and highways system throughout Fresno County. The County has a formally adopted Road Improvement Program (RIP), 2012-2017, which they utilize for transportation planning and implementation. Methodologies and strategies to expand, enhance or maximize the existing system given current financial constraints have been examined. This process has required coordinated planning activities and careful programming of road projects between the Fresno COG, its member agencies and Caltrans. The following text will itemize current planning activities that the Fresno COG is involved with.

FIGURE 2-4
Regionally Significant Road System - Metro Area

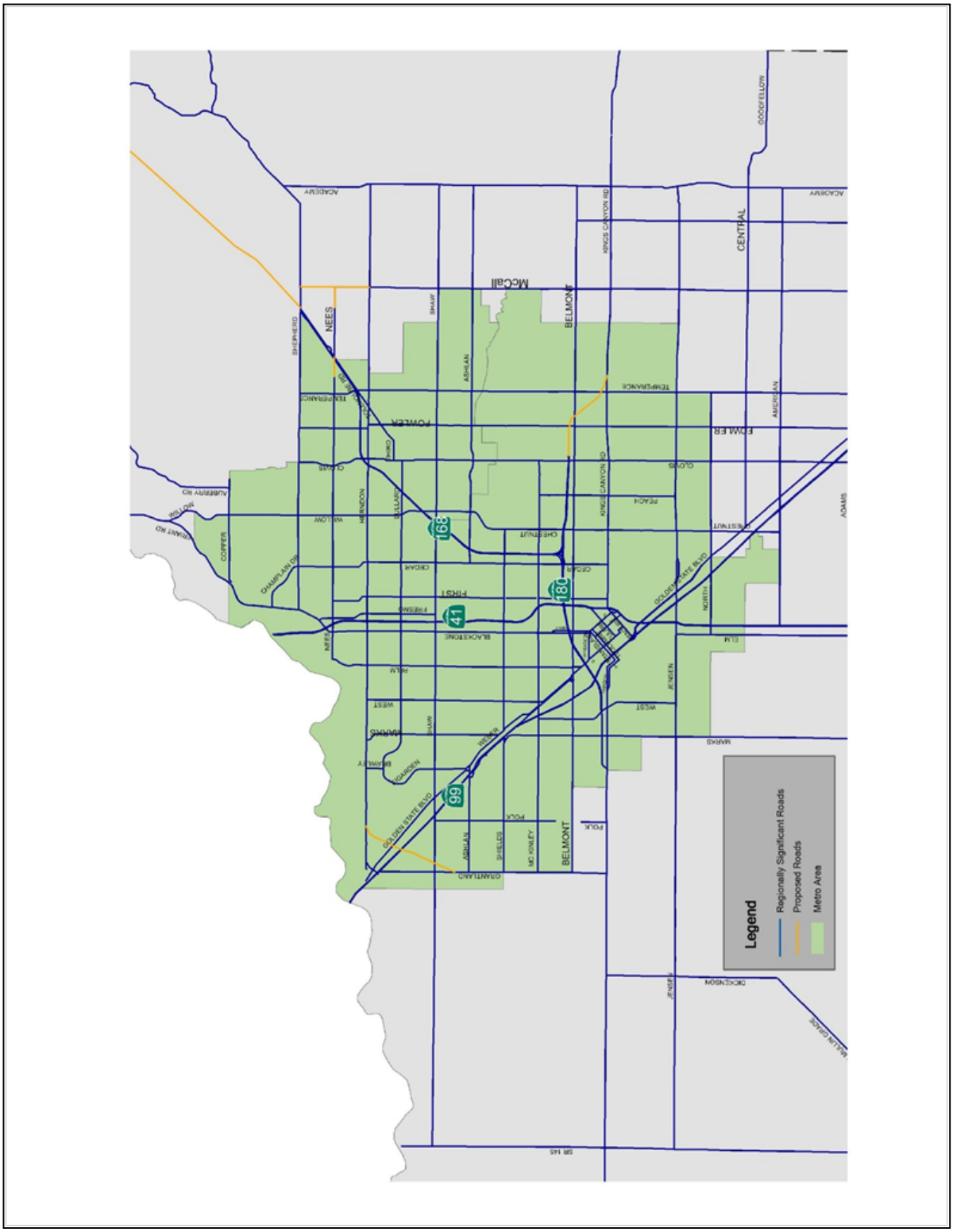
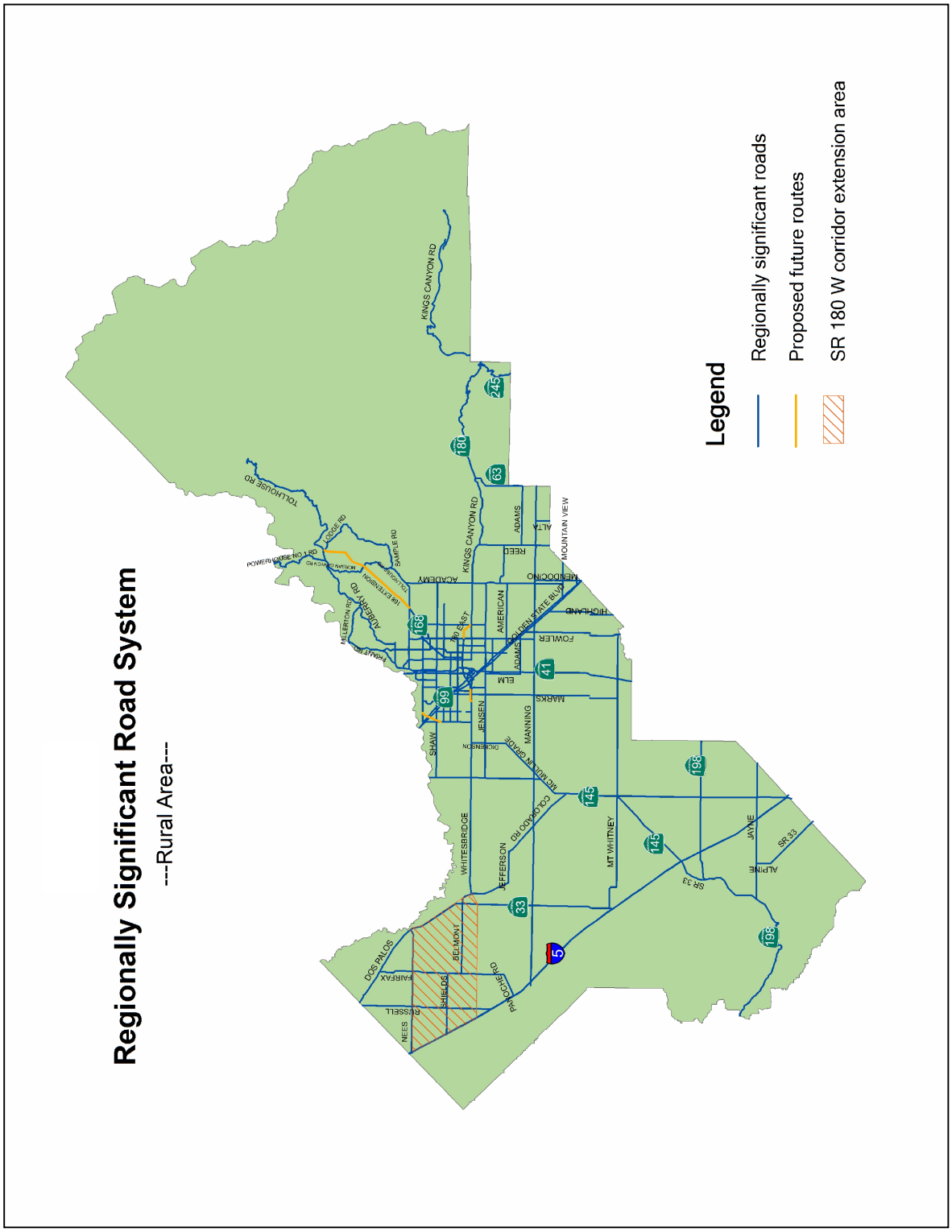


FIGURE 2-5
Regionally Significant Road System - Rural Area



Needs Assessment

There are a number of issues and needs related to the streets and highways network which require the attention of the Fresno COG. Among these issues are financing for maintenance, rehabilitation, reconstruction and construction; modification of travel demand; capacity problems; general plan circulation element inconsistencies; and, transportation corridor needs. The following text will analyze each of these issues/needs in further detail.

Financing of the Regional Transportation Network

Development of financing mechanisms to implement the planned transportation network remains a primary concern not only in Fresno County but throughout the entire State of California.

Transportation funding in California experienced a significant shift in recent years. Operational and maintenance costs increased much more rapidly than the relatively flat growth of gas tax revenues. Due to increased auto fuel economy a reduction in revenue per mile traveled materialized. The combination of higher construction costs, higher design standards, environmental mitigation, and increased repair and rehabilitation requirements on aging freeways basically reduced state transportation investments to essentially a maintenance program.

To address this concern, in 2006 voters of Fresno County reauthorized a ½ cent local sales tax, Measure "C," for transportation purposes. The 20 year tax is projected to generate $1.5 billion, to be expended through the Fresno County Transportation Authority. Fresno COG and the Authority have developed a Strategic Implementation Plan to facilitate expenditure of those funds.

Transportation Corridor Needs

Pursuant to federal direction, all new regional transportation projects are required to take a "Multimodal Transportation System Corridor" planning approach. In keeping with this federal direction, the Fresno COG is working in partnership with Caltrans, local jurisdictions and the private sector to identify transportation corridors and projects which will provide maximum utilization of a multimodal system for the citizens of Fresno County.

- ✓ **Fresno-Madera East-West Corridor Study**

  In the urban area, east-west travel demand in the northern Fresno-Clovis Metropolitan Area is perceived as a major transportation planning concern. In order to address the future east-west travel demand needs of northeast Fresno County and southeast Madera County, the Fresno COG, the Madera County Transportation Commission (MCTC), and Caltrans District 6 participated in a regional

transportation corridor study known as the Fresno-Madera County East-West Corridor / Sub- Area Study.

Phase One of the study focused on examining Fresno and Madera Counties' long-range transportation needs within the study area by considering various future land use plans together with circulation element policies and engineering and environmental constraints. Phase Two focused on the preliminary engineering analysis and detailed environmental analysis associated with potential river crossings between the State Route 41 San Joaquin River Bridge and approximately one mile north of the Alternative #3 corridor. For mapping information concerning this corridor, please see the 2014 RTP and SCS.

✓ **Southeast Corridor Study**

The Southeast Corridor Study was completed in 1996. The study's purpose was to analyze various modal alternatives, route alignments, and environmental issues facing development of a north-south regional route through the southeastern portion of Fresno County (see Exhibit 5-9 in the 2014 RTP). Academy Avenue project construction north and south of the City of Sanger was funded through the original Measure "C" program. Funding for the segment through Sanger has not been identified.

✓ **Herndon Avenue Specific Study**

In its role as the Regional Transportation Planning Agency for Fresno County, Fresno COG served as the lead planning agency for the Herndon Avenue Specific Study (see Exhibit 5-10 in the 2014 RTP). The basic purpose of the Study was to analyze future travel demand in the northern Fresno-Clovis metropolitan area (including State Routes 99, 41, and 168) and determine the appropriate type of transportation improvements beyond those already planned that would be needed on Herndon Avenue in order to accommodate projected population growth and the resultant vehicle trips.

✓ **Association for the Beautification of Highway 99**

In 1998 concerned policy makers and citizens began meeting regarding the appearance of Highway 99 (State Route 99), which is one of the region's main north-south routes and a major connector route to other areas of the state such as the San Francisco Bay area, Sacramento, and southern California. Policy makers and citizens were concerned that the appearance of Highway 99's, both inside and outside of the State right-of-way, was poor, and stifled economic development in the area.

Caltrans, the County of Fresno, and the cities of Fresno, Fowler, Selma, and Kingsburg, through individual Resolutions, agreed to form and participate in the Association for the Beautification of Highway 99. The Association consists of thirteen members: one from Caltrans, one from the Fresno Chamber of Commerce, one from Tree Fresno, one elected official (the mayor or a city council

member) from each city and the county (a member of the Board of Supervisors), and one private sector representative from each city and the county.

The Association for the Beautification of Highway 99 continues to meet bimonthly and work with Fresno COG on improving the appearance of Highway 99.

In addition to the corridor needs identified above, there are also several planning efforts underway to determine what type of long range transportation improvements are going to be necessary in order to provide adequate levels of service and overall mobility within Fresno County. The transportation corridors being analyzed are as follows:

- ✓ **Fresno-Madera County Freeway Deficiency Study**

In 2003, Fresno COG was awarded a Caltrans Partnership Planning grant to undertake a Freeway Interchange Deficiency Study in Fresno and Madera counties. The primary purposes of the project were to analyze planned land uses and transportation projects within the counties and determine which interchanges will be deficient by the year 2025, and provide an assessment of financing options.

- ✓ **State Route 180 Western Extension Corridor Study**

Caltrans and Fresno COG conducted a route adoption study for the extension of State Route 180 West from SR 33 to the I-5 corridor. The study looked at the appropriate future route alignment which would best serve the mobility needs of western Fresno County, as well as providing a "direct" state highway route for travelers and goods movement from I-5 to the City of Fresno.

- ✓ **State Route 99 Widening**

As mentioned earlier, SR 99 throughout the Central Valley, particularly within Fresno County, will be facing increasing congestion as the population of the state continues to grow. To address this concern, all of SR 99 through Fresno County will need to be 6 lanes. Because of recent construction, most of the SR 99 corridor within Fresno County is now six lanes; however, a portion, mostly within northern Fresno County, remains only four lanes. These remaining segments of four-lane freeway will be expanded to 6 lanes in the next few years.

The widening project funded by Proposition 1B required the preparation of a Corridor System Management Plan (CSMP) in order to secure funding. The Fresno-Madera Urban Corridor System Management Plan included the section of SR 99 from American Avenue in Fresno County to SR 152 in Madera County. In addition, Caltrans District 6 prepared a CSMP to facilitate future planning on SR 41. This CSMP will include the entire length of the SR 41 corridor, including the section in Fresno County.

Travel Demand

Modifying travel demand is a critical issue. It is becoming increasingly apparent that financial, energy, and environmental resources are slowly being overburdened by the need to satisfy ever-increasing demand for travel. Over time it will be necessary to develop and implement a variety of measures to reduce this demand. The measures range from the provision of various incentives to promote multi-occupancy vehicle use (i.e. rideshare and transit), alternative modes such as non-motorized and rail, and trip reduction through various land use planning mechanisms. Managing travel demand is expected to play an increasingly important role in future transportation planning and related energy and air quality planning activities.

Proposed Actions

✓ **Future Planning Activities**

The Fresno Council of Governments will continue to work with its member agencies, Caltrans, and the federal government in the development of a comprehensive multi-modal regional transportation network designed to provide maximum mobility for both the movement of people and goods throughout Fresno County. To the greatest extent possible, the Fresno COG intends for its state highway planning process to complement that of Caltrans.

The Constrained Program of Capacity Increasing Projects (reference Chapter 7 of the 2014 RTP and Figures 2-6 through 2-8 of this PEIR) includes street and highway projects that will move the region toward a financially constrained and balanced system within different time segments. Figure 2-6 identified projects that have been implemented between 2008 and 2013. Figures 2-7 and 2-8 reflect projects that will be implemented by Caltrans or local agencies between 2013 and 2025 and 2026 an 2040. Constrained projects have undergone air quality conformity analyses to ensure that they contribute to the Fresno region's compliance with state and federal air quality rules. Other modal projects including transit, bikeway, pedestrian, rail, and aviation projects are also planned between 2014 and 2040 and can be referenced in Chapter 7 of the RTP. Each transportation mode is also described in later sections of this chapter of the PEIR.

In the short-term, the Fresno COG will continue to work with its member agencies to address any general plan circulation element inconsistencies. Updated traffic monitoring counts on selected corridors will also serve as key input to future metropolitan and rural streets and highways analysis. Fresno COG publishes an annual Fresno Regional Area Traffic Monitoring Program. Also, the Fresno COG has the responsibility for annually coordinating the collection of sample system performance data within Fresno County. This data collection responsibility was assigned by the Federal Highways Administration who initiated a Highway Performance Monitoring System process designed to provide them with a means to assess and monitor the performance of federally-funded highway systems. Fresno COG will also remain

involved in what is commonly known as Transportation Systems Management techniques. These are traditional strategies which are designed to ease congestion and improve the flow of traffic.

✓ **Short-Term Improvement Program (2014 through 2018)**

The various jurisdictions within Fresno County have completed numerous projects over the last several years, while highest priority has been given to maintenance of the existing street and road system. Special emphasis has also been given to the optimization of the existing system through traffic signal improvements and operational improvements. The following are the top priorities in the region for the short-term (2014-2018):

1. Maintenance and rehabilitation of the existing state highway and local streets and roads network.
2. Complete construction on segments of the long planned freeway network and Measure "C" Extension Urban Area and Rural Tier 1 Street and Highway Projects.
3. Provide necessary further operational improvements.
4. Promote the implementation of transportation systems management actions where possible. Improvements on the local street network will focus primarily on safety, maintenance and rehabilitation projects.
5. Continued implementation of Transportation Control Measures such as improved public transit, traffic flow improvements, additional walking, bicycle facilities, park and ride lots and voluntary ridesharing.

✓ **Long-Term Transportation Improvement Program (2019 through 2040)**

Given the population projections for the Fresno-Clovis Metropolitan Area in conjunction with those of the other incorporated cities and incorporated areas of Fresno County it is anticipated that in the year 2040 approximately 1,374,709 people will inhabit Fresno County. This increased number of people will further strain the transportation network in terms of movement of people and goods. The top priorities for the long-term in Fresno County will continue to be the maintenance and rehabilitation of the existing network, construction of the planned freeway network, provision of necessary operational improvements, and continued promotion of the implementation of transportation systems management improvements. Fresno COG worked with its member agencies and Caltrans to identify and prioritize projects for the long-term program.

FIGURE 2-6
Capacity Increasing Projects (2008-2013)

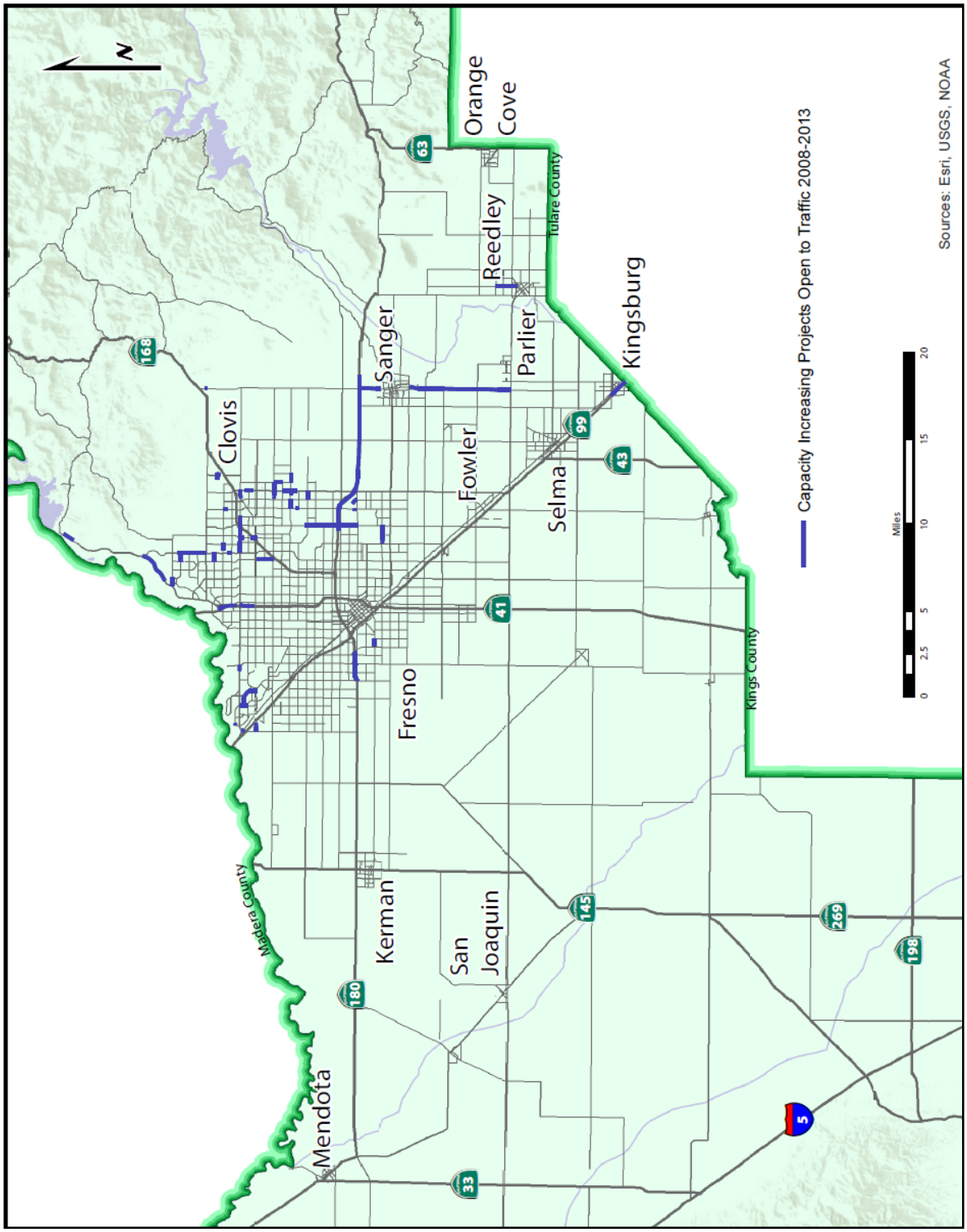


FIGURE 2-7
Capacity Increasing Projects (2014-2025)

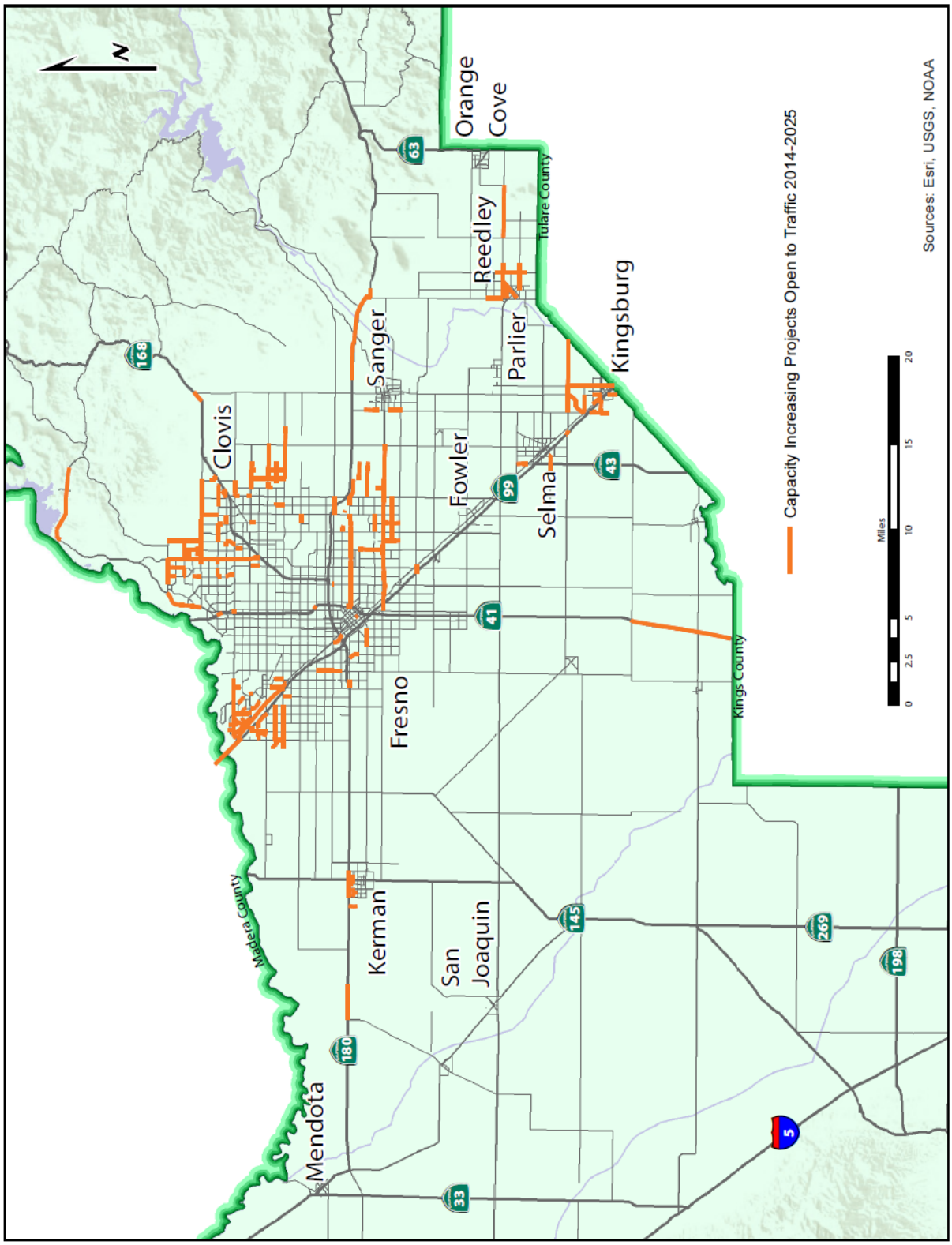
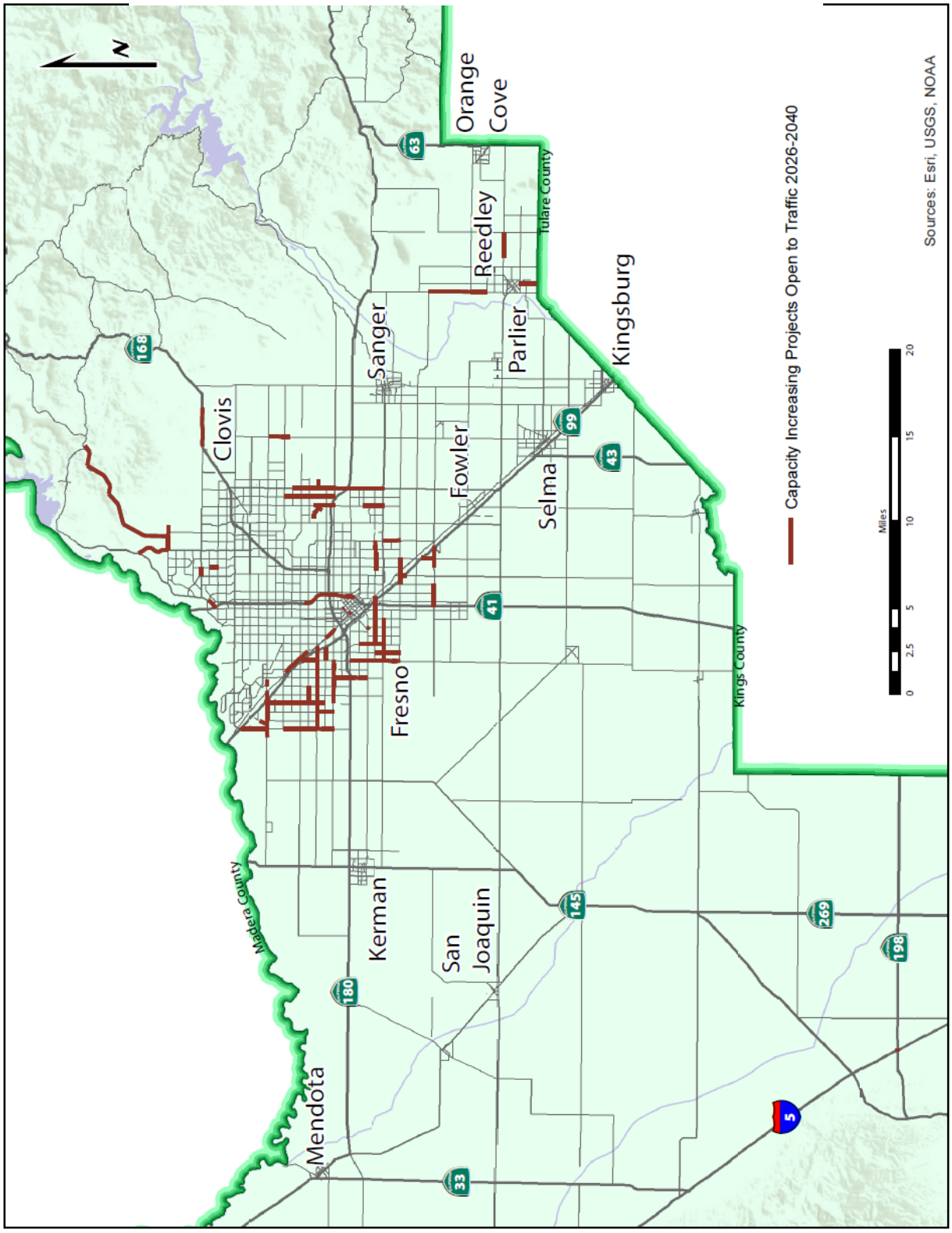


FIGURE 2-8
Capacity Increasing Projects (2026-2040)



Urban Mass Transportation

Mass transportation is an economical mode of moving large numbers of people to designated places by bus or train. Mass transportation in Fresno County consists of both public transit and Amtrak rail passenger service.

Public transportation may be operated by either the public, private or non-profit sector of the economy. Service may be provided in either a conventional manner, such as, fixed-route, scheduled service, or as a "demand responsive" service. Public transportation may take the form of shared ride taxis, car and van pools, subscription bus services, and specialized accessible service for disabled persons.

Although basic public transportation service within both the metropolitan and rural areas of Fresno County have been implemented, as those services exist today, public transit is little more than a safety net for transit dependent riders. In most cases, poor service frequency, short service hours, and multiple transfers create long travel times making public transit a distant last choice for travel.

Funding constraints have made efforts to maintain reliable and accessible transit service commensurate with reasonable needs difficult. The 2006 reauthorization of Measure "C", Fresno County's ½ cent sales tax for transportation purposes, has established a stable funding source for Fresno Area Express. However, actual revenues have been significantly lower than expected. In 2009 Measure "C" was expected to provide an estimated 11 million dollars per year. It is anticipated that in fiscal year 2013 Measure "C" will account for less than $8.5 million dollars in revenue. It is the goal of FAX to improve the level of public transit within the Fresno-Clovis Metropolitan Area. FAX will utilize the 2006 Measure "C" Extension Expenditure Plan, as well as Customer Satisfaction Surveys and route analysis to determine future service levels. Attention will continue to focus on the needs of transportation disadvantaged populations including low income, elderly and disabled persons; however, effort must also be directed towards other mass transportation challenges including improving air quality, reducing congestion, and expanding service for an ever-increasing population. If public transportation is to play an effective role in addressing these issues, a greater emphasis must be placed on providing attractive alternatives to the ubiquitous private automobile.

Legislative mandates including the Americans with Disabilities Act (ADA) of 1990, the federal Clean Air Act Amendments (CAAA) of 1990, the California Clean Air Act and the California Air Resource Board's (CARB) Transit Fleet Rule have had a profound impact on public transit. The ADA brought about many changes for transit operators including requirements to provide accessible buses, trains and facilities for the disabled. The ADA mandated the provision of comparable paratransit service by fixed-route operators, and assurances that transit facilities will be constructed using accessible features.

The 1990 Federal Clean Air Act Amendments significantly strengthened the linkage between transportation and air quality regulations. The Act requires substantial emission reductions from the

transportation sector and establishes conformity requirements to ensure that reductions are achieved. From a transportation perspective, the California Clean Air Act requires air pollution control districts to adopt and implement regulations to reduce emissions from indirect and area-wide sources and to encourage ridesharing, vanpooling, flexible work hours and increased multi-passenger trips through mass transit or other measures to reduce vehicle usage.

As a result of these legislative mandates, both the public and social service transportation systems have modified fleet replacement programs to include clean fuel and alternative fuel vehicles. The cleaner vehicles are more expensive to purchase, and more expensive to maintain. Operators have also made significant service changes in order to comply with legislated requirements, including service designed to meet the mandates of the ADA. The ADA has required significant capital and operating outlays in order to meet compliance for accessible transportation services.

The Personal Responsibility Work Opportunity Resource Act of 1996 and California's CalWorks Program have brought to focus the need for public transportation to provide an important and necessary link to job training and development. Transit operators continue to work with the Fresno County Department of Employment and Temporary Assistance to assess transit services for CalWorks recipients.

Social service transportation in Fresno County is being guided in a direction consistent with the Social Service Transportation Improvement Act of 1979 (AB 120). The primary goal of the legislation is to improve transportation service provided by social service agencies through coordination and consolidation of their transportation services. The Fresno COG designated three Consolidated Transportation Service Agencies (CTSAs) within Fresno County. They include: the Clovis CTSA, The Fresno Metropolitan CTSA, and the Fresno County Rural CTSA. The CTSAs are responsible for promoting, among social service agencies, the consolidation of their existing services in order to achieve cost savings. Notwithstanding the social service agency consolidation efforts, the CTSAs are also to coordinate their services, to the maximum extent possible, with existing public and private transportation providers.

The purpose of the Regional Transportation Plan's Mass Transportation section is to review the existing and planned transit services and determine those improvements that will provide the greatest benefit while maintaining a high level of system efficiency. This section will focus on the following topics:

- ✓ Existing System
- ✓ Needs Assessment
- ✓ Unfunded Needs
- ✓ Accomplishments
- ✓ Proposed Actions

Where appropriate, the discussion will distinguish between the services of Fresno-Clovis Metropolitan Area Public Transportation, the Fresno County Rural Area Public Transportation, and Social Service Transportation.

Existing System

✓ **Fresno-Clovis Metropolitan Area**

The major provider of urban public transportation in Fresno County is Fresno Area Express (FAX), a department of the City of Fresno. FAX provides two types of public transportation service in the FCMA: the fixed-route service for general public riders, and Handy Ride, a demand-responsive service designed for individuals who, because of an impairment or disability, are unable to use the regular fixed-route bus service.

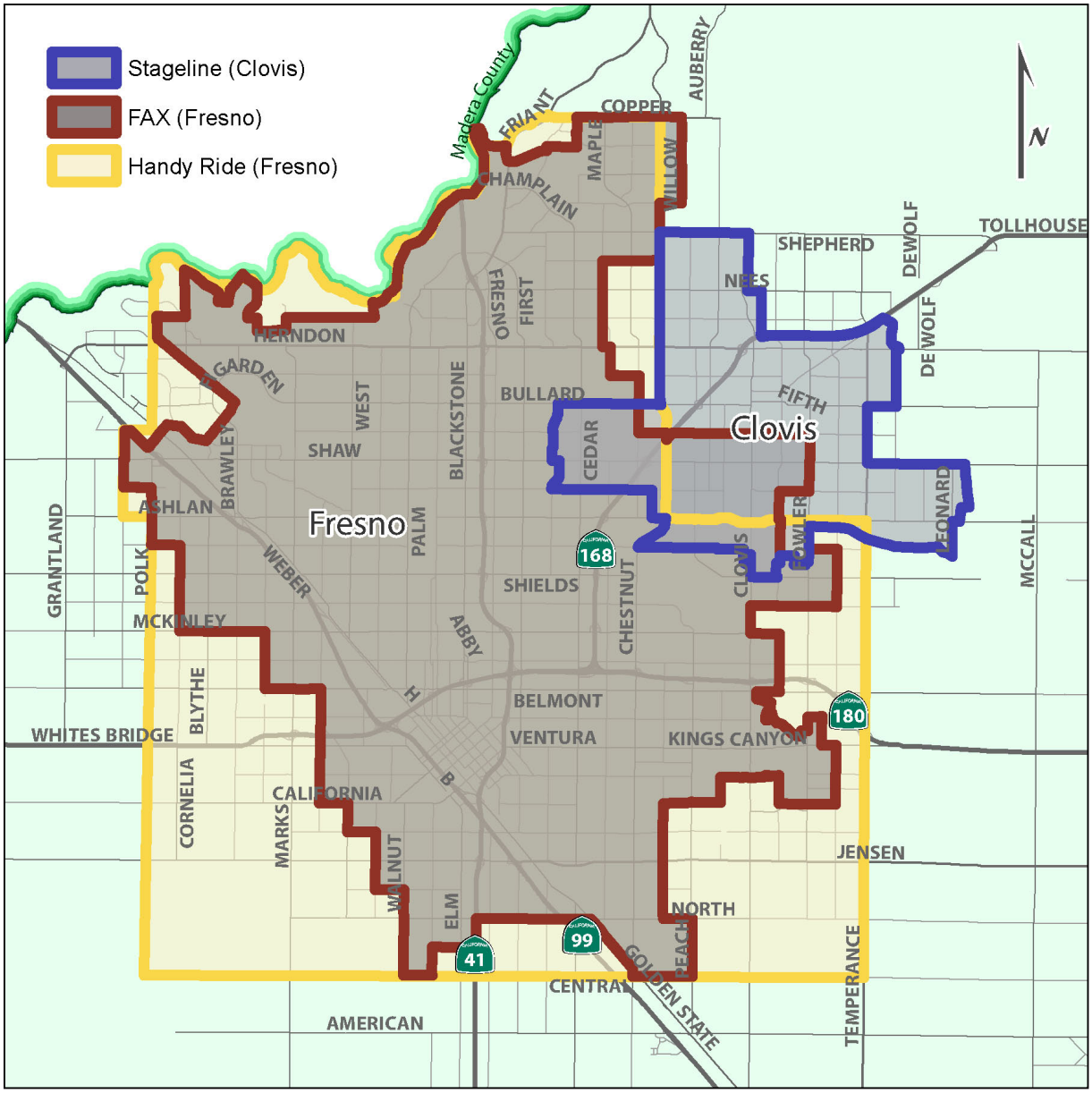
The fixed-route network follows a modified grid pattern with intersecting north-south and east-west bus lines. The Handy Ride demand-responsive system provides complementary paratransit service as required by the Americans with Disabilities Act (ADA) of 1990 to paratransit certified disabled persons.

The City of Clovis also provides public transportation in the FCMA. Clovis operates two types of service: Clovis Stageline, a general public fixed-route service, and Round-Up, a demand-responsive paratransit service. Stageline operates on four routes, each on 30-minute headways, and one express route that operates on school days only. The routes are scheduled to coordinate with FAX service whenever feasible, in order to facilitate transfers between Stageline routes and FAX routes.

Clovis Round-Up provides demand-responsive transportation service for the elderly and disabled persons within the city's existing sphere of influence. The City of Clovis and the County of Fresno also contribute funds to FAX through formal contracts to provide fixed-route and paratransit services to and within Clovis and to unincorporated County areas within the FAX service area. Clovis provides fixed-route services weekdays and demand-responsive service Monday through Friday in Clovis and Fresno and seven days a week within Clovis using wheelchair lift-equipped vehicles. The City of Clovis designated its Round-Up services as a 100 percent CTSA function. Measure "C" local funding dollars are used to augment fare revenue to provide the necessary funds to match Transportation Development Act Article 4.5 (TDA) dollars.

Service areas for FAX and Clovis Transit are shown on Figure 2-9.

FIGURE 2-9
FAX and Clovis Transit Service Areas



✓ **Inter-city Ground Transportation**

➢ **Amtrak**

Amtrak, with financial support from Caltrans, operates six round-trip trains daily, linking Fresno with Hanford, Corcoran, and Bakersfield to the south and Madera, Merced, Riverbank, Stockton,

Antioch, Martinez, Richmond, Berkeley and Emeryville to the north. One of the five trains continues on to Sacramento.

Amtrak augments the San Joaquin trains with an extensive system of Thruway Buses that offer guaranteed connections at train side. At Bakersfield, a total of eight buses fan out to cover 40 destinations all over Southern California and Nevada, including Las Vegas, Palm Springs, San Diego, Orange County, Los Angeles, Ventura and Santa Barbara. At Stockton, Thruway Buses connect to 30 destinations, including South Lake Tahoe, Reno, Sacramento, Davis, Chico and Redding. In addition, the SJJPA organized in 2012 was placed to maintain, enhance and promote the service.

- **Greyhound**

Greyhound provides frequent daily service from Fresno to a variety of points within California. Destinations served north of Fresno include Hayward, Sacramento, San Francisco, San Jose and Stockton. Destinations south of Fresno include Visalia, Bakersfield and Los Angeles. Connecting service is available to San Diego (via Los Angeles) and Yosemite National Park (via Merced).

- **Transportes Intercalifornias**

Transportes Intercalifornias provides three daily trips from Fresno to Los Angeles, with connecting services onward to Santa Ana, San Ysidro and Tijuana. There is also, two daily trips to San Jose with service to the Westside of Fresno County and two daily trips to Stockton, with service to the northern Central Valley.

- **Orange Belt Stage Lines**

Orange Belt Stage Lines provides daily service linking Fresno with Visalia, Paso Robles and San Luis Obispo. Orange Belt also connects several cities within the county, stopping at both Amtrak and Greyhound Stations in order to provide access to extensive travel networks.

✓ **Fresno Area Express**

During the past decade, limited funding has constrained service improvements by FAX. As such, FAX has had to balance the demand to provide service into new and underserved areas with the demand to provide reliable service within the existing system. During the 10-year period from 2003 to 2012, actual revenue service miles decreased from 4.03 million to 3.88 million, a 3.7% decrease. During that same period, total ridership rose from 11.2 million in 2003, to 14.3 million in 2012, an increase in ridership of 21.7 percent. The decrease in service miles is primarily driven by the elimination of unproductive routes.

Efforts to coordinate services among transit systems for maximum delivery of service throughout Fresno County continue, including coordination and/or consolidation of transportation services for social service agencies. The Fresno County Regional Transit Consolidation Plan is intended to provide a detailed analysis of potential service consolidation options for Fresno County's three public transportation operators. This study is a follow up to the 2007 Public Transit Regional Agency Formation Study which provided an initial assessment of consolidation opportunities and challenges. The Plan was completed in two phases:

1) Evaluation of existing conditions and potential "roadblocks"
2) Development and evaluation of potential consolidation options

The services provided by the three agencies are distinctly different by design. FAX provides an urban level of service, with many routes, high capacity buses, high frequencies (at least in some corridors), and full weekly service. Clovis Transit, alternatively, provides a more modest, suburban level of service with only a few routes and limited weekend service. FCRTA fixed-route service is limited to a few inter-city corridors, some of which operate only once or twice a week, while intra-community service is provided by demand-respond systems.

Implementation of additional regional coordination activities would be far less complicated and easier to implement than would full consolidation. Coordination efforts through MOU's to address fares, transfers, route integration, and other operating details could be accomplished without creating a new organization with a new governing structure. Each entity has a functioning governing body.

Accomplishments

Two entities have elected city councils. The third has a joint powers authority board made up of appointed elected officials from participating jurisdictions. Agreements between the entities regarding elements of coordination would require approval by a majority of the council or board from each entity. Consolidation of the transit providers into a new organization structure would require agreement to a new governance configuration. The existing three operating entities are governed by different voting structures. In the cases of the two cities, each council member has one vote. Transit decisions are voted on as are any other issue facing the city. In the case of FCRTA, a 14 member board is the decision making body. Each of 13 city members has one vote on the board. The 14th member is the county represented by a member of the Board of Supervisors. That representative has 6 votes.

Many of the consolidation and coordination activities that Nelson\Nygaard recommended back in 2007 are still relevant today. There's no reason the transit operators can't move ahead with any of these items that are still on the "To Do List." The three systems continue to operate with a high level

of coordination, but additional opportunities exist in terms of schedule coordination, on-line services, customer service and universal fare media.

Some of the major accomplishments for FAX during the past two years have occurred in conjunction with efforts to improve service coordination and address air quality, accessible service objectives, and pursue Intelligent Transportation Systems technology for public transportation. These accomplishments include:

- FAX implemented a Trip Planning Software System. After fully testing, effort will be made to include Clovis Transit and Fresno County Rural Transit.
- In early 2013, FAX completed the installation of Automatic Passenger Counters (APC's) on all fixed route buses. These counters will provide additional ridership information that will allow FAX to better report passenger trips and improve service planning and delivery.
- FAX purchased an additional nine 40-foot CNG buses and three 30-foot CNG buses bringing its alternative fueled fleet to 80 vehicles.
- FAX completed the installation of On-Board Video Surveillance System on all FAX buses. The video system has benefitted FAX in the defense of bogus lawsuits as well as identifying suspected criminals. It functions as a training tool to improve the safety of bus operators.
- Successfully applied for and received a $48 million FTA Very Small Starts Grant to bring Bus Rapid Transit (BRT) to Fresno. The initial corridor will run from River Park Shopping Center in the north along Blackstone Avenue to Downtown. From Van Ness Avenue, it will continue on Ventura Avenue and Kings Canyon Road to Clovis Avenue in the southeast.
- Utilizing funding from California Proposition 1B, FAX purchased a paratransit facility in central Fresno. The new facility allows for FAX staff to be stationed in the same building as the paratransit contractor. This provides better oversight of the operations and improves the communication between the vendor and FAX.
- In January 2013, FAX contracted with Keolis Transit America to operate the Handy Ride paratransit service.

✓ **Clovis Transit**

Over the past two years, Clovis Transit has accomplished many of its goals including:

- Purchased six (6) new Arboc low-floor kneeling buses.
- Clovis Transit made route adjustments to shift service from low productivity areas to areas of higher demand. The redesign of the routes improved on-time performance, shifted service hours from a lower producing area in the south of town to a higher demand new area in the northwest, and route modifications on Gettysburg Avenue captured an entire new area with substantial ridership.

- Completed the installation of Digital Video Recorders on all transit buses. The video system has been invaluable in reducing incidents on the bus, identifying those passengers who do commit violations on the bus, is a method to solve disputes and passenger complaints, and facilities the investigation of employee incidents and discipline.
- Clovis Transit installed a Zonar pre-trip system fleet wide. The Zonar system ensures proper pre-trip inspection of all transit vehicles. The Zonar units also incorporate a web-based GPS system that allows for instant tracking of vehicles and on-time performance from any computer with Internet capability.
- Clovis Transit made significant improvements to its fixed route bus stops. Concrete improvements were completed at over 50 stop locations by modifying the slope and space for ADA compliance, thus improving the access for persons with disabilities. In addition, Clovis Transit installed 42 benches at the stops.

✓ **Urban Transit – Safety and Security**

FAX customers value safety and security when using the transit system; FAX addresses these concerns:

(1) Transit Security Plan

FAX security plan provides a highly visible security presence for our transit customers and employees. FAX uses City of Fresno police officers to deliver system wide protection. Customers see uniformed patrol officers on buses and at transit facilities. As a result of the police presence, passengers feel safer, and public property has been protected from vandalism and graffiti. Since the introduction of the police officers, the number of crimes has been reduced.

(2) Video Surveillance System

In an effort to prevent graffiti and vandalism on buses, and to increase the safety of our passengers and drivers, FAX installed an On Board Video Surveillance System. It is believed that the presence of the video surveillance cameras serve as a deterrent to vandalism and other crimes.

(3) City of Fresno Emergency Operations Plan

The Department of Transportation/Fresno Area Express (FAX) is included in the City's Emergency Response Plan. This plan addresses the response to extraordinary emergency situations with natural disasters, technological incidents and national security emergencies in or affecting the City of Fresno.

Needs Assessment

✓ Unmet Transit Needs Process

Each year the Fresno COG holds "Unmet Transit Needs" hearings consistent with Section 99401.5 of the Transportation Development Act. The Act governs the administration of the Local Transportation Fund (LTF). The referenced section of the Act clarifies that the Regional Transportation Planning Agency (Fresno COG in the Fresno County Region) must make a finding, after a public hearing, that there are no unmet public transportation needs within a jurisdiction which can be reasonably met before it may approve LTF claims for streets and roads.

The Fresno COG Policy Board adopted the following definition of Unmet Transit Needs in 1984:

"Those public transportation or specialized transportation services that are identified in the Regional Transportation Plan and that have not been implemented or funded."

The adopted definition also sets forth the criterion by which “reasonable to meet” is determined. Since the RTP and SCS are the guiding documents for the provision of transit services, any service implementation should be consistent with the RTP and SCS. In fact, the Transportation Development Act requires that prior to claim approval, an RTP consistency finding must be made. This definition does not prohibit new proposals, but simply requires that, prior to implementation, the proposal be incorporated within the current RTP and SCS, if necessary, by amendment.

Prior to making a finding, an annual assessment and analysis of the existing and proposed transportation system is prepared. This report is the foundation for the public hearing process each year.

The Social Services Transportation Advisory Council (SSTAC) was established by the Fresno COG in 1988 to comply with 1987 legislation (SB 498). Primarily composed of persons representing the elderly, disabled, and persons of limited means, the SSTAC's purpose is to:

- Annually participate in identification of transit needs
- Review and recommend appropriate action by Fresno COG for a jurisdiction which finds that a) there are no unmet transit needs, b) there are no unmet transit needs that are reasonable to meet, or c) there are unmet transit needs that are reasonable to meet.
- Advise Fresno COG on any other major transit issues, including the coordination and consolidation of specialized transportation services.

The SSTAC was thoroughly educated as to the first step in its participatory role. With this solid foundation, it has now become an integral part of the Fresno COG transit planning process. Emphasis

is placed on the responsibility for recommending findings pursuant to the unmet transit needs process. Within Fresno County, there are currently no adopted findings of unmet transit needs that are reasonable to meet.

Public Transit-Human Services Transportation Coordination Planning

Fresno COG, as the designated Metropolitan Planning Organization (MPO), is responsible for transportation planning in Fresno County. This includes development and adoption of planning policies and documents, review and coordination of transportation planning, and transportation policy direction. The Fresno COG is the lead agency for the development of a Coordinated Human-Services Transportation Plan (CHSTP). A coordinated public-transit human-service transportation plan provides a strategy for meeting local needs. It prioritizes transportation services for funding and implementation, with an emphasis on the transportation needs of individuals with disabilities, older-adults, and people with low incomes.

Proposed Actions

- ✓ **Short-Range Transit Plan**

  - ➢ **Fresno Area Express**

    The most recent Short-Range Transit Plan (SRTP) for the Fresno-Clovis Metropolitan Area was adopted on June 27, 2013. The Plan represents a short-range evaluation of transit needs and proposes specific recommendations for implementing the long-range objectives of the RTP and SCS. The Plan guides the provision of transit services in the FCMA over a five-year period, and sets forth an action plan commensurate with reasonable needs and available funding.

    The SRTP and this RTP and SCS are being amended to reflect the findings and recommendations of the 2011 Public Transportation Infrastructure Study and the 2008 BRT Master Plan.

    In order to achieve the goal of maintaining financial stability, FAX must continuously seek improvements in service productivity and cost effectiveness. Since the majority of FAX's budget is spent to provide service on the street, it is critical that service be regularly monitored to ensure these resources are being utilized to the fullest extent possible. FAX has addressed system productivity by instituting an ongoing program of service evaluation to identify inefficient use of resources and respond with corrective measures.

    The primary assessment of transit service is accomplished by measuring individual route performance using FAX's route evaluation process. When appropriate, corrective action is taken

to modify route alignments, change the service schedule to ensure that resources are used in the most productive manner. There are many methods for evaluating the efficiency and effectiveness of public transportation service. Because each method has unique strengths and weaknesses, FAX employs several service evaluation methods. Among the methods used are: peer review analysis, system minimum/maximum standards assessment, and passenger surveys.

Peer Review Analysis uses standard service measurement criteria to compare one agency's system performance against another. This kind of analysis is most valuable when standard, well controlled data sets are available, and when the systems being evaluated have similar operating environments.

The System Minimum/Maximum Standards Assessment uses standards that are established both through legislation and local effort. From a legislative perspective, Federal and State regulations require public transit operators to provide and maintain service in some very specific ways. The Federal Transit Administration has regulations governing the provision of "Charter Service." Also, Title VI of the Civil Rights Act of 1964 states the following:

> *"No person in the United States shall, on the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discriminations under any program or activity receiving Federal financial assistance."*

As part of the Title VI regulations, FAX must provide a Title VI Evaluation Report every three years. There are two sections to this report. The first section, General Reporting Requirements, contains information concerning active lawsuits and complaints, a description of any pending applications for Federal financial assistance, a summary of civil rights compliance review activities, FTA civil rights assurances, and fixed facility impact analysis. The second section, Program Specific Requirements, contains information regarding the Title VI internal review process for service delivery, the internal monitoring process, the service standard policies, and a description of service changes specific to the Fresno Area Express fixed route transit system and its impacts on the minority population. The Title VI assessment is designed to ensure that FAX provides its services equally among various population groups. Specifically, census tracts designated as "Minority Census Tracts" must be evaluated and compared to Non-Minority Census Tracts to determine whether any discriminatory practices are evident.

The State Transportation Development Act (TDA) regulations require FAX to maintain a minimum 20 percent farebox recovery ratio. The TDA also places restrictions on the use of State Transit Assistance (STA) Funds. Regulations require transit agencies to keep cost increases under the State Cost of Living Index (CPI). If cost increases exceed the State CPI, transit agencies are not allowed to use STA Funds for operating expenses. Finally, local and regional concerns are used to develop minimum productivity standards. For FAX, these standards are developed through a

coordinated, comprehensive, continuous process carried out by the Fresno Council of Governments (Fresno COG). The Fresno COG's Regional Transportation Plan (RTP) and Short Range Transit Plan (SRTP) for the Fresno Clovis Metropolitan Area (FCMA), sets guidelines for service evaluation. Additionally, each year the Fresno COG prepares the Annual Transit Productivity Evaluation. This document assesses all public transit operators in Fresno County, and reviews the most recent Triennial Audit recommendations.

In 1981, a Transit Corridor Analysis was completed which evaluated the efficiency and effectiveness of service on a route by route basis. At that time, service measures were developed to assist in evaluating individual route performance in relation to the system wide performance. Those minimum performance measures continue to be the basis of local service evaluation. At a minimum, an individual route should exceed 60 percent of the system wide average for a number of key passenger productivity indicators. The 60 percent figure is an overall industry standard that assumes a transit system may tolerate some low performing routes if they provide an important component of the system, and especially if the component helps meet the needs of the transit dependent riders. Cost performance measures should not exceed 140 percent of the total system average, with 140 percent representing the system maximum.

Passenger surveys allow public transit operators to include human aspects of service in the evaluation mix. Measurements of satisfaction, friendliness, and of opinions about services provided are most appropriately collected through customer surveys. Additionally, customer surveys provide an effective way to measure customer expectations and needs, and provide valuable information for quality decision making.

FAX utilizes a variety of survey methods including outreach events and a bi-annual customer survey. The survey is more detailed and takes place on-board the buses and at stop locations. These surveys are used to collect information that is required by Federal and State agencies including passenger demographics, origin/destination information, and travel habits. This data also provides FAX with insights into the concerns of our passengers. For example, it was one of these passenger surveys that allowed FAX to prioritize service improvement options and select night service in 1999.

- **Clovis Transit**

Clovis Transit has also been affected by limited funding, which necessitated changes with an added emphasis on efficiency. Route changes will be implemented based upon demand, reducing transfers and elimination of unproductive routes or portions of routes. Increased emphasis will continue to be placed on peak-hour service.

Clovis Transit will continue to monitor existing services for productivity and internal efficiencies. Efforts to coordinate services among transit systems for maximum delivery of service throughout the region will also continue. Ongoing coordination and consolidation of all Clovis transportation service for social service agencies will continue to be the focus of Clovis' specialized services.

✓ **Long-Range Improvement Plan**

Fresno, like other Central California cities, is expected to continue experiencing growth and development over the next twenty years. This growth will bring both opportunities (new jobs, new housing and increased prosperity) and problems (increased traffic congestion, air pollution and general over-crowding).

The Fresno urban area is no stranger to some of these problems. Fresno experienced growth in the northern neighborhoods abutting Herndon Avenue, west of Highway 99 and in the south east. On one hand, this growth has been good because it has increased the stock of affordable housing and created thousands of jobs in construction and related industries. On the other hand, the increase in automobile traffic associated with this growth is having an effect on both traffic congestion (collector streets and arterials) and air pollution. It has also made it difficult for FAX to serve the areas that are substantially far from the City core. To make the transit system more effective and a feasible choice for non-dependent riders, the City needs to experience greater infill development.

With Fresno County's population expected to grow from the 2008 population of 912,521 and the current population of 952,000 (2013) to 1.301 million people by 2035 and 1.34 million by 2040, the topics of growth management, transit and land development policies are timely for Fresno for proactive planning that may stem the tide of Fresno County's past trends.

Increased congestion impacts not just cars but buses as well. An increase in congestion increases the time it takes for a bus to make a round-trip, which, in turn, increases the number of buses, needed just to maintain the current level of service. In other words, it ends up costing more to keep doing the same thing. Even a small decrease in the average speed along a corridor can translate into the need of one or two extra buses on a route. This in turn can increase annual operating costs by several hundred thousand dollars. In the near future as much as 25% of a bus' total round-trip time could be spent waiting at red lights or creeping along in stop and go traffic.
Public transit operators and policy makers must give serious consideration to how competitive transit can or should be with private automobiles. If FAX, or any other transit operator, is expected to play an earnest role in economic development, environmental justice or improving air quality, then it will be necessary to offer a system which is competitive with the private automobile. If so, that system will look vastly different from the system on the street today. The question then becomes, is the community ready to commit the resources needed for transit to be a viable alternative to the ubiquitous automobile?

The current FAX system, as with many other areas around the county including those within Fresno County, is one that primarily addresses social service transportation needs. The typical FAX passenger tends to come from a transit dependent household and has few, if any options other than riding the bus. If public transit is going to play a role in addressing mobility and air pollution challenges, the system will need to be structured, or restructured, in a manner that can attract choice riders. It must become competitive with the automobile.

With limited resources, shifting the service objectives of the FAX system could result in the need to make some difficult trade-offs. A system that is designed to be competitive with the automobile is not always appropriate for serving social service needs. This could become an issue for current riders and social service agencies. The question is, how limited resources will be distributed between competing needs. FAX identifies two short-term transit-specific scenarios as well as long-term strategies that build upon these scenarios.

(1) Short-term scenario A focuses all resources toward maximizing system-wide ridership. This scenario reduces service in areas that currently generate low ridership, while increasing the frequency of service to every 15 minutes all day in areas of high ridership. The service assumes a 25 percent increase in resources and suggests that ridership growth in the range of 35-50% is conceivable.

(2) Short-term scenario B retains coverage to all areas now served, and even expands the coverage area to include most developed parts of the city. Relatively few improvements are made to increase productivity, although some frequencies are improved. This scenario is likely to increase the growth rate in ridership slightly, but at a rate below that of Scenario A. To date, this has been the scenario of choice for FAX and other Fresno County service providers.

For long-term growth, the service plan recommends the implementation of either of the short-term scenarios, and then to grow service only as funding resources permit. The approach presumes that the 30% growth in travel projected for the region will occur overwhelmingly in the form of single-occupant auto trips.

The Public Transportation Infrastructure Study (PTIS) began as an effort to identify strategies for transportation investments and land use policies that would result in measurable reductions in vehicle miles travelled (VMT) and improve mobility choices for greater Fresno County residents. Improving transportation choices for Fresno County and City residents makes taking transit, bicycling and walking more attractive than driving alone for every trip. And, less reliance on the automobile translates to air quality improvements, setting achievable benchmarks for reducing greenhouse gases. The following recommendations were developed through the PTIS for the Fresno Clovis Metropolitan Area (FCMA):

1. Apply for funding for a second bus rapid transit corridor along Shaw Avenue from Highway 99 to Clovis, serving CSU Fresno within 5-6 years. The eastern end of the Shaw alignment could be either north on State Route 168 to a future high density employment center, or it could continue into downtown Clovis on Shaw Avenue if sufficient base zoning has been implemented to support the high capacity investment.
2. The third priority for high capacity transit investments was identified for Cedar Avenue from Shepherd Avenue to near Butler Avenue (and serving the CSU Fresno campus). The timeframe for this investment has not been identified, but would depend on an assessment of transit travel demand on existing local buses serving that route.
3. Restore 15 minute service frequency on high demand routes #34 (First Street) and #38 (Cedar Avenue). Increase frequency on route #32 (Fresno Street) to 15 minutes.
4. Implement "Owl Service" on 6-8 routes, extending service hours until midnight.

As policy decisions are implemented to support higher density development, housing and mixed use projects in downtown and when the High-Speed Rail project becomes operational, the following transit investments could be considered:

5. Provide a direct link between the planned BRT system and the planned High-Speed Rail (HSR) system to serve as a transit connection to destinations beyond downtown and to minimize the parking footprint needed for the future HSR station.
6. Consider building and operating a streetcar in downtown Fresno, serving Chinatown, the future HSR station and the regional medical center along Fresno Street, and terminating at San Joaquin Memorial High School.
7. Pursue funding for an expansion of the streetcar project that would operate along Fulton or Van Ness to connect the downtown convention center, the Fulton Mall, and continuing up to the Tower District, terminating at Fresno City College.
8. Pursue federal funding assistance to convert the BRT lines to LRT, particularly along Blackstone Avenue and Ventura/Kings Canyon Road.

In addition to the PTIS, several other regional studies of concern to public transit are currently active. The Fresno COG is conducting the Fresno-Clovis Metropolitan Area (FCMA) Public Transportation Strategic Service Evaluation and the City of Fresno's Fresno County Public Transportation GAP Analysis and Service Coordination Plan.

The purpose of The FCMA Strategic Service Evaluation is to examine metro travel patterns through extensive origin and destination studies; transit ride check and transfer studies; and pubic and stakeholder input with a goal of reducing transit travel times, and improving linkages to major trip generators. Improving transit travel time and responsiveness to community needs is critically necessary to making transit a viable alternative in contemporary urban environments. As Transit Oriented Development (TOD), and other measures geared toward alignment with the San Joaquin

Valley Regional Blueprint and Sustainable Communities Strategy (SB375), continues to be introduced and come to fruition in the FCMA, it is the intention of this planning effort to be ready to adjust routes and meet the increased demand in a smooth fashion.

In addition, the FCMA as the rest of the Central Valley continues to suffer the economic impacts of the Great Recession. Identifying the most effective and efficient service design and operating strategies is critical for the long-term sustainability of public transit services in the area.

Objectives of this study are:

- Assess metro travel patterns through extensive origin and destination studies; transit ride check and transfer studies; and pubic and stakeholder input.
- Identify transit route alignments and operating policies that could reduce transit travel times, and improve linkages to major trip generators.
- Make transit a viable alternative in the FCMA contemporary urban environments.
- Improve overall productivity, cost effectiveness and sustainability of transit service.

The Public Transportation GAP Analysis is a planning and research project that will meet the goals of the Fresno County Human Services Coordinated Transportation program by identifying specific needs of the transportation disadvantaged people in Fresno County and preparing an implementable plan to meet those needs. Identifying the barriers and gaps experienced by these groups as they seek to gain employment or simply travel to and from work, and determining the best methods to overcome those barriers will be of the highest priority.

The Fresno County Human Service Coordinated Transportation Plan identifies, in broad strokes, general transportation needs and gaps that exist within the Fresno COG jurisdiction. Although general transportation improvement opportunities are identified, there is insufficient data to develop meaningful transportation solutions. At the heart of this project, we intend to conduct a countywide survey of transportation needs that will focus on low-income, minority and transportation disadvantaged populations. According to the Fresno County Human Services Coordinated Transportation Plan, Fresno County has a higher percentage of disabled and low-income residents than statewide. Due to lower real estate prices and lower cost of living, many retirees relocate to Fresno County from major metropolitan centers. As this segment of population ages, it is expected there will be increased demand for specialized services for senior citizens.

Discussion

✓ **Coordination of Fares and Schedules**

Management and staff from FAX, Clovis Transit, Fresno County Rural Transit Agency, and Fresno County Economic Opportunities Commission meet regularly to discuss ongoing planning projects and reports, service issues, and connectivity among systems. Coordination of fares and schedules is an ongoing topic at these meetings. FAX includes Clovis Roundup schedules with the FAX Schedule Guide, and in October 2004, Clovis Roundup and FAX initiated the Metro Pass, a new regional pass that is accepted on both systems. Information for both systems is available by phone at 559-621-RIDE.

In addition, a regional farebox system that will facilitate a regional pass program is being implemented this year. FAX is the lead agency in the procurement of a new Automated Fare Collection System that will accomplish many of the benefits of forming a regional transit agency without the necessity of forming a new regional political structure.

✓ **Transit Interface**

Fresno COG continues to publish the Fresno County Transportation Guide. The Pocket Guide is a bilingual (English/Spanish), user friendly pamphlet which describes provides basic information such as maps and fares. The Guide also includes contact information on regional, inter-city, and local transportation providers; information on transportation services to many popular destinations; and clear direction on how to plan trips and make connections within and between systems and modes. The Fresno COG continues to revise the document each time it is published.

✓ **Public/Private Sector Coordination**

FAX continues to contract with the private sector for many services which can be provided more reliably and economically. The maintenance department contracts to private firms for a variety of services including major overhauls and vehicle painting. FAX also contracts with private firms for special studies, surveys, marketing projects, technical training and administrative equipment servicing. Planning and related services are now contracted with the Fresno Council of Governments. Many administrative support services such as legal, personnel, communications, finance, data processing and purchasing are performed by other city departments. Municipal code and labor contracts preclude some outside service contracting.

✓ **Inter-City Rail**

Amtrak currently provides inter-city passenger rail service for six round trips daily. Freight is carried along both the Burlington Northern Santa Fe and the Union Pacific railroads.

✓ **Passenger Rail Project Priorities:**

Passenger rail priorities currently facing Fresno include:

- Preservation of abandoned railroad right-of-way and trackage
- The California High-Speed Rail Project
- Assessment of future light rail potential
- Active participation in the newly formed JPA

A more detailed discussion of rail issues can be found elsewhere in the 2014 RTP (Section 5.8) under the heading Rail.

Stable Funding Source

Measure "C", the ½ cent sales tax is dedicated for transportation and transit purposes, and has provided local jurisdictions with additional local funds. However, actual revenues have been significantly lower than expected. By 2009 Measure "C" was expected to provide an estimated 11 million dollars per year. It is anticipated that in fiscal year 2014 Measure "C" will account for just over $8.6 million dollars in revenue.

Fresno County Rural Area Public Transportation & Social Service Transportation

Existing Systems

The Fresno County Rural Area is served by a combination of providers: common carrier; general public and social service agencies.

✓ **Rural Inter-City Ground Transportation**

The rural transportation network utilizes the limited services provided by regional common carriers. They include Greyhound, Orange Belt Stage Lines, and Transportes Intercalifornias. Their services generally utilize portions of state highways and provide very a limited service to a few of the County's incorporated cities.

✓ **Rural General Public Transportation**

The primary provider of rural general public transportation is the Fresno County Rural Transit Agency (FCRTA). The Joint Powers Agency was formed in 1979 to address transit needs of the rural incorporated cities including: Coalinga; Firebaugh; Fowler; Huron; Kerman; Kingsburg; Mendota; Orange Cove; Parlier; Reedley; Sanger; San Joaquin; Selma; and Fresno County. The FCRTA provides fixed-route services which link communities with each other and with the Fresno-Clovis Metropolitan Area. Intra-community public transportation service (fixed route and/or demand response) is provided through public, private or non-profit entities. The services specifically address the needs of elderly, disabled, and general public patrons. All vehicles continue to be accessible to frail elderly and disabled passengers in compliance with the Americans with Disabilities Act. Rural public transportation services are provided along four basic corridors to the FCMA as follows:

- Coalinga – Huron – Five Points – Lanare – Riverdale – Caruthers – Raisin City – Easton Corridor
- Firebaugh – Mendota – San Joaquin - Kerman Corridor
- Kingsburg – Selma – Fowler Corridor
- Orange Cove – Reedley – Parlier – Sanger Corridor

Additional inter-city corridors also provide linkages between rural incorporated cities:

- Huron – Interchange Developments at State Highway I-5 and 198, Harris Ranch, West Hills College, and Coalinga.

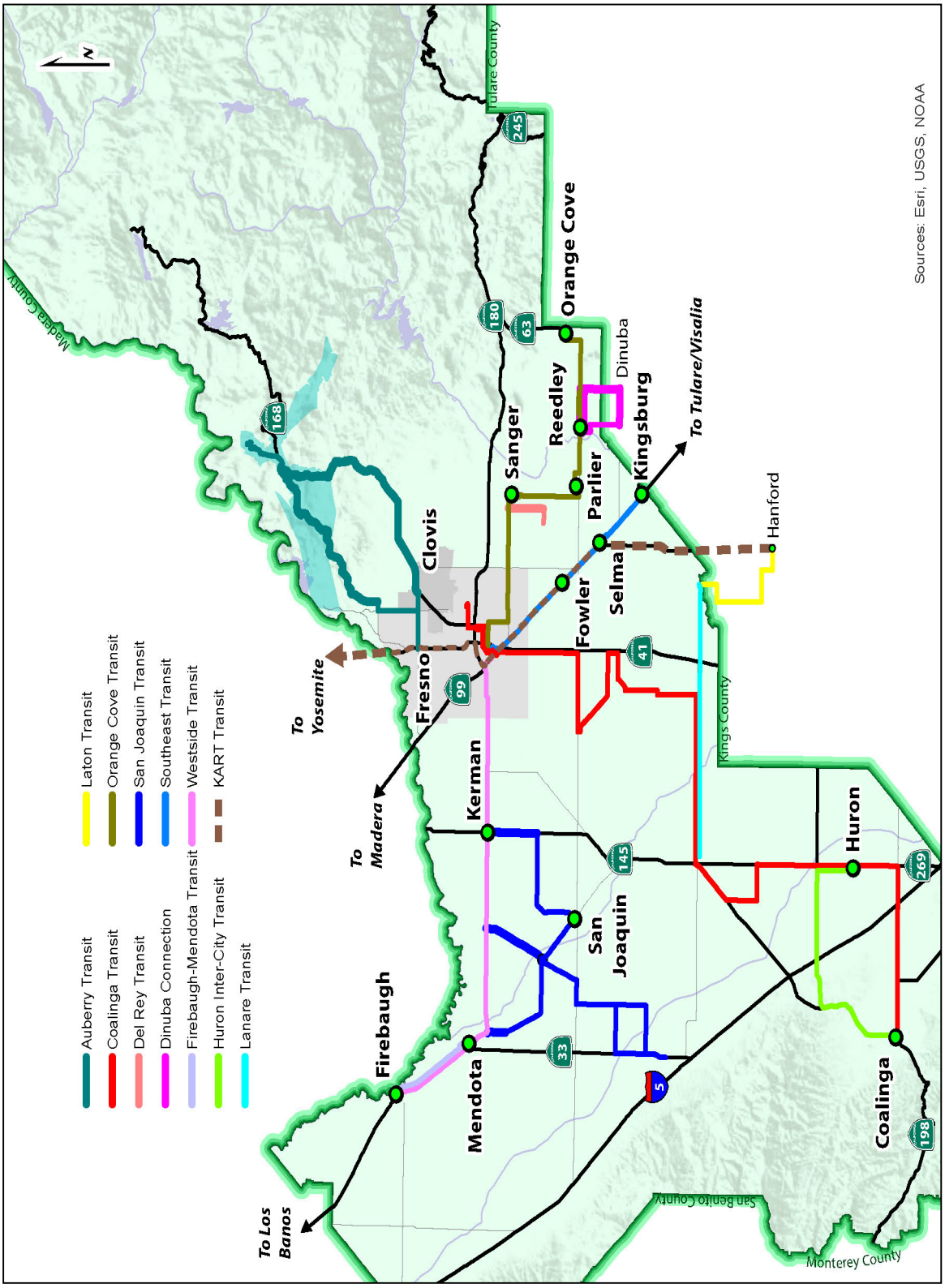
Figure 2-10 provides a summary of FCRTA's services in the rural system.

Rural Social Service Transportation

Fresno COG has co-designated the FCRTA and the Fresno Economic Opportunities Commission (FEOC) as the Rural Consolidated Transportation Service Agency. The Rural CTSA celebrated its thirty-second anniversary in 2014. FEOC is the lead agency responsible for overall program administration including liaison with social service agencies, data collection, development and implementation of the Rural CTSA Operations Program and Budget (OPB), execution of service contracts, and related administrative tasks. FCRTA administers Transportation Development Act (TDA) Local Transportation Fund, provides technical assistance, and evaluates the performance of the FCEOC.

The Social Transportation Improvement Act of 1979 encourages the coordination and consolidation of social service transportation. It enables up to five percent of the County's LTF monies to be set aside to enhance social service transportation. The Rural CTSA receives a share of these funds on a population basis ratio basis between the Urban and Clovis CTSAs.

FIGURE 2-10
Fresno County Rural Transit Services



The operating costs of CTSA services are funded with TDA / LTF Article 4.5 revenues, contract service revenues, and farebox revenues. TDA funding must be matched with contract revenues and farebox revenues on a forty-five percent, forty-five percent, and ten percent (45% / 45% / 10%) basis.

The Rural CTSA process primarily involves four types of coordinated transportation services. These services are provided through: 1) Vehicle Timesharing; 2) Ridesharing; 3) Consolidation; and 4) Maintenance.

The Rural CTSA currently provides services to the following four social service agencies: 1) Central Valley Regional Center (CVRC); 2) Fresno County Economic Opportunities Commission; and 3) Special Trips. The Rural CTSA also provides drivers for fifteen rural public transit subsystems under contract with the FCRTA.

Annually the Rural CTSA prepares a comprehensive "Operations Program and Budget" that reflects their specific work program for the coming fiscal year. The 2013-14 edition of the OPB was adopted by the respective agencies policy boards and the Fresno COG Policy Board in June 2013.

Fresno County Coordinated Human Services Transportation Plan

In June of 2012, Congress passed the Moving Ahead for Progress in the 21st Century Act (MAP-21), which is the funding authorization bill that governs federal surface transportation spending. Specific transit programs are part of the Surface Act. They include several programs, including the following:

- ✓ Enhanced Mobility of Seniors and Individuals with Disabilities - (Section 5310)
- ✓ Bus and Bus Facilities – (Section 5339)
- ✓ Fixed Guideway Capital Investment Grants – (5309)
- ✓ Public Transportation Emergency Relief Program – (Section 5324)
- ✓ Transit Asset Management – (Section 5326)

As part of fulfilling the requirement to receive funding from any of these sources, Fresno County was responsible for completing a 'Coordinated Human Services Transportation Plan'. The plan accomplishes the following:

- ✓ Identifies resources currently in use for public transit
- ✓ Surveys users to determine current needs and future expectation of users, and
- ✓ Develops strategies to close gaps in perceived service levels.

The federal funds are the resources used to close the gaps identified in the plan. The Fresno County Coordinated Human Services Transportation Plan was developed in close cooperation with public transit and human services providers and other stakeholders.

Fresno COG and FAX staff completed the Fresno County Coordinated Human Services Transportation Plan in November 2007. Following an extended forty-five day review period for public comments, the document was adopted by the Fresno COG Board on January 24, 2008 by Resolution 2008-03. Fresno COG is responsible for updating the plan in Fiscal Year 2013-14. The Plan is scheduled to be updated in 2013-14.

Accomplishments

During the previous few years FCRTA has made a number of modifications to its services and operations. Specific changes are documented in the "Short-Range Transit Plan for the Rural Fresno County Area, 2013-2018".

Needs Assessment

The assessment of needs in the rural area is a function of the Fresno COG's annual "unmet transit needs" process. The process itself was previously discussed in the Urban Section. Several surveys and demonstration programs have been conducted in recent years in response to particular rural unmet transit need requests:

- ✓ Periodic ridership surveys of each FCRTA subsystem continue to provide a profile of ridership characteristics and boarding and deboarding statistics and are conducted biennially.

- ✓ Non-rider survey: In response to a recommendation contained in a previous Triennial Performance Audit, Fresno COG and FCRTA staff have developed a survey form that was distributed randomly to 5,000 residents within FCRTA's Service Area.

  The bilingual (English and Spanish) multi-colored form was intended to introduce FCRTA's available services to those who may not be aware of their option to utilize public transit within rural cities and to the Fresno-Clovis Metropolitan Area. A tear-out map with phone numbers was provided for continued future reference purposes. As an incentive to utilize our services, we also provided a free round trip coupon that may have been utilized on any of our in-city services.

  Seven brief questions were asked to assist us in determining how we might better serve potential new riders. The form separated for return mailing purposes. Postage was pre-paid to facilitate a convenient response.

  Staff tabulated the results. A summary report entitled "Rural Public Transportation Service Marketing: Non-Transit User Survey for the Fresno County Rural Transit Agency" was made available for review

purposes. Observations and recommendations were offered for staff and Board consideration and acceptance. The results were included in the "Short-Range Transit Plan for the Rural Fresno County Area".

- ✓ Needs Assessment Surveys: The FCRTA has conducted many needs assessment surveys. Several have resulted in the implementation of demonstration services. The services are carefully monitored to ensure anticipated ridership expectations are realized, and minimum performance characteristic measures are maintained.

- ✓ The FCRTA has implemented several Demonstration Programs in recent years. They include: Biola Transit (within the community and to the FCMA); Coalinga Transit Express Transit (service to the FCMA for medical appointment); Friant Transit; Juvenile Justice Campus Transit (first for the Juvenile Campus and second for the Juvenile Court System); and South Sierra Transit (between Dunlap, Miramonte, Pinehurst, Squaw Valley and eastside cities and to the FCMA). We also were able to utilize Welfare to Work funding for several years from the Fresno County Employment and Temporary Assistance Department for: Coalinga Transit service to the I-5 Interchange Development between Coalinga and Huron; Eastside Transit (between Reedley and Selma). They also funded the FCRTA to expand its service hours from 6:00am to 6:00pm, include Saturday Service, and reduced the observance of holidays to just four days per year. Unfortunately, in each case minimum ridership did not materialize to warrant continuation. Minimum performance standards, including ten percent farebox receipts, were simply not met.

- ✓ Big Sandy Indian Rancheria: FCRTA Staff prepared an Unmet Transit Needs Survey for distribution to 330 tribal members "on" and "off" the reservation. Twenty-eight (28) surveys were returned. Limited-infrequent needs were expressed. The introduction to the Survey Form explain the three (3) existing services that were available to all mountain area residents, including Auberry Transit Intra-Community and Inter-City service to Fresno. That same information continues to be advertised weekly in the "Mountain Press" newspaper with expressed reference to the Big Sandy Rancheria, the Cold Springs Rancheria, and the Table Mountain Rancheria in Friant. When staff completed its survey analysis and report with finding and recommendations for the tribal leaders, several formal presentation opportunities were scheduled and then cancelled. Later, staff was informed that the entire leadership had been changed and that the new leadership was no longer interested in efforts initiated by the previous group. Staff forwarded multiple copies of the report and supportive documents through Rancheria representatives and Caltrans liaison staff. No other communications have subsequently transpired.

The annual unmet needs process and transit system performance evaluations shall ensure continued modifications, improvements, and expansion of rural transit service during the next twenty-five year RTP and SCS planning period.

Proposed Actions

- **Short-Range Improvement Plan**

The 2013-2018 Rural Short Range Transit Plan (Rural SRTP) was adopted by the Fresno COG Policy Board in June, 2013. The following points outline the purposes of the Rural SRTP: to provide a five-year, action-oriented program to implement the public transportation as defined in the RTP and SCS; to provide a basis for local governments to demonstrate that public transportation needs within their jurisdictions have been reasonably met; to serve as the planning basis for federal and State assistance to rural public transportation operations in Fresno County, and; to provide a valuable source of information for citizens and local-elected officials.

Plans for the succeeding five years call for a continuation of public transportation services within and between incorporated cities, reflective of warranted service levels. Expansion may include increased service hours, and weekend services. Requests for expansion to new areas should attempt to be accommodated within existing available operations. Special attention must be exercised to ensure that existing transit services are not diluted or jeopardized as service expansion requests to new areas are received.

Those subsystems exhibiting the weakest performance will continue to be monitored for possible adjustments in service. The adjustments may take the form of service revisions, consolidation through new institutional arrangements or termination of service.

Previously, with the deregulation of common carrier service, some rural communities within Fresno County experienced a lacked adequate inter-city bus service. The FCRTA acquired seven large capacity, alternatively fueled vehicles to address these obvious needs. Service improvements were introduced on the County's four primary inter-city routes in 1998 to ensure adequate service to meet public needs.

FCRTA will continue to seek improved operational and administrative efficiencies through coordination with the Rural Consolidated Transportation Services Agency.

The Rural CTSA has a similar document that guides its responsibilities. The CTSA's "Operations Program and Budget" is similar to a "SRTP". It identifies the responsibilities of the CTSA, the legislative intent of the program, and the systematic basis for addressing the relevant issues in the coming fiscal year. It reflects the negotiated services among participating social service agencies.

The Rural CTSA will seek to augment or contract its services with those rural transit subsystems catering primarily to social service clients and expand service in unserved rural areas where warranted.

Fresno COG will continue to monitor and consider elderly and disabled needs in the planning process. Annually, the "unmet transit needs" process evaluates the needs of all segments of the community. The CTSAs annually review the needs of their clients, and the elderly and disabled community plays an important role in that evaluation. Social service agencies must also recognize their responsibility under statute and continue to fund services for their clients.

- **Long-Range Improvement Plan**

The rural area's long-range improvement plans reflect the recommendations of the RTP and SCS. For the most part, the plan improvements are very conservative. When justified by need, and sustainable by performance criteria, additional vehicles and/or service hours will be added. Population growth and development of residential, commercial, and industrial uses in rural areas may also prompt additional services.

Unfinanced Needs

Unfunded mandates continue to have a significant impact on the year to year operations of the FCRTA and the Rural CTSA. The most recent were: the Americans with Disabilities Act; alternative fuels under the Clean Air Act; and Drug and Alcohol Testing requirements of the U.S. Department of Transportation. New unfunded mandates to address ongoing pollution reduction requirements will be further impacted in an entirely different way as the awareness for Climate Change, is understood further.

The comprehensive recognition of carbon emissions and their relationship to the reported problem of greenhouse gas coupled with requirements for major reductions is difficult to fully appreciate at this time.

The most significant ongoing need is the timely replacement of fleet vehicles. Measure C will go a long way to addressing this particular need over the fourteen years (the current twenty year Measure C programs expires in 2027). Of course, additional support from State and Federal sources will also be required. Existing grant programs remain very competitive. Available State and Federal apportionments simply purchase fewer vehicles due to inflationary increases in equipment costs.

Aviation

The Aviation Element is focused on aviation related planning efforts of the Fresno COG, its member agencies and other local entities. The Element ranges from a broad locational diagram of public use airports within the Fresno County region to the specific details of individual airport facility development.

The precise location, facility design and detailed costs of specific facilities contained in the Master Plans of the individual airport facilities. The Master Plans address long-term planning goals, potential land use, noise and safety impacts, and the means by which to implement the short and long range improvements.

An integral next step in the Master Plan process is delineation of airport impacts on the surrounding land area. The responsibility for coordination of land use planning among state, regional and local agencies in the area surrounding an airport facility lies with the Airport Land Use Commission. Through adoption of land use policy plans, the Commission delineates a compatible environment for the airport facility and, in turn, protects a valuable local investment. Fresno COG member agencies with jurisdiction over an airport also incorporate these policies into their Airport Master Plans and general planning efforts.

Regional airport system planning is required by both state and federal funding agencies in order to inventory facilities, evaluate needs (both on the airport and as a result of aircraft activity in the surrounding areas), and forecast demand, determines funding levels and apportionment. The Central California region of the California Aviation System Plan is integrated into the California Aviation System Plan (CASP) and, ultimately, into the National Airport System Plan, which identifies the existing airport relationships on a state and national level and the service and facility needs. All non-NPAIS airports are considered worthy of consideration for improvement through state funding since these airports are not eligible for federal funding.

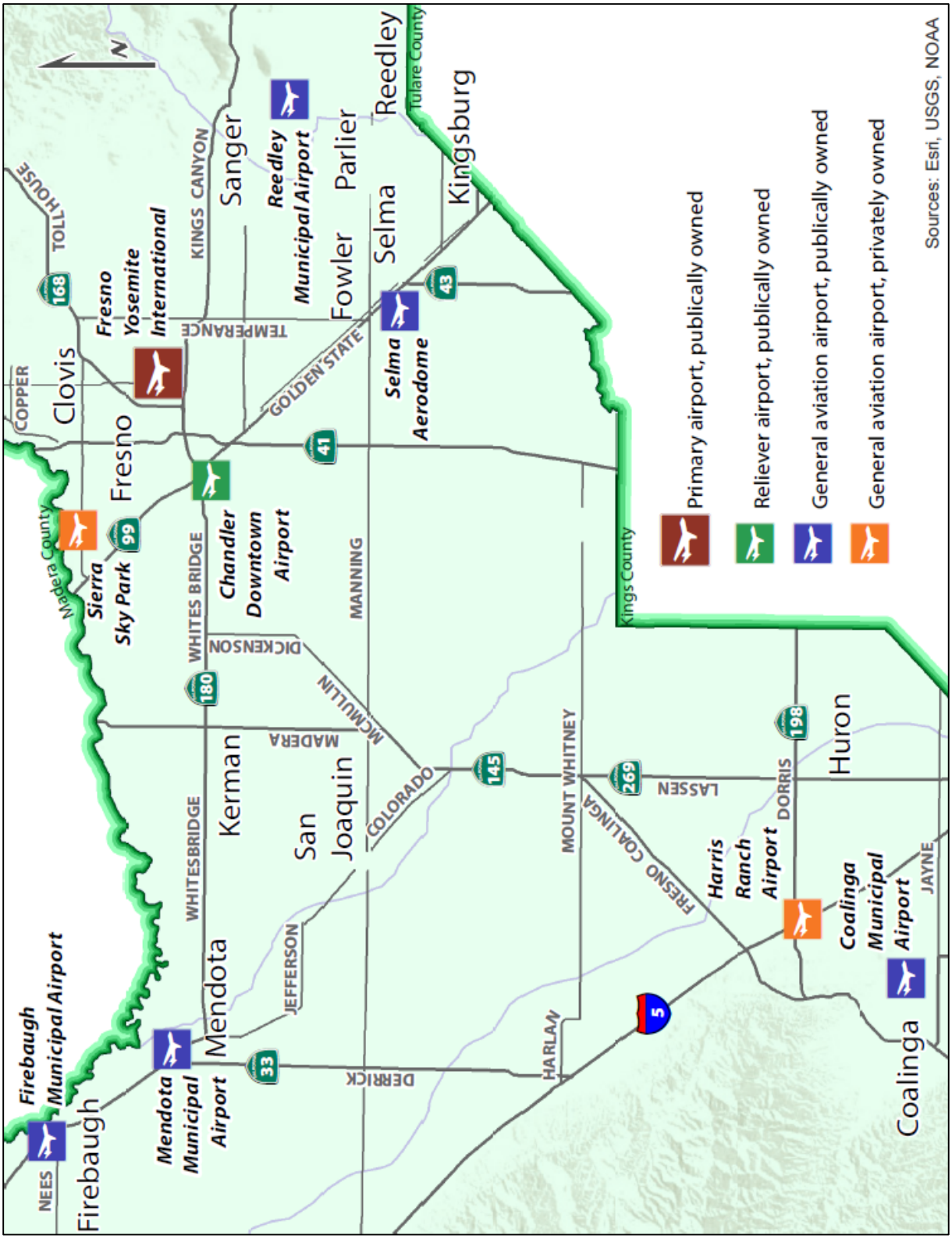
Many of the public airports in Fresno County are, subsidized by the jurisdiction's general fund. However, the cost of capital improvements currently needed by the airports cannot be met by local funding sources alone. Both the Federal Airport Improvements Program (AIP) and the California Aid to Airports Program (CAAP) are also not adequately funding airports in Fresno County.

Existing System Inventory

The California Aviation System Plan (CASP) is a multi-element plan prepared by the California Department of Transportation (Caltrans), Division of Aeronautics, with the goal of developing and preserving a system of airports responsive to the needs of the State. A segment of the CASP, the Central California Aviation System Plan, includes all the public use airports in Fresno County (Reference Figure 2-11 and the 2014 RTP and SCS for more information). The Capital Improvement Plan (CIP) is a ten-year compiled listing of capital projects submitted to Caltrans for inclusion in the CASP predominantly based on general aviation airport master plans or other comparable long-range planning documents. The CIP allows Caltrans partners to actively participate and assist in the coordination of its ongoing, statewide, aviation system planning and project funding effort.

The CIP is updated biennially (every two years) per PUC section 21704. Biennial updates to the CIP provide the basis for the development of the funding program, which consists of airport development and land use compatibility plan projects selected by Caltrans based on a priority matrix. The California Transportation Commission adopts the Aeronautics Program from the projects listed in the CIP, therefore projects must be in the CIP to obtain State funding. The CIP is published every odd year, and the Aeronautics Program, based on the CIP, is adopted every even year.

FIGURE 2-11
Regional Airports



Accomplishments

✓ **Recent Planning Activities**

In 2010, Fresno COG joined a statewide effort, led by San Joaquin COG, in the formation of the California Airport Land Use Consortium (Cal-ALUC).This group of both public and private sector professionals was formed as a collaborative effort to provide a forum for airport land use professionals to share in, and gain knowledge of the land use planning issues in and around airports in California. The first Symposium was in May of 2012, and there will be a Symposium in March of 2014.

The Fresno COG Policy Board approved submission for the CMAQ funding to implement a two year pilot Operating Support for Shuttle Service from Fresno to Yosemite and Sequoia-Kings Canyon National Parks. A study in 2011 provided analysis that resulted in substantial demand for transit service to these locations. The service plan provides direct connectivity to the National Parks, originating in Fresno, and stopping at key locations and transportation hubs, including Fresno Yosemite International Airport.

In 2012, the ALUC (Airport Land Use Commission) adopted and updated Airport Land Use Compatibility Plan for FAT to take into consideration the $40 Million runway safety and improvement projects that were completed in 2013, and the 144th Fighter Wing's conversion from F-16 aircraft to F-15 aircraft. This effort changed the review area and associated maps, representing the airspace protection surfaces, noise and safety contours.

➢ **Coalinga Airport Master Plan**

The City of Coalinga completed and adopted an Airport Master Plan in 2008 for the Coalinga Municipal Airport, which was approved by the ALUC. The Plan will accommodate the type and extent of aviation facilities needed at the Airport through the year 2025.

➢ **Firebaugh Airport Master Plan**

The Airport does not have a master plan, but the Airport Layout Plan is under revision, initiated in 2012, anticipated to be approved by the FAA during the first quarter of 2014. A master plan would be an important tool to identify facility and safety improvements and priorities.

➢ **Fresno Chandler Executive Airport Master Plan**

In April 1999, the City of Fresno adopted a comprehensive update of the Fresno Chandler Executive Airport Master and Environs Specific Plan. The Master Plan document identifies opportunities for Chandler in concert with other developments occurring in the area (nearby business parks,

downtown redevelopment, and planned freeway access), reinforces the role of Chandler as a reliever airport to Fresno Yosemite International Airport and as an executive airport suitable for business aircraft, and guides development of the airport over the next twenty years. In October 2005 a Focused Master Plan Update for North Side Development was competed, which addressed how to accommodate future growth at the airport. In June 2010 an Airport Layout Plan Narrative Report was executed to reflect planning adjustments being considered for Fresno Chandler Executive Airport since completion of the 2005 Focused Master Plan Update for North Side Development.

- **Fresno Yosemite International Airport (FAT) Master Plan**

FAT, in cooperation with the FAA, updated the airport master plan in 2006. Known as the January 2006 FAT Master Plan Update (AMP), the process included a total of six meetings with input from the public and several agencies, including the ALUC. Although not formally adopted, the AMP provides a 20 year planning window for FAT, including an FAA approved 20 year aviation demand forecast, and an FAA approved Airport Layout Plan (ALP). In 2012 FAT, in cooperation the FAA, FAT updated the ALP based on a congressionally mandated Runway Safety Area (RSA) Program.

- **Mendota (William R. Johnston) Airport Master Plan**

Although the Mendota Airport does not have a master plan, the airport layout plan was updated in 2007. Ideally an airport master plan is needed to address the deterioration occurring to the airport infrastructure. Continuing deferred maintenance caused by lack of funding will result in the eventual obsolescence of this community asset. It must be noted that efforts have been made by city staff to apply for funding identifying priority improvements to the airport.

- **Reedley Airport Master Plan**

The City of Reedley is currently updating its ALP, which has an extensive draft report identifying needed improvements and priorities. The most recent Master Plan was adopted by the City of Reedley in 2008, and approved by the ALUC.

- **Selma Aerodrome Master Plan**

It is not unusual for a privately owned public use airport to not have a master plan, as funding constraints and less focus on facility improvement planning do not promote the need. However, the City of Selma at one time had interest in supporting the airport and a master plan would help to identify priorities for this community asset. An airport layout plan update would help focus attention to preserving and improving this facility. Selma Aerodrome currently does not receive funding from local, state or federal sources to conduct planning or major improvement efforts.

- **Sierra Sky Park Airport Master Plan**

As a privately owned public use airport, it is not unusual for this type of airport to be without a master plan. The airport layout plan has not been updated in several decades. The airport is unique in several ways. It is a small general aviation airport located within the city limits of Fresno in a fairly dense urban residential and commercial area near State Route 99 and on one of the busiest roadways in Fresno, Herndon Avenue. Maintenance and operation of the airport is funded and overseen by the homeowner's association of the Sierra Sky Park community. Encroachment of surrounding land uses is of great concern, and attention to future planning is needed.

- **Airport Land Use Commission**

Beginning in October 2008, the Fresno Council of Governments assumed responsibility from the County of Fresno for staffing the Airport Land Use Commission (ALUC). As the Metropolitan Planning Organization (MPO) and Regional Transportation Planning Agency (RTPA) for Fresno County, the member agencies (including the County of Fresno and the 15 incorporated cities) agreed that Fresno COG was the logical place to house the ALUC. The ALUC reviews land uses and land use changes, rezoning applications, zoning ordinance text amendments, airport master plans and building regulations proposed by local jurisdictions when located in the review area of Fresno County airports. This review process is established to determine a project's or proposed land use's consistency with the adopted Fresno County Airport Land Use Compatibility Plan (ALUCP) for noise, safety, airspace protection, and aviation easement and protection. Further, proposed transportation projects that are part of the Regional Transportation Plan (RTP) undergo an environmental review process which is also reviewed by the ALUC for a determination of consistency with the ALUCP. This ensures that RTP projects have met the requirements of the adopted Fresno County ALUCP prior to inclusion in the RTP or upon major scope changes that require an RTP amendment. If the ALUC finds a proposal inconsistent with its plan, the city council responsible for the airport in question may overrule the ALUC action by a four-fifths vote. However, specific findings pursuant to Section 21670 of the Public Utilities Code must first be made.

The ALUC has adopted a series of land use policy plans for the public use airports within the region. The responsible public agencies have also adopted the respective land use policy plan or have incorporated certain provisions of the policy plan into their General Plan documents and Airport Master Plans. The policy plans provide the basis for recommendations on land use development proposals within the airport environs. Fresno COG along with the Mendota Airport as the qualifying sponsor, applied for funding through the State Aeronautics program to develop a Fresno County Airports Compatibility Land Use Plan. Because of the FY 2012-13 decrease in revenue, the project did not receive funds. However, it is expected that funds will become available, and Fresno COG's effort to list the project in the 2013 Capital Improvement Plan has secured a place for the next funding cycle. The reason for this effort is that many of the Airport Land Use Compatibility Policy

Plans are very out of date. It is crucial to provide basic tools for review and identification of current status and future needs of the county's airports, to ensure orderly development in and around the airports. Caltrans Aeronautics has identified this kind of funding as a priority based on public safety and a desire to improve the standards under which public airports operate.

- **Coalinga Airport Completed Improvements**

Perimeter fencing was updated in 2008 to a 6 foot height from the original 4 foot fencing. The last time that funding was available for capital improvements was in 2007, at which time the runway asphalt was improved via a slurry seal project.

- **Firebaugh Airport Completed Improvements**

In 2012, the City of Firebaugh received $156,496 in funding to improve the pavement of the taxiways and tie-down aprons pavement. This is the first improvement project receiving funding in over 6 years.

- **Fresno Chandler Executive Airport Completed Improvements**

Fresno Chandler Executive Airport continues to make improvements as funds allow. New T-hangars and maintenance facilities have been constructed. An Automated Weather Observing System (AWOS) was constructed and is now fully operational. Two new GPS approaches now exist. In 2003, Chandler completed a $3.9 million reconstruction of the main runway and ramp areas, the largest airfield construction project in its history. Runway 30/12 was recently extended to 3,630 feet, Taxiway A was rehabilitated and airfield drainage and security improvements were made.
Federal Aviation Administration (FAA) funds were used to fund two projects at Fresno Chandler Executive Airport in fiscal year 2004-05. The City of Fresno utilized $166,700 to fund the first phase rehabilitation of Chandler's historic Terminal Building, believed to be the last continuously operating WPA terminal building in the nation. Approximately $150,000 per year for the subsequent two years was utilized to fund phases 2 and 3 of the rehabilitation project. Also completed was the closing the shorter of the two parallel runways, thereby expanding the amount of developable land at the airport and providing for use of the closed runway as a ramp area along which aviation facilities and an aviation-related industrial park could be built.

In 2004, the City of Fresno renamed the airport from Fresno Chandler Downtown Airport to Fresno Chandler Executive Airport.

- **Fresno Yosemite International Airport (FAT) Completed Improvements**

The Fresno Yosemite International Airport Master Plan and subsequent joint environmental document (2011 EA/EIR) took into consideration the 20 year FAA approved aviation demand forecast, which was a key step in providing a basis for determining the aviation development and activity at the airport. The aviation demand forecast data and detailed distribution of operations can be found in the EA/EIR. The 2012 updated ALP is based on an FAA approved RSA study of alternatives and recommended plan, and is support by a NEPA EA and a CEQA Initial Study (2012 EA/MND). A $30 Million secondary runway lengthening, widening and strengthening was completed in 2012, resulting in lengthening and widening of the parallel runway from 7,205 to 8,008 feet long and 100 to 150 feet wide. In 2013 FAT completed a Runway Safety Area enhancement project that resulted in lengthening of the primary runway 29R/11L from 9,227 feet long to 9,539 feet long.

- **Harris Ranch Airport Completed Improvements**

There have been no major improvements or projects at the Harris Ranch Airport other than regular maintenance such as painting faded runway markings, cleaning and leveling safety areas, and all other safety measures recommended during required Caltrans Aeronautics safety and permitting inspections to meet current design standards.

- **Mendota (William R. Johnston) Airport Completed Improvements**

There have been no recent major improvements at the Mendota Airport. Although short term planning efforts by the city have been pursued, funding has been a major issue, as both the city budget and state and federal funding sources have not been available for much needed improvements.

Although the runway was improved in 2007, because of deferred maintenance and safety issues the taxiways, apron and runway lighting are in disrepair and the airport is permitted for day use only.

- **Reedley Airport Completed Improvements**

Recent improvements at the Reedley airport include an apron overlay (slurry, seal, design and construction) completed in 2012, and a beacon replacement, also in 2012.

- **Selma Aerodrome Completed Improvements**

  The Selma Aerodrome has not made any major improvements since it was built in 1963, and focuses on maintaining FAA (Federal Aviation Administration) FAR Part 77 safety requirements, even though it must do so with limited funding from its shrinking private operating revenues. This makes modernization projects out of reach without support from local sources such as the City of Selma.

- **Sierra Sky Park Completed Improvements**

  There have been no major improvements other than regular maintenance in compliance with Caltrans Aeronautics safety and permitting regulations and recommendations. This is carried out by homeowner's association of the Sierra Sky Park community.

Needs Assessment

A number of issues continue to impact aviation in California, including safety, noise, ground access, transportation system management, airport financing, institutional relationships, land use, air quality, air service and public awareness. To a greater or lesser degree these issues also impact the Fresno County aviation sub-system. Of particular importance to Fresno County airports is the need for additional state and federal funding to maintain existing airport facilities and construct new facilities necessary to accommodate anticipated levels of growth in based aircraft and aircraft operations.

While the general aviation airports located in the county are anticipated to have ample capacity to accommodate future forecast levels of aircraft operations, this capacity could be significantly reduced if airport runways, taxiways, landing and navigation aids and other airport support facilities cannot be adequately maintained because of funding constraints. The ability of airports to accommodate forecast levels of based aircraft is dependent upon the availability of funding to both maintain existing parking facilities and to construct additional parking as the need arises.

All eight General Aviation Airports in Fresno County were identified for facility enhancement need in the California Aviation System Plan (reference the 2014 RTP and SCS). Another need identified by many of the general aviation airports in the county is funding for airport master plans. While Coalinga and Reedley have been successful in securing funding to develop Airport Master Plans, airports in Firebaugh and Mendota and the Selma Aerodrome have all identified the need to develop an airport master plan to guide future improvement and development. The information contained in a master plan could help in re-opening the conversation that at one time was moving the City of Selma toward the acquisition of the airport. Also, each of the cities, including Selma, believes its airport is important for economic development. Airport master plans would help delineate the physical relationship between airport development and adjacent industrial and business park development.

FAT's service area consists of six counties including Fresno, Kings, Madera, Mariposa, Merced and Tulare. State Department of Finance population figures indicate this six-county area had a total population on July 1, 2013 of 2,000,243 or 5.2 percent of the total California population of 38,204,597. The passenger usage of FAT has been steadily growing since 2010 and ridership reached an all-time airport record in 2013 with a total of 1,401,582 passengers. Airfares are stable due to the diversity of choices travelers have between ten airlines, 12 destinations, five of which are major gateway hubs. The airlines have responded to the sustained economic growth of the region by adding flights, destinations and available seats in the market. However, there is still leakage that occurs due to market forces generated by the automobile and alternative airports in Sacramento, the Bay Area and Los Angeles.

Passengers within the service area of FAT who currently choose to fly out of these alternative airports or drive to their final destinations, will continue to respond as the airlines offer increased flight destinations, frequencies, and additional seats, all of which make other travel choices less convenient. In addition, ongoing education is necessary to convince residents within the six-county service area of the advantages of selecting FAT rather than airports within larger metropolitan areas. These advantages include less use of expensive gasoline, reduced travel time, lower congestion, less vehicle wear and exposure, and better parking and security. Complementary service such as the proposed Fresno to Yosemite Transit Shuttle, with a strategic stop at the airport would dramatically improve options for travelers and increase interest in the city and the region.

The future of Airports, given the capital intensive nature of maintaining them makes it difficult to plan and prepare for. Air traffic system modernization technologies such as NextGen (Next Generation Air Transportation System (reference 2014 RTP and SCS) have safety and efficiency benefits for both commercial airports like FAT and general aviation public use airports in Fresno County. As access to these technologies and more importantly, funding becomes available, the Fresno region will join the nation's air transportation system's improvement to travel times, safety, fuel economy, environmental impact and economic contribution.

There is also an ongoing effort to quantify and promote the economic significance of FAT to Fresno and the entire San Joaquin Valley in order to better develop and sustain ongoing support. It is important that this marketing effort continue. Research on policy for long term planning of economic development and revenue generation strategies have consistently shown that airports provide a city, region and state with many co-benefits. Airports provide global connectivity for general travel and business and generate revenue from tourism and leisure at the local level. California is a top destination for foreign travel and export, ranking number 2 in both, and number 1 in domestic air travel.

Of increasing economic significance to FAT is the role and value of air cargo. In this regard, major airports in both Southern and Northern California may experience significant air cargo constraints that include both facilities and operations capacity, thereby presenting an opportunity for FAT. Intermodal goods movement planning in the near future should, therefore, focus on increased air cargo/distribution service. Longer

term increases associated with passenger demand for FAT may also result. These are economic opportunities that are pursued by the airport and those efforts should continue.

Proposed Actions

✓ **Future Planning Activities**

The airport land use policy plans for the general aviation public use airports in Fresno County provide for orderly growth surrounding each airport. Future ongoing land use planning efforts of local governments will seek to assure that land use actions are consistent with these recommended policies. Many of the airports in Fresno County have expressed an interest in updating their airport land use compatibility policy plans (ALUCPP or CLUP). Although funding was not available during the recent funding cycle, efforts to obtain of State Aeronautic funding for development of a countywide ALUCPP will continue. Fresno COG is committed to include aviation system planning as an integral part of its transportation planning program and to prepare special aviation studies or reports as needed. Fresno COG is further committed to update the Fresno County Regional Aviation System Plan at the appropriate time.

➢ **Short-Range Improvement Plan**

The short-range improvement plan calls for continued maintenance and ongoing improvements to the airport facilities and the protection of clear zones to comply with safety standards. Emphasis will continue to be placed on airport land use compatibility.

➢ **Coalinga Airport Short-Range Improvement**

The City of Coalinga plans at full build out a 7,500 foot runway with a full Instrument Landing System (ILS). Planned short-range improvement projects include runway, taxiway and apron pavement maintenance, additional vehicle parking, and the extension of sewer and natural gas lines to the airport. Longer range improvements include a 4,000 foot long cross wind runway with parallel taxiway and lights, hangars for potential light industrial tenants, shades for existing tiedowns, a terminal building, and a fire station. The crossing runway is particularly important because of wind direction and velocity and, therefore, safety considerations at the airport.

➢ **Firebaugh Airport Short-Range Improvement**

The City of Firebaugh's planned short-range improvement projects include installation of taxiway lighting, additional aircraft apron and hangars, and a fuel island, pilot's lounge and security gates.

As with other airports in the County, development of an Airport Master Plan remains a high priority.

- **Fresno Chandler Executive Airport Short-Range Improvement**

  Planned short-range improvement projects are to improve safety and security, and rehabilitate aircraft taxiways. Longer range improvement projects are to design and construct airport access road improvements, design and construct north airfield drainage improvements, and enhance the airport's Runway Safety Areas.

- **Fresno Yosemite International Airport (FAT) Short-Range Improvement**

  Planned short-range improvement projects at FAT include rehabilitation of the West Commercial Aviation Ramp, acquisition of a new ARFF vehicle and rehabilitation of Taxiways C, B3, B4, C4, and B7.

- **Harris Ranch Airport Short-Range Improvement**

  Harris Ranch operates as a private limited use airport that primarily serves the Harris Ranch Inn and Restaurant and therefore does not have any significant improvement projects planned. The close proximity to Interstate 5 makes the airport a good site for emergency aircraft services, which is the main reason for its public use designation. The airport does not rely on federal or state funding for operating or capital improvement revenue, but does keep its maintenance and safety standards compliant with FAA and Caltrans Aeronautics regulations and recommendations. Harris Ranch Airport provides an important public safety function for the surrounding rural community, and travelers and commuters in the region.

- **Mendota (William R. Johnston) Airport Short-Range Improvement**

  The need to bring the airport runway lighting, taxiways and apron up to standard is of major concern, and the airport is currently permitted for day use only. Planned short-range improvements include cap and seal of the parking ramp, seal coat of the existing runway, widening the south 700 feet of the runway to the 60-foot width of the north end of the runway, reconstruction and extension of taxiways, apron expansion, provide hangers, improve access roads, major runway light replacement and electrical improvements. Development of an Airport Master Plan is also a high priority.

- **Reedley Airport Short-Range Improvement**

  An Airport Layout Plan (ALP) Update and associated environmental documentation to address California Environmental Quality Act (CEQA) requirements were recently completed by the City of Reedley for Reedley Municipal Airport. Recommend short-term development projects (5 year) included improvements to airport and airfield drainage, grading of runway safety areas, fuel facility relocation, Southside transient parking apron area improvements, electrical vault replacement, and perimeter fencing replacement. Other recommended medium (10 year) to long-term (20 year) projects included land acquisition to maintain a buffer against incompatible land use encroachment around the airport and upgrades to the antiquated and deteriorating main hangar and terminal facilities.

- **Selma Aerodrome Short-Range Improvement**

  The Selma Aerodrome's needed short-range improvements include improving and lengthening the runway from 2,400 feet to 3,600 feet to meet FAA standards, although the airport currently meets design standards in accordance with FAA (Federal Aviation Administration) FAR Part 77 safety requirements. These requirements were "grandfathered" to meet the original 1963 standards when the airport was completed. The airport maintains an excellent record of maintenance and safety measures to the approved standards, even though it operates as a private public use airport and does not receive funding from local, state or federal sources. This makes modernization projects challenging, and therefore improvements such as lengthening the runway, upgrading airport lighting, reconstructing the taxiways are not possible at this time. An Airport Master Plan would be instrumental in focusing attention to the need for funding of improvements and support from the City of Selma.

- **Sierra Sky Park Airport Short-Range Improvement**

  There no short range improvements other than regular maintenance, in compliance with Caltrans Aeronautics safety and permitting regulations and recommendations. This is carried out by the homeowner's association of the Sierra Sky Park community.

Financing

- **Existing Financial Sources**

  Aeronautic projects are funded from federal, state and local sources. The Regional Transportation Plan anticipates that funding for airport projects within Fresno County will fall short of the amount needed over the next twenty years.

In November 2006, Fresno County voters approved a twenty-year extension of Measure C, the one-half cent sales tax increase for transportation purposes. At the time of the original expenditure plan for the extension of Measure C, the amount estimated available for airport projects at that time was $17,000,000 (approximately one percent of the total amount estimated to be generated by the extension of Measure C), for use by Fresno Yosemite International Airport and Fresno Chandler Executive Airport. Since the implementation of the Measure C program, the current amount estimated available for airport projects is $14,474,820; an adjustment that reflects a reduction of $2.52 million in actual sales tax receipts originally anticipated for the 20 year period ending in 2027. These funds will be available to match state and federal funding for improvements at the two airports.

Non-Motorized Transportation

The Non-Motorized Transportation Element of the RTP and SCS is focused on regional, metropolitan, and community bikeway and pedestrian networks, including multi-use trails. Travel by bicycling and walking is a strong indicator of good land use and transportation planning. By placing complementary land uses in close proximity between residents or employees of an area, and by developing attractive, convenient pedestrian and bicycle environments, the number and percentage of trips made by bicycle or on foot should increase. In addition, this RTP and SCS recognizes the value of equestrian and hiking trail systems for recreational purposes, as enhancements to the multimodal transportation system, and for their contribution to an improved quality of life in Fresno County and, therefore, supports their continued development.

For many, bicycling and walking for transportation has several appealing aspects. Both have positive air quality, energy, economic and health impacts and can reduce automobile congestion. From an air quality perspective, every bicycle or walking trip that replaces an auto trip results in cleaner air. Bicycles do not consume expensive fuel, maintenance is low, and bicycling can be used for commuting as well as for recreational purposes while providing physical exercise.
The bicycle's door-to-door capability for shorter trips makes it an attractive alternative mode of transportation in the Fresno region when the climate is mild, because the flat terrain is ideal for riding. Implementation of a comprehensive bikeway system will provide connectivity between cities and access to destinations of regional interest, as well as commuter lanes in the Fresno Clovis Metropolitan Area and in many smaller cities within the county.

Pedestrian and bicycle access also affects the effectiveness and efficiency of transit service, as most transit trips involve walking or cycling at one or both ends. Commuters are more likely to take transit if they can easily walk or bike from their home or worksite to a transit stop or station. As a result walking and cycling infrastructure improvements are often an effective way to support transit use. This relationship between transit, bicycling, and pedestrian trips is important to the Fresno COG and to the communities within Fresno County. The Blueprint Planning Program was of primary importance in addressing this relationship. For example, Blueprint Smart Growth Principles include "create walkable neighborhoods, mix land uses, and provide a variety of transportation choices" among many others.

Within the 2007/08 – 2026/27 Measure C Program, 4% of funding is allocated to pedestrian/trails/bicycle facilities subprograms while fully 24% of funding is allocated to the Regional Public Transit Program, including the Public Transit Agencies Subprogram (19.66%), the Farmworker/Car/Van Pools Subprogram (1.16%), the New Technology Reserve Subprogram (2.10%) and the ADA/Seniors/Paratransit Subprogram (0.79%), among others. In addition, the 2011 RTP included new policy regarding Complete Streets and policy enhancements suggested by the Fresno County Department of Public Health that emphasize walking, bicycling, and transit for reasons of health and well-being. Policy and funding are finally coming together to establish an achievable, not just theoretical, relationship between transit and bicycling/pedestrian infrastructure.

Goals for the development of bicycle and pedestrian transportation in Fresno County are as follows:

- ✓ Planning - The recognition and integration of bicycling and walking as valid and healthy transportation modes in transportation planning activities.
- ✓ Physical Facilities - Safe, convenient, and continuous routes for bicyclists and pedestrians of all types that interface with and complement a multimodal transportation system.
- ✓ Safety and Education - Improved bicycle and pedestrian safety through education and enforcement.
- ✓ Encouragement - Increased acceptance of bicycling both as a legitimate transportation mode on public roads and highways and as a transportation mode that is a viable alternative to the automobile.
- ✓ Implementation - Increased development of the regional bikeways system, related facilities, and pedestrian facilities by maximizing funding opportunities.

Existing System Inventory

Pedestrian facilities are not typically regional in function. Rather, they are essentially site-specific and local, and hold particular importance in community design and redesign in working toward a more livable environment. Alternatively, bicycle facilities can be regional in function. The planned bikeways regional system is shown in Figures 2-12 and 2-13. The plan calls for community routes and routes which link communities and provide access to activity centers, including major commercial and employment centers, major recreational sites, and schools.

All of the cities in the County and the County itself have planned bikeway facilities, although limited available funding has had an impact on their construction. Nevertheless, local agencies continue to add to the inventory of completed bikeways on an ongoing basis, particularly in conjunction with new development.

Accomplishments

City of Fresno street design standards for collector and arterial streets in newly developing areas require five feet per side for a bike lane. This standard has promoted the long-term development of a bikeway system in newer areas. Provision of this additional right-of-way in advance avoids conflicts that arise when the loss

of on-street parking becomes a necessary part of bikeway implementation. Within the City of Fresno, several miles of bikeways have been added, particularly in the Woodward Park and Bullard Community Plan areas, but elsewhere in the community as well. The City of Clovis provides for bike lanes along designated streets in accordance with adopted specific plans and has implemented bikeways along segments of several major streets.

Cities outside of the metropolitan area have also proceeded with efforts to incorporate bikeway facilities in their plans and programs. All of these communities have addressed bicycle transportation in their general plan circulation elements and within other local planning documents and planning policies. In addition, all but two of the cities outside of the metropolitan area have completed Bicycle Transportation Plans, thereby making them eligible to compete for Active Transportation Plan (ATP) funding. The San Joaquin Valley Blueprint Integration Project was recently established to provide support to smaller Valley cities in integrating Blueprint Smart Growth principles into their general plans and planning policies. As a result of this project, new or updated bicycle transportation plans were prepared for the cities of Firebaugh, Orange Cove, and Parlier.

In addition, several communities have competed successfully for funding under the Safe Routes to School Program (now part of the ATP program). These include Clovis, Reedley, Kerman, Fresno, Mendota, Sanger, Orange Cove, San Joaquin, Firebaugh, and the County itself.

The City of Fresno requires the installation of bike racks in new development to encourage increased use of bicycling and bus commuting. The City of Fresno has also installed bike racks on its entire transit fleet, as has the City of Clovis on its Stageline transit fleet and the Fresno County Rural Transit Agency on its intercity transit fleet. Newer busses of the Rural Transit Agency's intracity fleet are also equipped with bike racks.

The City of Fresno has established a Bicycle Pedestrian Advisory Committee that advises the City Council and Mayor on all matters involving bicycle transportation. In 2009, the City of Fresno contracted with the consulting firm Fehr and Peers to prepare a comprehensive Bicycle, Pedestrian, & Trails Master Plan. The Plan was adopted in October 2010. In September 2013, the County of Fresno adopted a revised Regional Bicycle and Recreational Trails Master Plan. The City of Clovis also adopted in May 2011 an update of its Bicycle Master Plan. All of this activity has provided a unique opportunity to develop a comprehensive and coordinated bicycle/trails system particularly within the Fresno-Clovis Metropolitan Area but also within the entire county.

The Measure C Extension approved by the voters in November 2006 requires that by January 1, 2012, all jurisdictions within Fresno County will have updated and/or adopted a Master Plan for Trail, Bicycle and Pedestrian Facilities that promotes connectivity within all of Fresno County and its urban areas. The Master Plan will be the guiding document for upgrade and/or installation of such facilities. If any jurisdiction fails to meet this goal, the earmarked funds for trail, bicycle and pedestrian facilities shall be withheld by the Fresno County Transportation Authority until such time as a jurisdiction is in compliance.

FIGURE 2-12
Rural Bikeways

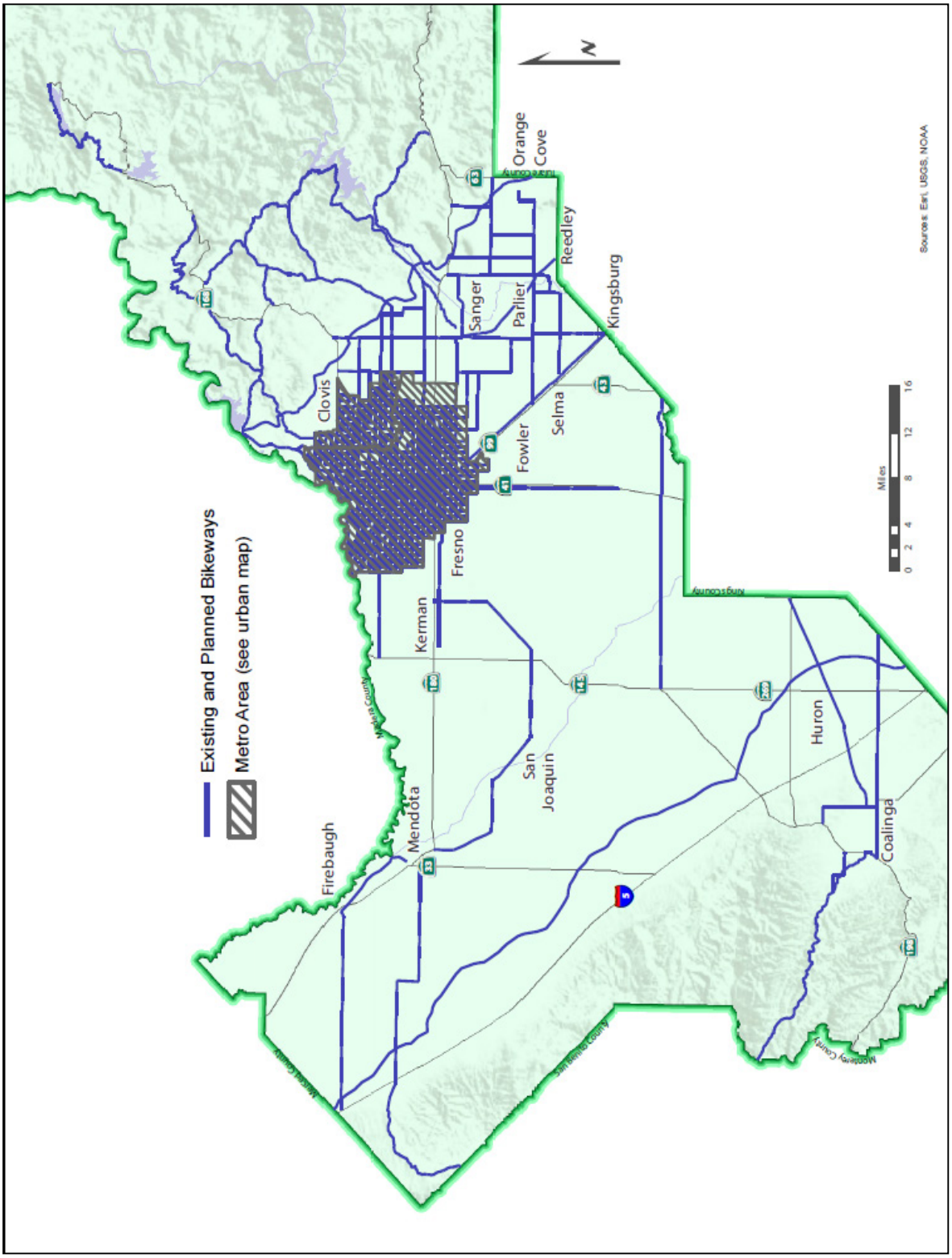
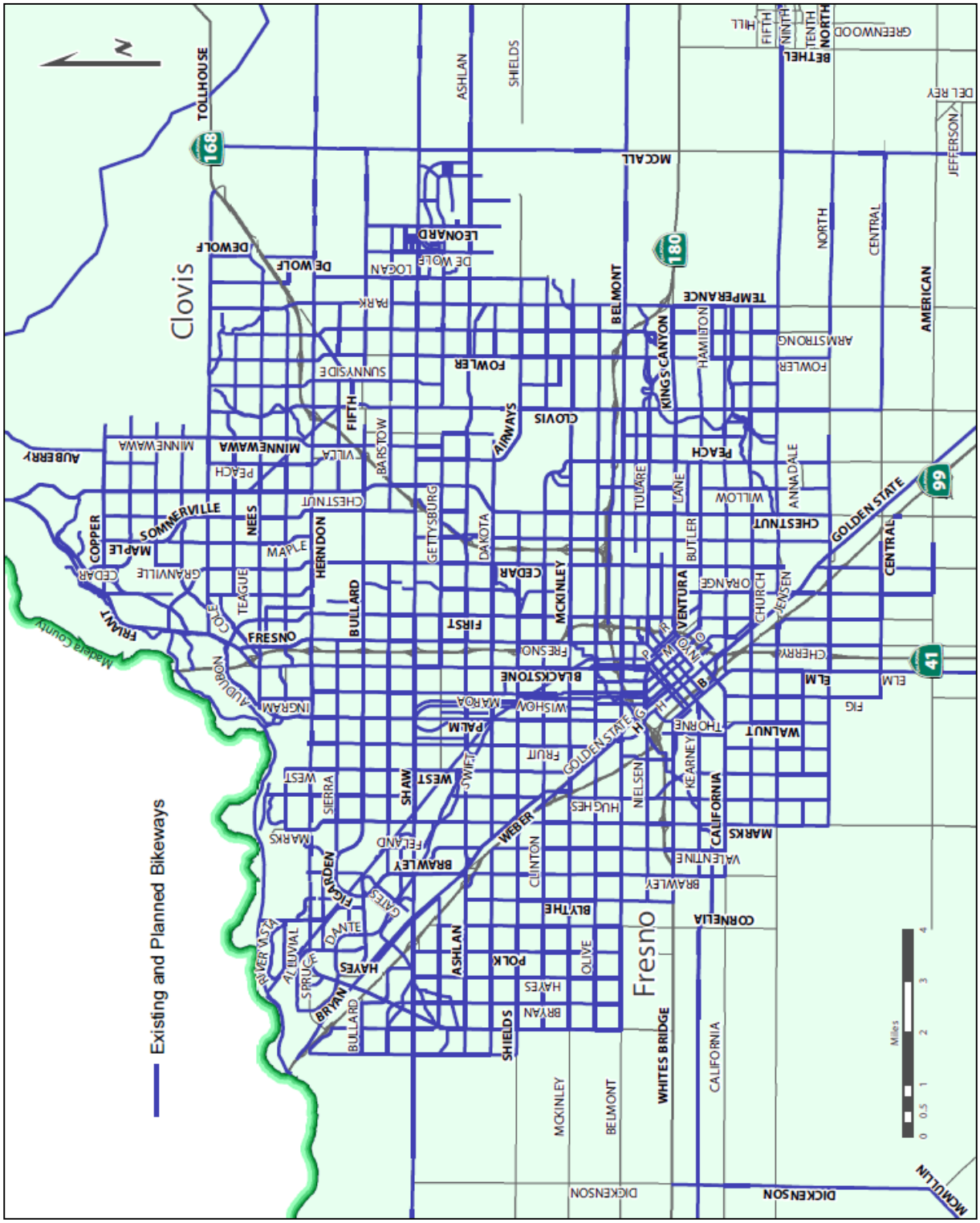


FIGURE 2-13
Urban Bikeways



Measure C Extension earmark funds may be used for new construction of pedestrian/bicycle trails, bike lanes, and for the development of the Master Plan as well as retrofitting pedestrian/bicycle trails within the circulation system that existed as of January 2007 or the date of adoption of the Master Plan. Trails built with earmarked or other Measure C Extension funds shall, at a minimum, be designed in accordance with the design criteria for bicycle paths and multi-purpose trails set forth in the California Highway Design Manual, Chapter 1000, Bikeway Planning and Design, with certain caveats as noted in the Final Measure C Extension Expenditure Plan.

The Final Measure C Extension Expenditure Plan includes additional requirements applying to all streets, roads, and highways utilizing either regional or local allocation funds. For example, every highway, expressway, super-arterial, arterial, or collector within the County constructed or reconstructed in whole or in part with Measure C Extension funds shall include accommodations for bicycle travel either by a shared roadway or by bike lane. Reference is made to the Expenditure Plan for a description of these additional requirements, including exceptions to the requirements.

Needs Assessment

While much of the basic work of planning for regional and metropolitan bikeway systems was completed in the 1970s and 1980s, it is necessary to periodically reevaluate the planned bikeway system and make adjustments as necessary to reflect changes in growth patterns and the development of new activity centers. As noted above, the cities of Fresno and Clovis and the County of Fresno have recently developed comprehensive revisions to their Bicycle Master Plans/Bicycle Transportation Plans. Also, as with the metropolitan area jurisdictions, all but two of the mid-sized and smaller cities in Fresno County have prepared and adopted Bicycle Transportation Plans that discuss the eleven required elements listed in Section 891.2 of the Streets and Highways Code. These plans are required in order for local agencies to be eligible to compete for Bicycle Transportation Account funding.

There is an ongoing need to focus on implementation of facilities through development project requirements and through active programs undertaken by the county or the cities. Most likely the programmatic initiative for facility implementation rests with traditional public works or traffic engineering staff that work with street development and pavement marking and signing programs. With competition for funds and staff time, local programs can be dependent on the priorities set by both governing bodies and by agency staff. Coordination between agencies on regional routes can also diminish unless a forum exists which promotes active participation. The Fresno Council of Governments can assist local agency staff by providing an opportunity to share information and coordinate future efforts, taking a proactive position to encourage and facilitate bicycle use. There have been two recent examples of this Fresno COG role. First, the Fresno COG, with assistance from a non-motorized committee formed for this purpose, assisted the County in determining the unincorporated area bikeway network for inclusion in the County's 2000 general plan. Second, the Fresno COG prepared in April 2001 a "template" Bicycle Transportation Plan for use by cities in Fresno County. The "template" plan has been and will continue to be particularly useful to the

smaller communities as the larger communities typically have their own staffs to manage their planning processes.

In addition, a number of pedestrian safety enhancements such as pedestrian over-crossings and under-crossings at dangerous intersections, street and sidewalk repairs and installations, and additional curb cuts and handicap ramps have also been identified within communities as worthwhile projects should future funding become available.

Proposed Actions

✓ **Future Planning Activities**

Fresno COG began implementation of the Measure C Extension Pedestrian/Trails/Bicycle Facilities Program in Fiscal Year 2007-08. By January 1, 2012, all jurisdictions within Fresno County will have updated and/or adopted a Master Plan for trail, bicycle and pedestrian facilities that promotes connectivity within all of Fresno County and its urban areas.

➢ **Short-Term Program (1 - 4 Year Programs and Projects)**

The Transportation Development Act requires that 2% of the Local Transportation Fund be set aside each year for bicycle and pedestrian purposes. Fresno COG apportions these monies annually to each jurisdiction, proportionate to its population. Recent years have shown growing use of these funds for pedestrian projects, particularly as local jurisdictions looked for funding to meet ADA requirements. With growing emphasis on air quality and Transportation Demand Management objectives and with funding available through the Measure C Extension Program that must be spent on ADA improvements, the focus may shift back to bikeway system implementation.

Fresno County will continue to implement planned facilities as a part of its road construction program. The cities of Fresno and Clovis will stripe and sign those major street segments that have recently been constructed and will be constructed, particularly within the growing northern, eastern and western portions of the Fresno Clovis Metropolitan Area. The RTP and SCS anticipates that the cities of Fresno and Clovis and Fresno County will continue to implement the regional bikeway system in a timely manner and that the smaller cities within Fresno County also will continue to implement their proposed bikeway plans as funding provides.

➢ **Long-Range Improvement Plan**

The Measure C Extension Program requires every highway, expressway, super-arterial, arterial or collector within the County constructed or reconstructed in whole or in part with Measure C funds shall include accommodations for bicycle travel either by a shared roadway or by bike lane. A shared

roadway includes a paved shoulder or a wide outside lane. The Measure C Extension Program includes other provisions as well, including a listing of exceptions to the requirements. The 20-year Measure C Extension Program estimates countywide funding total for bicycle facilities is $15 million; for pedestrian/trails in the urban area (Clovis and Fresno Spheres of Influence) is $37 million; and, for pedestrian/trails in the rural area is $16.3 million.

In 2008, the State of California enacted AB 1358, the Complete Streets Act, which requires cities and counties to incorporate provisions for multimodal streets into their General Plan Circulation Elements starting in 2011. This requirement will result in streets, roads and highways that better meet the needs of pedestrians, bicyclists, and others in a manner that is suitable to the rural, suburban or urban context of the General Plan.

Rail

At the regional level, the Regional Transportation Plan can provide a general framework to assure coordination and interfacing of rail freight and passenger transportation with other transportation modes in an overall planning process. The federal Surface Transportation Board and the California Public Utilities Commission (PUC) have historically exercised strict control over railroad operations and are, along with the railroads themselves, key partners in this planning process.

The movement of inter-city freight by rail provides an alternative mode for the transport of the wide variety of agricultural commodities and manufactured goods produced within the region. Movement of freight by rail results in significant reductions in the number of trucks using major inter-regional roads such as State Route 99 and Interstate 5, thereby reducing traffic congestion, air pollution, and maintenance costs.

Passenger rail provided by the Amtrak San Joaquins is growing in importance, particularly given the increasing ridership and the impending shift in governance from the state to a recently formed San Joaquin Joint Powers Authority. June 30, 2014 is the earliest that the administrative responsibility/management of the San Joaquin intercity passenger rail service can be transferred to the SJJPA.

Existing System Inventory

The rail network in Fresno County consists of approximately 280 miles of operating main and branchline right-of-way (Figures 2-14 and 2-15). The Union Pacific Railroad (UP) and the Burlington Northern Santa Fe Railroad (BNSF) each operates one mainline that passes through Fresno County. In addition, there are four branchlines that either pass through (Exeter Subdivision) or lie completely within (West Side Subdivision, Riverdale Subdivision, Clovis Subdivision) Fresno County. These branchlines are operated by the San Joaquin Valley Railroad Company, a RailAmerica Company now controlled by Genesee & Wyoming

Inc. Additionally, the railroads operate many spur lines to serve industrial and agricultural clients, some of which operate on adjacent property by agreement between the railroad and the property owner.

Amtrak continues to play a role in the balanced transportation system of the San Joaquin Valley. Amtrak operates four trains per day between Bakersfield and Oakland and two trains per day between Bakersfield and Sacramento with each train making one round trip per day. This allows for seven north-bound and seven south-bound schedules each day. Amtrak service helps fill a service level void that exists in mass transit between inter-city bus and airline services. Also, there is Amtrak dedicated bus service connecting rail stations with cities not directly served by the San Joaquin trains.

FIGURE 2-14
Urban Rail System

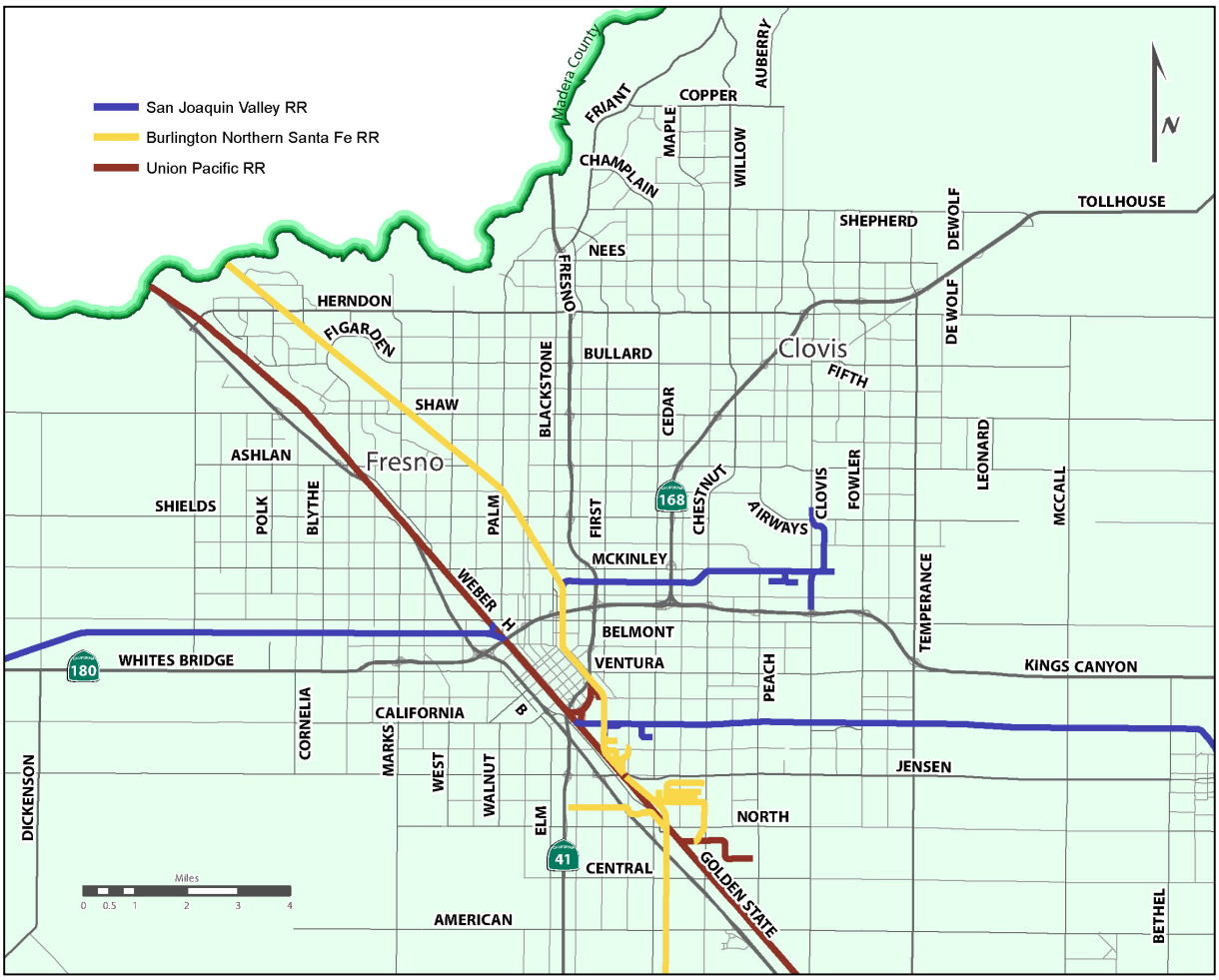
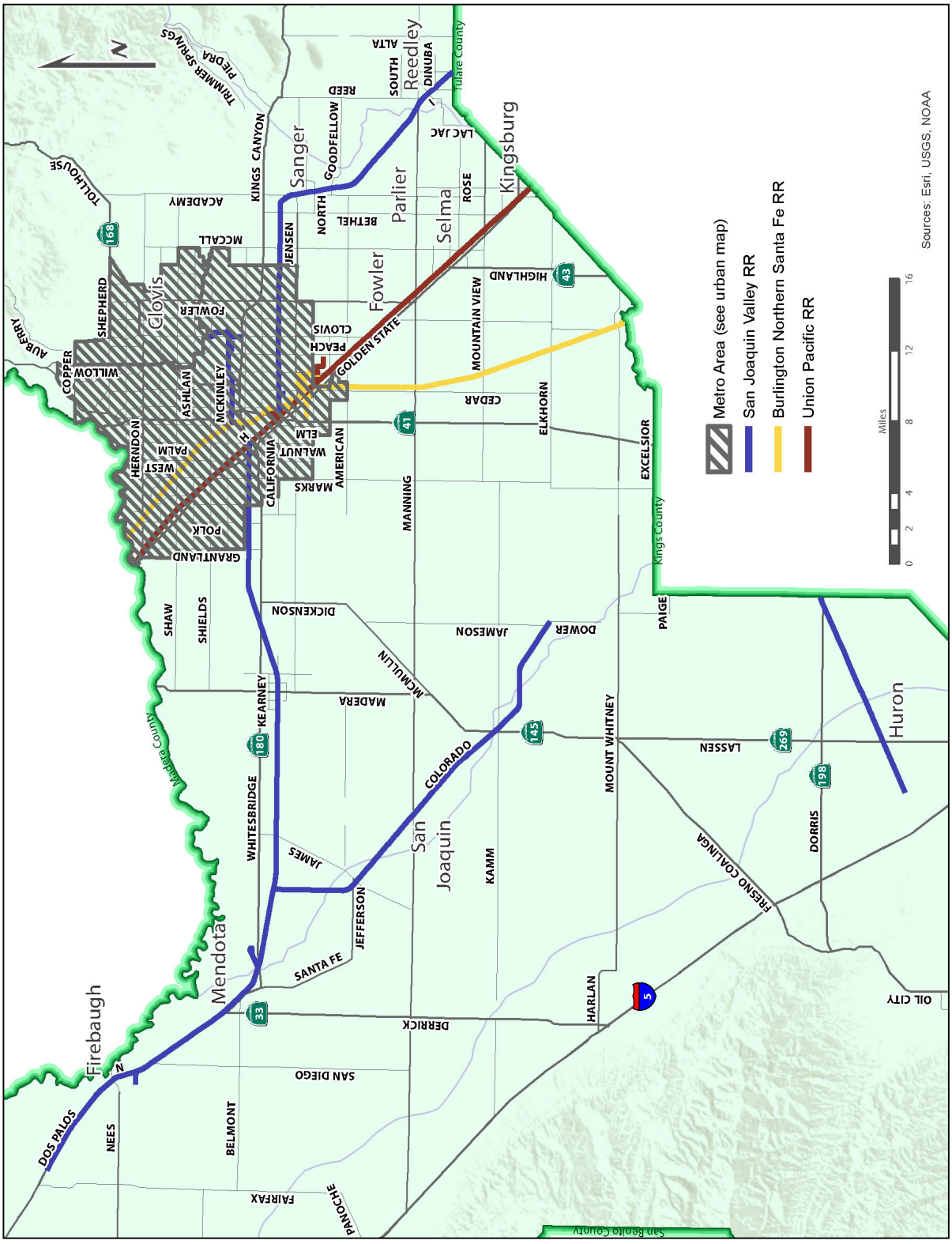


FIGURE 2-15
Rural Rail System



The Amtrak San Joaquin trains have made significant improvements in fare recovery, operating efficiency, and on-time performance. The feeder bus service, more frequent service, and improved on-time performance are the major reasons the service has increased ridership over the last several years.

Accomplishments

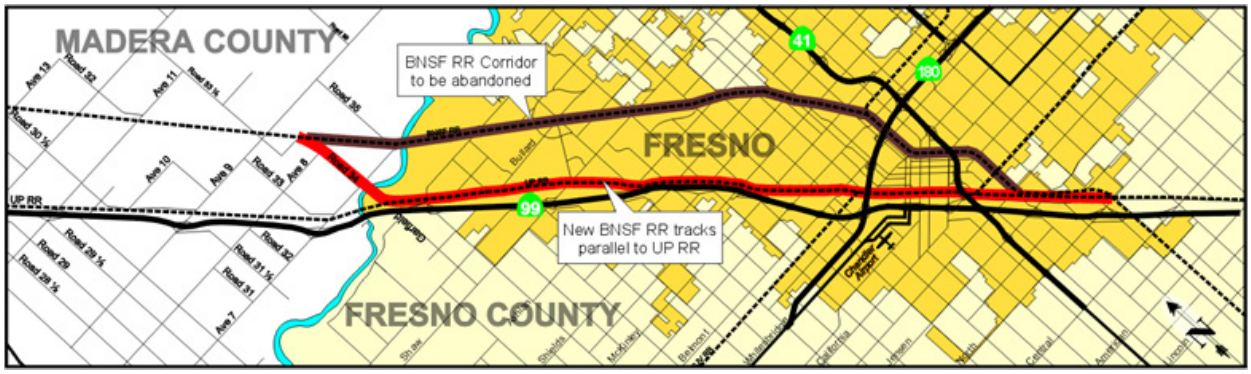
✓ **Recent Planning Activities**

➢ **Consolidation Efforts**

The existing BNSF tracks pass through the urbanized portion of the City of Fresno, thereby creating numerous transportation problems. Moving all BNSF rail traffic to the UP corridor or to an alignment that bypasses the metropolitan area to the west would: 1) eliminate at-grade train/vehicular conflicts along the BNSF corridor, resulting in a safer environment for motorists and pedestrians; 2) eliminate delay to emergency service vehicles due to train/vehicular conflicts; 3) eliminate the slower speeds required on the BNSF corridor because of its location in more urbanized areas of the community; 4) eliminate the need for additional grade separation structures on the BNSF; 5) make available the BNSF corridor or portion thereof for multi-use trail purposes and/or potential local or light rail service; and 6) reduce air pollution emissions through traffic flow improvements.

The City of Fresno, Fresno County, the Fresno COG, and the railroads previously contracted with HDR Engineering to provide an independent cost analysis for rail consolidation in the Fresno Urban Area. That analysis was completed in July 1993 and included preliminary cost estimates to relocate the BNSF mainline track into a single corridor now owned and operated by the UP, as illustrated in Figure 2-16, and build needed grade separation structures.

FIGURE 2-16
Conceptual Alignment of the Proposed BNSF/UP Rail Consolidation



The City of Fresno, the County of Fresno, Fresno COG, BNSF and UP jointly agreed to fund an updated study on rail consolidation, including new cost estimates. HDR Engineering, Inc. was again retained to conduct the study, which was completed in March of 2002. Updated cost estimates ranged from $275 million to $319 million depending on the alternative, a 38% increase over the estimates developed in the 1993 study. However, these cost estimates did not include the cost of purchasing the portions of UP's right-of-way to be deeded to BNSF, the cost of compensating or relocating industries that will lose rail service if the BNSF corridor is completely abandoned, the cost of mitigation measures, and certain other costs.

In 2009, Fresno COG entered into an agreement with the California High-Speed Rail Authority to jointly fund a study to define and evaluate an alignment that would accommodate both high-speed trains and rail consolidation or rail realignment. The study evolved to focus more narrowly on rail realignment as the Authority acted to implement the high-speed train project. The study concluded a stand-alone rail realignment project could be expected to cost between $803 million and $1.38 billion depending on the alignment developed.

- **Light Rail, Commuter Rail, and other Fixed Guideway Rail Systems**

Although earlier studies indicate there is not sufficient ridership for a light rail, commuter rail, or some other fixed guideway rail transit system, it is prudent from the standpoint of long-range planning to identify and preserve rail corridors that may be needed in the future, given our growth potential. Evaluation of a countywide fixed guideway rail transit system should consider future air quality constraints in the Valley and the alternative to additional lanes on existing commuter corridors between smaller Fresno County cities and the metropolitan downtown hub. Caltrans continues to examine the rail alternative on rights-of-way of new freeway projects.

Existing rail trackage within the county has been inventoried and analyzed for its future benefit as mass transportation corridors. The existing trackage is extensive and located in areas that could well serve many of the heavily developed portions of the metropolitan area and other areas of the county. The thirteen-mile long Clovis Branchline/Pinedale Spurline Railroad Corridor was acquired by the cities of Fresno and Clovis in December 1997 for alternative transportation purposes, including potential future light rail.

It is conceivable that commuter rail routes may someday extend into Tulare, Kings and Madera Counties. There is significant commuter activity between the Fresno-Clovis Metropolitan Area and other central San Joaquin Valley urban areas such as Visalia, Madera, and Hanford.

Current criteria utilized by state and federal agencies for light rail or other fixed guideway rail transit may be modified in the future. Such factors as changes in the economy, air quality, fuel costs and the availability of private vehicles may also increase the attractiveness of fixed guideway

rail transit to local agencies and the general public. Both planning and contingency studies on the feasibility and routing of fixed guideway rail transit should continue.

- **Additional Amtrak Service**

The sixth daily round trip was added on March 18, 2002. Both the fifth and sixth trains provide a direct train connection to Sacramento while the other four currently utilize Amtrak bus service for the portion of the trip between Stockton and Sacramento. Additional round trips are proposed in the 2013 California State Rail Plan. Predominant right-of-way ownership is by the BNSF (Port Chicago – Bakersfield). The UP owns 39 miles at the north end of the route between Oakland and Port Chicago and 49 miles in the new segment between Stockton and Sacramento.

The California High-Speed Rail Authority's 2012 Business Plan proposes that San Joaquin trains will use the first construction section from Madera to just north of Bakersfield of the Initial Operating Segment (IOS) from Merced to the San Fernando Valley. Additional studies are required to determine the appropriate number of San Joaquin trains that would use the first construction section of the IOS and the existing BNSF line during the interim period until high-speed rail begins to operate on the IOS, as well as once high-speed rail service is initiated. Service along the first construction section of the IOS is anticipated to begin in 2018 and service along the IOS is anticipated to begin in 2022.

- **San Joaquin Valley Rail Committee**

The San Joaquin Valley Rail Committee, formerly named the Steering Committee of Caltrans' Rail Task Force, provides a forum for Valley rail concerns regarding service improvements to be voiced to Caltrans Division of Rail and to Amtrak. This committee has representatives appointed by Valley cities and counties and other non-Valley counties that are served by Amtrak's dedicated bus service. The Joint Exercise of Powers Agreement (JEPA) establishing the San Joaquin Joint Powers Authority proposes that the Rail Committee remain in existence and become the Steering Committee of the SJJPA for the purpose of advising the SJJPA. The Steering Committee will advise the SJJPA on technical issues associated with the improvements in passenger rail service and related facilities in the San Joaquin Rail Corridor, including stations and rights-of-way, the coordination of public mass transit services and facilities, the coordination of passenger and freight services in the Corridor, and other technical matters.

- **Fresno Works Committee**

The Fresno Works Committee was formed initially to guide the development of Fresno County's proposal for the high-speed rail heavy maintenance facility but now focuses on other aspects of high-speed rail as well. This executive level committee includes highly experienced individuals and appears well-established to remain effective.

- **High-Speed Rail Authority**

The California High-Speed Rail Authority's purpose is to plan, design, fund and construct the high-speed rail system. The Authority produced a 2012 Business Plan that proposes the integration of high-speed rail into an expanded and improved statewide rail network. The Plan proposes to build an Initial Operating Section (IOS) by 2022 that will connect the Central Valley to the Los Angeles Basin via the San Fernando Valley. The Plan also provides for the integration, or blending, of the high-speed rail project by upgrading existing rail systems to provide near-term benefits to passengers, while connecting to, and laying the foundation for, the future high-speed rail system. The Fresno COG will continue to work with the Authority and its consultants to provide for consideration of Fresno County consensus positions regarding the many high-speed rail issues, including the location of the heavy maintenance facility in Fresno County.

- **Rail Abandonment**

Abandonment of railroad branch lines within Fresno County is detrimental to users relying solely on rail freight service and can result in the loss of potential light or commuter rail corridors that would be almost impossible, or at least very difficult, to replace. State law requires that local jurisdictions have a right to review proposed abandonments and have the right of first refusal of that right-of-way. In 2012, Fresno COG worked with then Assemblywoman Galgiani in the passage of AB 1779, which provided legislation to require that all lines proposed for abandonment be brought under public ownership as a precondition to abandonment. Fresno COG staff is currently monitoring the potential further abandonment of segments of the San Joaquin Valley Railroad in Tulare County for implications for Fresno County and future freight and passenger rail.

In December 1997, the cities of Fresno and Clovis acquired title to those portions of the Clovis Branchline/Pinedale Spurline Railroad Corridor which lie within their respective spheres of influence. The corridor has been developed as a multi-use trail. In the long-term, the Corridor may also accommodate transit in addition to pedestrian and bike paths. Transit is understood to mean local rail, light rail, or other transit modes.

- **Rail Inventory**

The Fresno County Rail Corridor Preservation/Acquisition and Transportation Alternatives Study was adopted by the Fresno COG in January 1997. The primary purpose of the study was to inventory the different railroad branchline corridors within Fresno County and evaluate their potential for alternative transportation purposes, including potential future fixed guideway rail transit. The study concluded that although the majority of branch line corridors within the County have already been abandoned, dismantled and sold, most of the corridors that have the greatest potential to provide rail transit service are intact. The study prioritized the different corridors for preservation and identified funding sources and strategies.

In addition to the Fresno County Rail Corridor Preservation/Acquisition and Transportation Alternatives Study, reference should be made to the following studies for detailed information on the different mainlines and branchlines existing in Fresno County, including their potential for rail transit.

- The 1990 Commuter and Inter-City Rail Right-of-Way Inventory and the 1992 update of that inventory.
- The 2004 Caltrans Rail Right-of-Way and Abandoned Rail Corridors Evaluation Study.
- The separate 2011 Business Plans for the San Joaquin Valley Railroad Westside and the San Joaquin Valley Eastside.
- The 2013 California State Rail Plan.

- **Potential Rail Corridors in Freeway Right-of-way**

State Routes 41, 180 and 168 within the Fresno Clovis Metropolitan Area each contain an ultimate median of thirty-six (36) feet, which would provide sufficient width for light rail, except possibly at interchanges. In addition to the ultimate median, twenty-four (24) feet for two additional median lanes is reserved for HOV, Dedicated Bus or regular traffic lanes, for a total right-of-way in the median of sixty (60) feet.

- **California Inter-Regional Intermodal Service (CIRIS)**

The primary objective of this study was to estimate the market for the California Inter-Regional Intermodal Service (CIRIS), a short-haul rail intermodal service that would connect the San Joaquin Valley with the Port of Oakland. This short-haul rail intermodal service is viewed by many as an alternative that would reduce the amount of truck traffic in the region by diverting some of the goods between the Valley and the Port from the current truck dray operations to rail. Furthermore, the Fresno area location for the rail alternative appears favorable because it has both a large market and a relatively low cost differential between the CIRIS service and the current

truck-only drayage operations. Public benefits from the operation of the CIRIS service include lower congestion and emission reductions due to reduced truck traffic.

- **Potential Commuter Rail Corridor Extension to Adjoining Counties**

  In addition to identifying and preserving potential future commuter or light rail corridors in Fresno County, the transportation needs and resources of adjacent counties should also be considered. The counties of Madera, Tulare and Kings have also developed rail inventories that may be helpful in determining which rail corridors have potential for regional commuter or light rail service. Kings, Tulare, and Fresno counties, along with the San Joaquin Valley Railroad, private companies and the San Joaquin Valley Unified Air Pollution Control District, cooperated to rehabilitate the rail between Visalia in Tulare County and Huron in Fresno County in order to improve and reestablish freight rail service. The two-year project was completed in 2003. At some future point, the Cross Valley Rail Project may be extended to Coalinga and may also provide commuter rail opportunities.

- **Completed Improvements**

  Several rail-related construction projects in Fresno County have been completed during the past several years. These include the project to double-track the 8.6 mile segment of the BNSF mainline between Calwa and Bowles in Fresno County, completed in early 2007; the restoration of the historic Santa Fe Depot and related improvements for use as Fresno's Amtrak station, completed in early 2005; the construction of an underpass at Weldon Avenue and the Burlington Northern Santa Fe; and, the implementation of Quiet Zones.

Local agencies, Amtrak, community rail interest groups and State and Federal legislators and agencies continue to lay the groundwork for additional significant changes. Major efforts are focused on two goals, rail consolidation and high-speed rail.

Needs Assessment

The following rail transportation needs for Fresno County have long been identified.

- ✓ Consolidation of all Burlington Northern Santa Fe mainline rail traffic onto the Union Pacific corridor from the point where the two railroad tracks cross at North Avenue and Golden State Boulevard near Calwa to a point north of Herndon Avenue. Alternatively, realignment of the BNSF by itself or in conjunction with the UP to a new corridor that would bypass the metropolitan area to the west.
- ✓ Additional inter-city train service for the Amtrak San Joaquin route.
- ✓ Rerouting the Amtrak San Joaquin service from the Burlington Northern Santa Fe to the Union Pacific alignment between Fresno and Stockton.

- ✓ Construction of a new multimodal station in Fresno on the Union Pacific alignment subsequent to or concurrent with consolidation/realignment and high-speed rail.
- ✓ Obtaining and preserving appropriate abandoned railroad rights-of-way through the County of Fresno for future local transportation purposes, including commuter or light rail.
- ✓ Long-range planning and corridor preservation for potential future commuter or light rail or other fixed guideway mass transit applications in Fresno County.
- ✓ Development of new passenger rail service between Bakersfield and Los Angeles as a logical expansion of Valley train service.

Proposed Actions

- ✓ **Future Planning Activities**

Rail planning will continue to consider the above needs with emphasis on constructing railroad grade separations, all issues related to high-speed rail including station area planning and efforts to secure the heavy maintenance facility for Fresno County, and the new regional governance structure for the Amtrak San Joaquin Corridor.

The extension of Measure C, approved by the voters in November 2006, requires progress be made on rail consolidation/rail realignment. An evaluation of its feasibility and the likelihood of securing the additional funding are to be included in the biennial update of the Expenditure Plan. A more thorough review will take place at ten years. If rail consolidation/rail realignment is not programmed with construction imminent within fifteen years after the Measure passed, the funds will revert to grade separation projects that coordinate with transit improvements and provide the greatest amount of congestion relief and air quality benefit. The amendment to the Measure "C" Rail Consolidation Program to utilize $25 million instead for the potential high-speed rail heavy maintenance facility along with the dissolution of Fresno Area Residents for Rail Consolidation (FARRC), an organization founded to advocate on behalf of rail consolidation, indicate the project is highly problematic.

Establishment of the San Joaquin JPA to replace the State as the governing authority for the Amtrak San Joaquins will require considerable attention. Next steps include selecting a managing agency, developing a business plan, and developing and negotiating an Interagency Transfer Agreement with the state.

The potential for a light rail, commuter rail and other systems of fixed guideway transit in the Fresno-Clovis Metropolitan Area and throughout Fresno County needs to be monitored and options preserved.

Fresno COG member agencies will continue to petition the Public Utilities Commission for funding of grade separations, with priority given to public safety and improving the circulation system. Fresno COG and member agencies will continue to investigate the establishment of "quiet zone communities" within Fresno County. A community desiring to become a Quiet Zone must install Supplemental Safety Measures (SSM's) or additional warning device/traffic control apparatus that can effectively compensate for the absence of the locomotive horn or whistle.

Rail planning activity will continue to center around high-speed rail in an effort to maximize its benefits for Fresno County. This will include the ongoing development of Fresno County proposals on the many aspects of high-speed rail, including the location of the heavy maintenance facility in Fresno County and the new passenger station located along the UP corridor in downtown Fresno, and the effective communication of those positions to the High-Speed Rail Authority.

Fresno COG in conjunction with its member agencies will continue to work closely with the Authority and its staff and consultants during plan development and project implementation within Fresno County and the San Joaquin Valley.

Local agencies, Amtrak, the newly established San Joaquin Joint Powers Authority, and state agencies will continue to work together and with the railroads to lay the groundwork for significant railroad improvements in the future.

✓ **Short-Range Improvement Plan**

➢ **Grade Separation**

No grade separation projects are currently scheduled.

➢ **Rail Consolidation/Rail Realignment**

The extension of Measure C provides for an estimated $102.5 million over the twenty-year period for rail consolidation/rail realignment. Effective July 1, 2007, funding became available for planning, design, and environmental studies as well as lobbying activities required to secure additional funding. While this project is highly problematic, the Fresno COG will continue to monitor potential opportunities.

➢ **Rail Passenger Station**

The rehabilitation of the historic Santa Fe Depot for use as the new rail passenger station in downtown Fresno on the Burlington Northern Santa Fe tracks was completed in early 2005.

However, additional improvements to the Depot itself and to the site may be programmed as funds are identified and become available.

- **Caltrans Recommendations for Amtrak**

Notwithstanding the establishment of the San Joaquin Joint Powers Authority, the administrative responsibility/management of the San Joaquin intercity passenger rail service will remain with the Caltrans Division of Rail until at least June 30, 2014. Caltrans will continue to identify short-term actions that, when implemented, will make the service more attractive to potential riders. The focus of Caltrans' short-term operating strategies is to improve customer service and amenities and increase the cost-effectiveness of the services. These two strategies are complementary, as an improvement in customer satisfaction should increase ridership and revenue. Recent performance standards include consistent ridership and revenue gains, an improved farebox return and improved on-time-performance.

Short-term actions include improvements to stations, parking facilities, and track and signals elsewhere on the line, marketing the service and public relations, expanding the "Free Transfer" program with local transit operators, adjustments to the feeder bus network, coordinating schedules with other Amtrak services, and monitoring and adjusting food service as needed.

- ✓ **Long-Range Improvement Plan**

- **High-Speed Rail**

In the long-term, rail improvements in Fresno County may occur in conjunction with the development of a statewide high-speed rail system. Specific improvements might include the construction of a new multimodal rail passenger station along the Union Pacific corridor in downtown Fresno and new grade separation structures, which might also benefit rail consolidation/rail realignment, along the Union Pacific corridor, the recommended alignment for high-speed rail through Fresno.

- **Amtrak**

Principal long-range objectives for the San Joaquin Corridor include increasing annual ridership, annual revenues, the revenue/cost ratio, and the frequency of daily round-trip service from 4 to 5 between Oakland and Bakersfield and from 2 to 3 between Sacramento and Bakersfield. Additional objectives include reducing train running times and improving the reliability of trains. Improvements have been identified which will provide for an increase of train speeds to 110 mph where possible, in order to reduce travel times, and to operate additional roundtrips. These

improvements include significant expansion in track capacity and the installation of a supplemental signal system to permit speeds higher than the current limit of 79 mph.

Financing

Existing federal financial sources include:

- ✓ Federal Transit Administration - Federal programs have been available in the past to fund urban light rail and commuter rail projects that meet federal criteria. While at this time it is doubtful that local rail projects can meet current federal criteria under these programs, Fresno COG will periodically review these criteria and other factors to determine the feasibility of light rail or commuter rail or some other fixed guideway rail transit projects.
- ✓ The Congestion Mitigation/Air Quality program provides funding for transportation projects that will contribute to the attainment of national ambient air quality standards. The capital costs of new rail systems that initiate commuter and/or urban rail services are eligible for CMAQ funding. In some cases CMAQ funds can be used for operating costs up to three years for new transit systems. Although these funds could likely be used to purchase abandoned rail right-of-way for non-motorized transportation, because of the ability to implement such a project fairly quickly, it is not likely that these funds could be used to purchase abandoned right-of-way for a future fixed guideway rail program that is not scheduled for implementation in the near future. CMAQ funding was a key component of the funding package developed for the Cross Valley Rail Project.
- ✓ The new Transportation Alternatives Program (TAP) under Moving Ahead for Progress in the 21st Century (MAP-21) provides funding for projects that integrate transportation facilities into their surrounding communities. Preservation of abandoned railway corridors is eligible under the TAP.
- ✓ The Regional Surface Transportation Program (RSTP) provides funding for transit capital improvement projects and bicycle/pedestrian projects. The federal share is 88.53 percent for transit projects and 80 percent for bicycle or pedestrian related projects. Acquisition of the Clovis Branchline/Pinedale Spurline Corridor was funded in part by RSTP funds.
- ✓ MAP 21 provides a source of funding for high-speed train projects in Fresno County, the San Joaquin Valley, and elsewhere.

Existing state financial sources include:

- ✓ Public Utilities Commission - Grade crossings and railroad grade separations are implemented through the State Public Utilities Commission (PUC). However, funding for such crossing and separation projects is limited, providing for only one or two projects throughout the state annually. The application cycle begins every two years and each new list is effective for two years. The PUC also recommends to Caltrans projects to be funded from the annual Section 130 Highway-Rail Crossing Improvement Program, a federally funded program for reducing the hazards of at-grade highway-rail crossings.

- ✓ Projects selected by the Public Utilities Commission are funded 80 percent by State grade separation assistance funds with a 10 percent match from the affected railroad and a 10 percent match from the responsible local agency. Railroad projects are constructed based on their priority list ranking and on the availability of state grade separation assistance funds.
- ✓ State Proposition 1B, approved by the voters November 7, 2006, provides $400 million for Caltrans intercity rail projects. Of this amount, $125 million shall be used for the procurement of intercity rail cars and locomotives. Other provisions of Proposition 1B include funding for commuter rail and freight rail.
- ✓ State Proposition 1A, approved by the voters November 4, 2008, provides for $9 billion for high-speed rail and $950 million for capital projects on other passenger rail lines (including a minimum of $47.5 million for the Amtrak San Joaquin Corridor, to provide connectivity to the high-speed train system and for capacity enhancements and safety improvements.

Existing local financial sources include:

- ✓ City and County TDA funds and general funds may be utilized for the purchase of abandoned rail right-of-way and other rail improvements.
- ✓ Other local funds available to governmental agencies are their gas tax revenue and Measure "C" revenues. These funds are especially useful in providing the local share of State programs described above. In addition, the extension of Measure C includes $102.5 million for the rail consolidation/rail realignment project, although subsequent amendment redirects $25 million of this amount to the potential high-speed rail heavy maintenance facility. If this project is not programmed with construction imminent within 15 years of the date Measure C was extended (November 7, 2006), the funds will revert to grade separation projects that coordinate with transit improvements and provide the greatest amount of congestion relief and air quality benefit.

- ✓ **Anticipated Revenues & Expenditures**

  San Joaquin Valley passenger rail service is operated by Amtrak and supported by state funding. There is no local budget expended for this service.

Specific Transportation Strategies and Management Systems

Motor vehicle use on the street and highway system continues to be the primary travel mode within and through the region, given the rural and agricultural nature of Fresno County. Under the current Surface Transportation Reauthorization Act and the influence of the Clean Air Act, more emphasis is placed on the efficient use of existing systems. Maintenance of existing roadways and reduction of congestion, maintenance of existing capacity, or improving capacity at a low cost, are all important. Capacity is also important to modal alternatives, such as transit and cycling, which use existing streets and trails. The efficient functioning of the street and highway system and the reduction of congestion on streets and

highways also contribute to improved air quality, as vehicles generally produce more air pollution in congested traffic and while idling.

In addition to the planning agencies, the California Air Resources Board and the San Joaquin Valley Unified Air Pollution Control District contribute education, research, and regulatory efforts related to transportation strategies. Fresno COG and local agencies involved in transportation and land use planning work cooperatively with the San Joaquin Valley Unified Air Pollution Control District to enact strategies working toward the goal of improved air quality. While there is overlap among the many transportation strategies, efforts fall into the following categories:

Transportation Control Measures

Regions that have been designated as non-attainment for the National Ambient Air Quality Standards (depending on their classification-or the severity of the air pollution) are required to demonstrate that they have included all reasonably available control measures (RACM) in the State Implementation Plans (SIPs). Transportation Control Measures (TCMs) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce motor vehicle emissions. Transportation Control Measures (TCMs) focus on the reduction of motor vehicle emissions by reduction of single occupancy vehicle use, changing traffic flow, or reducing congestion. Typically, vehicle technology based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not considered TCMs.

Section 108(f)(1) of the Clean Air Act, as amended in 1990, lists the following transportation control measures and technology-based measures:

1. Programs for improved public transit;
2. Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;
3. Employer-based transportation management plans, including incentives;
4. Trip-reduction ordinances;
5. Traffic flow improvement programs that achieve emission reductions;
6. Fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service;
7. Programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use;
8. Programs for the provision of all forms of high-occupancy, shared-ride services;
9. Programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;
10. Programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;

11. Programs to control extended idling of vehicles;
12. Programs to reduce motor vehicle emissions, consistent with title II, which are caused by extreme cold start conditions;
13. Employer-sponsored programs to permit flexible work schedules;
14. Programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;
15. Programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and
16. Program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.

Transportation Control Measures (TCMs) from applicable State Implementation Plans (SIPs) for the San Joaquin Valley region are updated during each Transportation Conformity Analysis. Since the San Joaquin Valley is a multi-pollutant non-attainment area, a number of SIPs govern TCMs. The applicable implementation plans are summarized below.

- ✓ **Applicable Implementation Plan for Carbon Monoxide**
  The 2004 Revision to the California State Implementation Plan for Carbon Monoxide was approved by EPA on November 30, 2005 (effective January 30, 2006). The Plan does not include TCMs for the San Joaquin Valley.

- ✓ **Applicable Implementation Plan for Ozone**
  The 2007 Ozone Plan (as revised in 2011) was approved by EPA on March 1, 2012 (effective April 30, 2012). The Plan does not include TCMs for the San Joaquin Valley.

- ✓ **Applicable Implementation Plan for PM-10**
  The 2007 PM-10 Maintenance Plan was approved by EPA on November 12, 2008. No new local agency control measures were included in the Plan.

  The Amended 2003 PM-10 Plan was approved by EPA on April 28, 2004 (effective June 25, 2004). A local government control measure assessment was completed for this plan. The analysis focused on transportation-related fugitive dust emissions, which are not TCMs by definition. The local government commitments are included in the Regional Transportation Planning Agency Commitments for Implementation Document, April 2003.

However, the Amended 2002 and 2005 Ozone Rate of Progress Plan contains commitments that reduce ozone related emissions; these measures are documented in the Regional Transportation Planning Agency Commitments for Implementation Document, April 2002. These commitments are included by reference in the Amended 2003 PM-10 Plan to provide emission reductions for precursor gases and help to address the secondary particulate problem. Since these commitments are included in the Plan by reference, the commitments were approved by EPA as TCMs.

- ✓ **Applicable Implementation Plan for PM-2.5**
  The 2008 PM2.5 Plan (as revised in 2011) was approved by EPA on November 9, 2011 (effective January 9, 2012). However, the Plan does not include TCMs for the San Joaquin Valley.

  The 2012 PM2.5 Plan was approved by the San Joaquin Valley Air Pollution Control District on December 20, 2012, and was further accepted by the California Air Resources board on January 24, 2013. The Plan has been submitted to EPA and is pending approval.

Transportation Demand Management

Transportation Demand Management (TDM) refers to strategies aimed at providing alternatives to single occupancy vehicle use for travel choice. TDM specifically targets the work force, which generates the majority of peak hour traffic. Education is an essential feature of demand management, which attempts to persuade people to consider their transportation choices in an effort to reduce single occupancy vehicle usage. Transportation alternatives that provide a choice of transportation modes help reduce single occupancy vehicle usage. Transportation Demand Management strategies and alternative transportation modes include the following:

- ✓ Public transit
- ✓ Rideshare programs
- ✓ Carpooling
- ✓ Flexible work hours
- ✓ Vanpools
- ✓ Cycling or walking
- ✓ Telecommuting
- ✓ Mixed use land development

Similar to Transportation Control Measures, Fresno County, the cities, private businesses, and governmental offices implement some of these programs. Fresno COG sponsors, through the use of Measure "C" funding, a variety of transportation programs including carpool and vanpool subsidies, Rideshare programs and reduced senior fares for Taxi rides.

Fresno County has been aggressively working towards expanding the use of carpools within the region. An increase in carpool usage is highly beneficial to the region in various ways. It can have dramatic impacts for reducing traffic congestion, improving air quality, conserving non-renewable energy sources, and conserving road and highway infrastructure. For these reasons, community leaders felt it necessary to include funding for a Carpool Incentive Program within the plan to reauthorize the Measure C ½ cent sales tax that was

ultimately passed by voters in 2006. Fresno COG has also taken the opportunity to link potential carpoolers together by upgrading the Valleyrides.com website to allow residents the ability to find potential ridematches using more sophisticated technologies.

The Measure C Carpool Incentive Program began July 1, 2009. Participants who carpool or vanpool can submit carpool logs through the valleyrides.com website. Each log is entered into a monthly drawing for cash prizes. Each eligible log also qualifies participants for the annual Grand Prize Drawings that are held each year in July.

Program eligibility rules are as follows:

- ✓ Participants must travel in a carpool at least twice per week with at least on other person to work or school.
- ✓ Participants must be at least 18 years of age and have a valid driver's License.
- ✓ Participants must commute to or from Fresno County

Given that Measure C passed in 2006 for a 20-year timespan, the goal is to continue to market and expand the Measure C Carpool Incentive Program through at least 2026 in order to encourage carpooling as an alternative to driving in single-occupancy vehicles, thereby contributing to the reduction of traffic congestion and improving air quality. Plans will also include funding strategies for the program for 2026 and beyond.

Providing residents the opportunity to connect with potential carpool partners has also been a key element of the overall ridesharing plan. Valleyrides.com is a website that comprises all relevant ridesharing information for Fresno County. Most recently, the website has undergone extensive upgrades from the design of the website itself, to the programming technology used to match carpoolers with each other. The previous technology in use was quite antiquated. Up until recently, more advanced technology was quite expensive to establish. However, advances in technology have allowed for the acquisition of a higher-tech website at more reasonable costs. Residents can now visit the website and get more accurate results when being matched with other prospective carpoolers. The goal is to continue to upgrade and advance the capabilities of the valleyrides.com website into the future in order to provide the best possible ridesharing resource for residents.

Transportation System Management

Transportation System Management (TSM) is a program to identify short-range, low-cost capital improvements which improve the operating efficiency of the existing transportation infrastructure. TSM, in coordination with the programs listed above, improves air quality and the level-of-service of existing roadways, reducing congestion and improving circulation. These strategies fall within the responsibility of member agencies and Caltrans and include, but are not limited to the following:

- ✓ Ramp metering
- ✓ Traffic signal synchronization
- ✓ Street widening
- ✓ Removal or limitation of on-street parking
- ✓ Access limitations on arterial streets
- ✓ Turning lanes and bus bays
- ✓ Traffic engineering geometric improvements
- ✓ Bikeway facilities
- ✓ Bus terminals
- ✓ Pedestrian malls

Transportation System Management strategies are implemented by cities, the county, transit operators, and Caltrans.

Land Use Strategies

Research done by the San Joaquin Valley Air Pollution Control District and the California Air Resources Board indicates that land use and transportation strategies can reduce vehicle trips and vehicle miles traveled, thus reducing the air pollution produced by motor vehicles. Within California, and the San Joaquin Valley in particular, design of residential neighborhoods still assumes reliance upon the automobile for the majority of trips. Land use decisions made to the year 2040 will have an important impact upon future air quality. Alternative transportation modes must be available in order for residents to have a choice instead of reliance on single occupancy vehicles. Communities can be designed to be more conducive to walking, biking, and transit use. In that process, "livable" environments are created with reduced congestion, healthier air, and increased mobility for all groups. Strategies used effectively in other communities have resulted in urban areas that have improved air quality, are economically viable, and improve the quality of life for residents. Available approaches include the following:

- ✓ Compact development
- ✓ Focused infill and renewal
- ✓ Transit oriented development
- ✓ Concentration of employment densities (50 to 60 employees per acre)
- ✓ Enhanced downtown districts
- ✓ Focusing expected new growth into compact, walkable neighborhoods with mixed-use configurations providing a range of housing and job types
- ✓ Clustered activity centers- nodes, urban villages, or suburban activity centers
- ✓ Integrated street patterns which allow travel choices to neighborhood destinations

In 2006, the eight regional planning agencies in the San Joaquin Valley came together in an unprecedented effort to develop a coordinated valley vision – the San Joaquin Valley Regional Blueprint. This eight county venture was conducted in each county, and was ultimately integrated to form a preferred vision for future development throughout the Valley to the year 2050. On April 1, 2009, the San Joaquin Valley Regional Policy Council adopted a preferred growth scenario for the Valley along with 12 Smart Growth Principles to guide development and promote the livable and sustainable communities mentioned above. In addition, Fresno COG has incorporated the first SCS in the 2014 RTP development process.

Existing Requirements

Transportation conformity is the regulatory link between the Federal Clean Air Act and transportation planning. In order to receive transportation funding or approvals from the FHWA/FTA, state and local transportation agencies with plans, programs or projects in nonattainment or maintenance areas, must demonstrate that they meet the transportation conformity requirements of the Clean Air Act as set forth in the transportation conformity regulation [40 CFR 93 Subpart A]. The regulation requires that the RTP and TIP be demonstrated to conform to the State Implementation Plan (SIP) before approval by the MPO, or acceptance by the U.S. Department of Transportation. Conformity to a SIP means that transportation plans, programs and projects will not produce new air quality violations, worsen existing violations, or delay timely attainment of the National Ambient Air Quality Standards.

Timely implementation of Transportation Control Measures (TCMs) is a transportation conformity requirement. Fresno COG's conformity process is discussed in more detail in the Air Quality Conformity Analysis for the 2014 Regional Transportation Plan. The transportation conformity regulations also require following formal interagency consultation processes. Fresno COG along with the other seven Valley Metropolitan Planning Organizations (MPOs) are parties in a Memorandum of Understanding (MOU) with the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) to ensure a coordinated transportation/air quality planning approach and to jointly develop and implement local control measures in each Sate Implementation Plan. These coordinated and cooperative efforts were further strengthened in September 9, 2009 with the signing of an updated Memorandum of Understanding (MOU) to enhance the Valley's coordinated transportation/air quality planning activities

The regulation of sources of emissions, while effective, is not the only means to reduce pollution from transportation sources. Public information and education campaigns certainly play a role in promoting the behavior changes necessary to reduce vehicle miles traveled. Under the current Surface Transportation Reauthorization Act, MAP-21, public participation is an integral component of the transportation planning process.

Fresno COG continues to bring transportation-related air quality issues to our Transportation Technical Committee, Policy Advisory Committee, the Fresno COG Policy Board, and the Regional Policy Council in hopes of educating not only transportation professionals, but also informing the interested public.

Accomplishments

The foregoing is descriptive of transportation strategies which are aimed at reducing congestion, improving transportation system operational efficiencies, reducing vehicle miles traveled, and providing alternative travel choices enables the work commuter to evaluate the choice of travel mode and to reduce dependence on single occupancy vehicle (SOV) use. Fresno County agencies, particularly within the metropolitan area, have been involved in implementing many of these strategies since the late 1970's. Recent years have seen

improvements in our ability to monitor and to model the effectiveness of various strategies. Since the last 2011 RTP the Fresno COG network model and the eight MPO models have all been upgraded to a much higher standard. They are both more advanced and have more in common with one another than before. The standardization of modeling practice in the Valley will make collaboration and sharing of information among the MPOs more effective. Collaboration and information sharing in turn will allow for greater compatibility between models in neighboring jurisdictions, and greater understanding of how to meet common modeling challenges. For more detail on transportation modeling please see the section Fresno COG Regional Travel Demand Forecast Model in the 2014 RTP and SCS.

The San Joaquin Valley Unified Air Pollution Control District continues in its path of ongoing adoption of new rules, strategies, and requirements with local agencies and local businesses. The Air District adopted Rule 9410 Employer Based Trip Reduction (eTRIP) that businesses with over 100 eligible employees participate in varying approaches to reduce SOV vehicle trips. Fresno COG is an Air District Healthy Air Living Business Partner. A major landmark accomplishment is the attainment of the National Ambient Air Quality Standard for PM10. This took the coordinated effort of the entire San Joaquin Valley, residents, businesses, agriculture management, as well as focused funding to reduce sources of particulate matter in the Valley. Transportation Demand Management has seen improvements and new accomplishments with the July 1, 2013 launch of an all new Valleyrides.com website, which provides information on rideshare matching, carpooling, vanpooling and bicycle resources. Fresno COG also facilitated an App for mobile users (both Android and IPhone) to locate rideshare information. Change may be slow, but it is being accomplished through widespread collaborative participation.

Needs Assessment

Fresno COG works with the San Joaquin Valley Unified Air Pollution Control District on the development of the local control measure section of each State Implementation Plan. The needs assessment is part of every State Implementation Plan (SIP). The SIP identifies where emissions can be reduced in order to meet the attainment deadlines. Fresno COG continues to review and improve the programs that impact air quality, such as the Congestion Mitigation and Air Quality (CMAQ) Improvement program. All of the San Joaquin Valley Metropolitan Planning Organizations have adopted policies for distributing at least 20% of the CMAQ funds to projects that meet a cost-effectiveness threshold for emission reductions. In the 2012 CMAQ funding cycle, (reported as part of the 2013 FTIP) Fresno COG awarded approximately 52% of the available funding to cost-effective projects. Fresno COG's commitment to reducing motor vehicle emissions remains strong.

Proposed Actions

✓ **Short-Range Plan**

Actions required and taken between now and 2018 make up the short-range transportation strategy for Fresno County. These actions are found in the Short-Range Transit Plan, the Regional Transportation Improvement Program, and the TCMs contained in existing Air District plans.

✓ **Long-Range Plan**

Long-range strategies will be dependent on the effectiveness of short-range programs and upon available funding. Potential programs include land use planning strategies that increase densities and concentrate trips, high-speed rail, light rail or other alternative fixed route facilities, further implementation of bus rapid transit, HOV lanes, and other multimodal corridor alternatives.

MAP-21 Congestion Management Process

MAP-21 requires Transportation Management Areas (TMAs), which are urbanized areas with a population over 200,000, to address congestion management through a process that provides for safe and effective integrated management and operation of the transportation system. Fresno is considered a TMA, and as such, is required to include congestion management in the development of performance measures and strategies in the transportation plans.

The Congestion Management Process (CMP) provides information on transportation system performance and alternatives to relieve congestion and improve mobility of persons and goods. The intent of a CMP is identification and implementation of the most efficient use strategies for existing and future transportation facilities, where congestion is occurring or is expected to occur. The CMP includes several elements:

(1) Methods to monitor and evaluate the performance of the multimodal transportation system
(2) Definition of congestion management objectives and appropriate performance measures to assess the extent of congestion
(3) Establishment of a coordinated program for data collection
(4) Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies
(5) Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy
(6) Implementation of a process for periodic assessment of the effectiveness of implemented strategies

Fresno COG's Congestion Management Process (CMP) was completed in 2009. It is defined in Work Element 172 of our Overall Work Program (OWP). The CMP tries to optimize the efficiency of the existing and planned transportation system. Traffic conditions were evaluated, and a list of most feasible and appropriate alternative strategies was identified for the Fresno region to manage existing and future congestion. A process/methodology has also been established to analyze Single Occupancy Vehicle (SOV) projects in order to meet the requirement of alternative strategies being considered before constructing capacity increasing projects.

The 2009 Fresno County CMP has been integrated with and implemented in the 2014 FTIP and RTP processes.

As documented in the Strategy Implementation section of the 2009 Fresno County CMP, in order to encourage member jurisdictions to consider alternative strategies for managing congestion/mobility issues, a competitive scoring system was set up in the FTIP project selection process to provide incentives for members to submit CMP projects. During the 2011/2012 - 2013/2014 RSTP call for projects, extra points were given to projects that met the criteria of the adopted congestion management strategies in the 2009 Fresno County CMP. Such CMP projects were scored based on how well they met the goals and objectives established during the congestion management process.

In addition, the 2009 Fresno County CMP adopted Level of Service (LOS) D as the minimum threshold for the streets and roads in the Fresno-Clovis metropolitan areas, and LOS C for the rest of the County. In the ranking of the RTP projects, no point was given to projects that have existing condition at LOS D or better in the Fresno-Clovis Metro area or projects at LOS C or better in the rest of the County.

As required by the congestion management legislation, appropriate analysis of all reasonable travel demand and operational improvement strategies should be conducted for the corridor in which a capacity increasing project is proposed. The 2009 Fresno County CMP adopted a Single Occupancy Vehicle (SOV) Alternative Analysis methodology to determine whether alternative strategies can meet the demand for capacity before SOV projects are constructed. The capacity increasing projects proposed by the jurisdictions for the 2014 RTP and SCS were first matched up with the CMP network that was established during the 2009 CMP process. The capacity projects on the CMP network were then run through the SOV Alternative Analysis process.

California Congestion Management Program

California's Congestion Management Program became law along with the gasoline tax increase in 1990 (Proposition 111). The Congestion Management Program tied land use and development policies to transportation with the intent of lessening smog and traffic congestion. So cities and counties would take the legislation seriously, a portion of the new gasoline tax money was to go directly to cities and counties that complied with a locally adopted Congestion Management Program.

With the passage of AB 2419 (Bowler) in 1996, the Congestion Management Program became optional if the county and cities, representing a majority of the incorporated population, decided to exempt themselves from the Congestion Management Program requirements. Fresno County's Congestion Management Program and the Fresno COG's designation as the Congestion Management Agency was rescinded by the Fresno COG Policy Board on September 25, 1997, at the request of Fresno County and its fifteen cities.

Air Quality

As discussed in Chapter 1, and in the San Joaquin Valley Profile section of the Valleywide Chapter Appendix of the 2014 RTP and SCS, the San Joaquin Valley faces the serious environmental problem of poor air quality during the majority of the year. Air quality is a self-defining term: the quality of the air that we breathe. National Ambient Air Quality Standards (NAAQS) are established for criteria air pollutants in order to protect human health and welfare. Criteria pollutants are pollutants proven to be able to harm your health and the environment, and cause property damage.

Of the six criteria pollutants, particle pollution and ground-level ozone are the most widespread health threats. EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels. Pursuant to federal law, the Environmental Protection Agency (EPA) has designated the entire San Joaquin Valley Air Basin (SJVAB) a nonattainment area that does not meet established standards for ozone and particulate matter. The San Joaquin Valley is designated as attainment/maintenance for PM10 and carbon monoxide (CO). In addition, the State of California also has set "health protective" standards for air pollutants that are even more stringent than federal levels. At the state level the SJVAB is designated as nonattainment for ozone and particulate matter.

The following section summarizes the air pollutants that are of major concern in the San Joaquin Valley.

Ozone

Ground level ozone is the major component of Fresno County's summertime "smog" and it affects human health and vegetation. Ozone is formed when two chemicals, volatile organic compounds (VOCs) and nitrogen oxides (NOx), interact with sunlight and heat. (VOC is also referred to as reactive organic gases or ROG) Generally, low wind, stagnant air, no clouds, and warm temperatures provide the best conditions for ozone formation; the conditions in San Joaquin Valley Air Basin are ideal for this reaction. Since the formation of ozone occurs during warmer weather, it is mostly a problem in summer and early fall. Ozone does not form immediately, but occurs over time and distance; therefore, ozone is a regional pollutant and often impacts a large area. VOCs and NOx are emitted from fuel combustion, agricultural processes, and industrial processes, consumer products as well as from natural sources (biogenic sources such as some species of plants and trees).

EPA has established ozone standards based on 1-hour averaging periods, and for 8-hour averaging periods. The 1-hour Ozone National Ambient Air Quality Standard was revoked by EPA on June 15, 2005 and replaced with the more stringent 8-hour standard. Due to a series of legal challenges to EPA's actions, the San Joaquin Valley Unified Air Pollution Control District was required to address these challenges and has adopted the *2013 Plan for the Revoked 1-hour Ozone Standard*.

Particulate Matter

The other significant pollutant in the San Joaquin Valley is particulate matter (PM). Particulate matter is a mixture of solid particles and liquid droplets in the air. The size of PM is directly related to potential health problems; the smaller the particles are more detrimental to health. EPA has set federal standards for PM10 (PM that is 10 microns or less in diameter) and PM2.5 (PM that is 2.5 microns or less in diameter). The chemical composition of PM is also a factor in the type and severity of health impacts. In addition to directly-emitted particles, PM can form in the atmosphere through photochemical reactions of precursors. These particles can include basic elements such as carbon and metals, or can be complex mixtures such as diesel exhaust and soil.

Much of the ambient particulate matter is formed from atmospheric reactions of NOx (nitrogen oxides) NOx is also a precursor for ozone. Mobile sources are the major contributor to NOx.

In addition to the ozone problem in summer and early fall, the San Joaquin Valley exceeds the standards for particulate matter at other times of the year. The highest levels of particulate matter in Fresno County and the San Joaquin Valley are found in late fall (October) through winter (February). This, in combination with ozone, creates a year-round air pollution problem. This produces an additional concern for human health in our Valley in that we do not have a "clean" season that would allow for respiratory system recovery.

The primary sources of particulate matter include farming operations, paved road dust, fugitive dust, unpaved road dust, and waste burning. In addition, residential wood combustion is a significant contributor in urban areas during the winter months, accounting for up to 30% of emissions. The impact of residential wood burning is being reduced due to innovative regulations by the San Joaquin Valley Air Pollution Control District. Particulate matter is categorized by size: diameters larger than 2.5 microns and smaller than 10 microns is referred to as PM10, smaller particles with diameters 2.5 microns or less are referred to as PM2.5. (As a reference: the diameter/cross-section of a human hair is anywhere from about 50 to 100 microns.)

The finer particles pose an increased health risk, because they can reach deep into the lungs and are associated with both acute and chronic health effects including aggravation of existing respiratory diseases, heart and lung disease, coughing, and bronchitis.

Diesel particulate matter is further recognized by California's Air Resources Board as a toxic air contaminant based on its ability to cause cancer and other health effects.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fuels. The main source is motor vehicles. CO has been an air quality problem in the past, affecting four of the eight Valley counties in the San Joaquin Valley Air Basin, including Fresno, Kern, San Joaquin, and Stanislaus. The Fresno/Clovis Metropolitan Area was redesignated to a "maintenance area" when EPA proposed direct, final approval for the *1996 Carbon Monoxide Redesignation Request and Maintenance Plan*. Currently the San Joaquin Valley is designated as attainment for CO and has an adopted maintenance plan to ensure continued control. On April 26, 1996 ARB approved the *Carbon Monoxide Redesignation Request and Maintenance Plan*, EPA approved and redesignated on June 1, 1998; on October 22, 1998 ARB revised the SIP to incorporate the effects of ARB action to remove the wintertime oxygen requirement for gasoline in certain areas. On July 22, 2004 ARB approved the update to the SIP showing the standard will be maintained through 2018.

Air Quality Planning

Based upon the geographical shape of the San Joaquin Valley Air Basin, a regional approach to air quality planning is utilized. Currently, the eight Valley Metropolitan Planning Organizations (MPOs) and the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) have a Memorandum of Understanding (MOU) to ensure a coordinated transportation/air quality planning approach. The MOU defines a cooperative process aimed at maximum effectiveness and compatibility of both air quality and transportation plans. It also facilitates compliance with the air-quality conformity provisions of the federal Clean Air Act. The MOU was updated and adopted by all eight of the Valley RPAs and the SJVUAPCD on September 9, 2009.

A close relationship exists between Transportation Systems Management, Transportation Demand Management, air quality, and energy planning. Transportation Systems Management is the efficient management of existing transportation systems so as to improve upon the level of performance (i.e. traffic flow improvements), while Transportation Demand Management involves planning strategies for managing human behavior regarding how, when, and where people travel. Because Transportation System and Demand Management efforts have secondary benefits, (the associated reduction of vehicle miles traveled and fuel use), they prove to be effective strategies in reducing sources of air pollution from transportation sources.

The Regional Transportation Plan recognizes the importance of state and federal air quality planning regulations. This chapter summarizes these regulations, and reviews actions to reduce mobile source emissions to a level necessary to contribute to the attainment state and federal air quality standards.

Existing Federal & State Requirements

✓ Transportation and Air Quality Planning

In September of 1975, the Urban Mass Transportation Administration (now named the Federal Transit Agency) and the Federal Highway Administration issued joint regulations for the development of transportation improvement programs. The regulations called for a short-range, low-capital, multimodal Transportation Systems Management Element to be consistent with the long-range Regional Transportation Plan. The California Legislature also passed statutory requirements (AB 3705, 1988), which mandated the preparation of a separate Transportation Systems Management element for regional transportation planning areas over 50,000 in population.

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 redefined the joint regulations and created a new framework for linking air quality, transportation, and land use. It intended to produce a significant shift in federal transportation policy from reliance on roads and motor vehicles to a multimodal approach. ISTEA and its successors TEA-21, SAFETEA-LU and the current Surface Transportation Reauthorization Act: Moving Ahead for Progress in the 21st Century, (MAP-21), delegates major planning decisions to the states and MPOs. They also reinforce the goals of the Federal Clean Air Act by making air pollution a central concern of transportation planning and spending decisions.

ISTEA created, and TEA-21, SAFETEA-LU, and Moving Ahead for Progress in the 21st Century, (MAP-21) continue the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, which funds transportation projects and related programs that contribute to air quality improvements and provide congestion relief. The goal of the CMAQ Program is to reduce emissions in nonattainment and maintenance areas.

✓ Air Quality Planning

Federal and state legislation requires an integrated transportation/air quality planning process. The Federal Clean Air Act Amendments of 1990 reaffirmed that all areas are required to attain the National Ambient Air Quality Standards. Numerous specific reductions of emissions and an aggressive attainment time frame were required. Although the EPA, California ARB and the San Joaquin Valley Unified Air Pollution Control District are responsible for implementing most federal Clean Air Act requirements, the Regional Planning Agencies (RPAs) are responsible for the development and implementation of transportation control measures and compliance with the transportation conformity regulation.

Under certain conditions failure to meet requirements may be met with sanctions. Under the Federal Clean Air Act, the EPA is required to impose automatic sanctions under certain circumstances. The EPA can apply two sanctions:

1. Offset Sanctions: Establishment of a 2 to 1 emission offset ratio requirement for new stationary sources.
2. Highway Sanctions: A restriction on federally funded highway projects, plans and programs.

The first sanction could make industrial expansion prohibitively expensive in the Valley while the second sanction could delay needed highway improvements and jeopardize economic growth and jobs.

If the above sanctions are not resolved in a timely manner, the EPA would also be required to file a Federal Implementation Plan (FIP) which would detail how the region will reduce emissions to reach attainment, effectively taking control away from the state and local air district.

- **State Implementation Plan (SIP)**

  Federal clean air laws require areas with unhealthy levels of criteria air pollutants (designated as non-attainment) to develop plans, known as State Implementation Plans (SIPs). SIPs are comprehensive plans that detail how an area will attain National Ambient Air Quality Standards (NAAQS). SIPs are not single documents, but a compilation of new and previously submitted plans, programs, district rules, state regulations and federal controls.

  - **1996 Carbon Monoxide Redesignation Request and Maintenance Plan**
    California's Air Resources Board submitted a redesignation request to EPA in July of 1996 on behalf of Fresno County and nine other areas in the state to reclassify the areas to "maintenance" status for carbon monoxide. EPA approved the 1996 Carbon Monoxide Redesignation Request and Maintenance Plan in June 1998. The Plan included contingency provisions made up of measures that were already adopted such as California reformulated fuel, enhanced vehicle inspection and maintenance (Smog Check II), and low-emission new vehicle standards. Additionally, the Plan contains the CO emission budget used for the conformity analysis in the transportation conformity determination for this RTP and SCS. On October 22, 1998 ARB revised the SIP to incorporate the effects of ARB action to remove the wintertime oxygen requirement for gasoline in certain areas. On July 22, 2004 ARB approved the update to the SIP showing the standard will be maintained through 2018.

- **2004 Extreme Ozone Attainment Demonstration Plan (1-hour Ozone)**
  The San Joaquin Valley Air Pollution Control District (SJVAPCD) adopted this plan in October 2004 to address EPA's 1-hour ozone standard. However since EPA revoked this standard in 2005, EPA did not act on this plan until 2010, when a court decision required EPA action. EPA's 2010 action approved the plan, but subsequent litigation led to a court finding that EPA had not properly considered new information available since the District adopted the Plan in 2004. EPA thus withdrew its plan approval in November 2012, and the District and ARB withdrew the plan from consideration. The SJVAPCD then workded on the 2013 Plan for the Revoked 1-hour Ozone Standard which was adopted in September 2013.

- **2007 Ozone Plan (8-hour Ozone)**
  The District approved the 2007 Ozone Plan on April 30, 2007. This plan included an in-depth analysis of all possible control measures and projected that the Valley will achieve the 8-hour ozone standard (as set by EPA in 1997) for all areas of the SJVAB no later than 2023.
  - The ARB approved the 2007 Ozone Plan on June 14, 2007.
  - EPA published transportation conformity budget adequacy determination on January 22, 2009.
  - EPA approved the Plan and conformity budgets (as revised in 2011) on March 1, 2012, effective April 30, 2012.

- **2007 PM 10 Maintenance Plan and Request for Redesignation**
  - The District has compiled a series of PM10 Plans, with the first one in 1991. Based on PM10 measurements from 2003-2006, EPA found that the SJVAB had attained the federal PM10 standard.
  - The District's 2007 PM10 Maintenance Plan and Request for Redesignation, approved on September 21, 2007, assures that the Valley will continue to meet the PM10 standard and requests that EPA formally redesignate, or label, the Valley to attainment status.
  - On September 25, 2008, EPA redesignated the SJV to attainment for the PM10 standard and approved the Maintenance Plan.

- **2008 PM 2.5 Plan (Annual)**
  - The District approved the 2008 PM2.5 Plan on April 30, 2008. This plan addresses EPA's annual PM2.5 standard of 15 µg/m³, established by EPA in 1997. Building upon the strategy used in the 2007 Ozone Plan, the District agreed to additional control measures to reduce directly produced PM2.5. The 2008 PM2.5 Plan estimates that the SJVAB will reach the PM2.5 standard (as set by EPA in 1997) in 2014.
  - The EPA approved the Plan (as revised in 2011) on November 8, 2011 which contains the motor vehicle emission budgets for PM2.5 and NOx.

- **2012 PM2.5 Plan (24-hour)**
  - The SJVAPCD adopted the 2012 PM2.5 Plan in December 2012, and was approved by ARB January 2013 and was submitted to EPA on March 3, 2013. EPA approval is pending at the time of this draft for the 2014 RTP and SCS. This plan addresses EPA's 24-hour PM2.5 standard of 35 µg/m³, which was established by EPA in 2006.

In addition to federal requirements, the State of California Air Resources Board requires local air districts to show progress toward meeting the California Clean Air Act (CCAA) air standards. The California Clean Air Act Triennial Progress Report and Plan Review demonstrates local air districts' reasonable progress to attain the more stringent California air pollution standards.

Accomplishments

The major accomplishments made toward improving local air quality since adoption of the 2011 RTP include the following measures:

✓ **Regional Transportation / Air Quality Planning**

The eight Valley Regional Planning Agencies (RPAs) continue through a Memorandum of Understanding (MOU) to ensure coordinated transportation/air quality planning activities. The MOU defines a cooperative process aimed at maximum effectiveness in meeting state and federal air quality standards. This MOU, between and among the eight Valley MPO's, was revised and adopted by all eight RPAs on September 21, 2006.

These coordinated and cooperative efforts were further strengthened in September 9, 2009 with the signing of the Memorandum of Understanding (MOU) adding the San Joaquin Valley Air Pollution Control District to enhance the Valley's coordinated transportation/air quality planning activities

Interagency consultation is generally conducted through the San Joaquin Valley Regional Planning Agency's Director's Association Interagency Consultation Group (IAC) This was formerly called the San Joaquin Valley Model Coordinating Committee (MCC). The MCC was formally revised in 2009 incorporating quarterly workshops, MPO staff conference calls, and interagency conference calls. The IAC has been established by the Regional Planning Agency's Director's Association (all eight Valley COGs) to provide a coordinated approach to valley air quality, conformity and transportation modeling issues. The committee's goal is to ensure Valley-wide coordination, communication and compliance with Federal and state Clean Air Act requirements. Each of the eight Valley Regional Planning Agencies (RPAs) and the San Joaquin Valley Unified Air Pollution Control District are represented. In addition, the Federal Highway Administration, Federal Transit Administration, the Environmental Protection Agency, the California Air Resources Board and Caltrans (Districts 6, 10 and headquarters) are all members of the committee.

Since the last 2011 RTP process this committee has coordinated the unified approach among all the agencies to successfully adopt a new State Implementation Plan-the 2012 PM2.5 Plan, completed three separate Transportation Conformity Determinations, has played a major role in the coordination of work on the 2014 RTP and SCS between and among the eight counties in the San Joaquin Valley Air Basin which include the first Sustainable Community Strategies for each of the eight counties, and has provided input to the Statewide Transportation Conformity Working Group.

✓ **Valleywide Air Quality Coordination**

In November 1995, the eight Valley RTPAs jointly contracted for the services of an air quality consultant to assist and advise them regarding air quality and modeling regulations. This contract has been renewed since then, and continues today.

✓ **Regional Transportation/Air Quality Plans and Programs**

The Valley RPAs have continued their involvement and contribution to the San Joaquin Valley Unified Air Pollution Control District's State Implementation Plans. The Valley RPAs continue to work in concert with SJVUAPCD providing updates and information.

✓ **Transportation Modeling for Air Quality Conformity- Model Steering Committee**

The Valley Regional Planning Agencies have developed a coordinated effort for transportation modeling for air quality conformity purposes. The objective of the Model Steering Committee is to satisfy air-quality conformity requirements from a Valley-wide perspective, and as well as from individual county data. A staff level committee of the Valley RPA Directors, Interagency Coordination Group and the Statewide Transportation Conformity Working Group meets regularly (three to four times per year) to discuss issues of concern regarding transportation and air quality planning in the Valley. Since the last 2011 RTP the Fresno COG model and the eight MPO models have all been upgraded to a much higher standard. They are both more advanced and have more in common with one another than before. The standardization of modeling practice in the Valley will make collaboration and sharing of information among the MPOs more effective. Collaboration and information sharing in turn will allow for greater compatibility between models in neighboring jurisdictions, and greater understanding of how to meet common modeling challenges. For more detail on transportation modeling please see the section Fresno COG Regional Travel Demand Forecast Model earlier in this chapter.

- ✓ **Traffic Flow Improvements**

  Fresno COG member agencies identify facilities, which require traffic flow improvements. When requested, Fresno COG modeling staff assists in the identification of congested facilities by providing current and future years' traffic forecasts from the traffic model. Numerous traffic flow improvements resulting in air-pollution emission reductions have been funded under the Congestion Mitigation and Air Quality Improvement Program.

- ✓ **Rideshare Program**

  Trip reduction services provided by ValleyRides.com primarily assists two segments of the region it serves: employer worksites and individual commuters. Services include consultation, worksite program development, and carpool matching. Incentives are available to commuters in order to encourage them to leave their single-occupancy vehicle in exchange for a multiple-occupancy carpool or vanpool. These incentives are funded locally, through the Measure C sales tax initiative.

- ✓ **Plug-in Electric Vehicle Coordinating Council**

  On November 20, 2012, Fresno COG was invited to participate in the San Joaquin Valley Regional Plug-in Electric Vehicle Coordinating Council (PEVCC). The San Joaquin Valley Air Pollution Control District received a grant from the California Energy Commission to develop a comprehensive regional plan to support Plug-In Electric Vehicle (PEV) readiness. The monthly meetings are continuing and will work to identify barriers to PEV readiness and provide solutions to those barriers.

Needs Assessment

Management of the transportation system is becoming an increasingly important need in Fresno County. Current air quality issues are driving this need and maximizing the utilization of existing facilities is also important. Funding for developing new capacity-increasing projects is limited; even the construction of Measure "C" (local sales tax measure) projects will not satisfy the long-term travel demand within the Fresno/Clovis Metropolitan Area. Therefore, the Fresno region will be looking to demand management measures as means of maintaining accessibility, reducing congestion, and meeting air quality standards in order to serve the needs of a growing and diverse population.

Previous efforts have been regional or generalized in terms of analysis and recommendations. This focus will likely shift to more specific local corridor analyses. This is especially true with regard to federal legislation that requires consideration of alternate transportation modes, the cost/effectiveness of such modes, and analysis of potential environmental impacts associated with each mode.

Modeling activities continue to indicate a strong demand for east-west travel in the northern portion of the Fresno/Clovis Metropolitan Area. The implementation of improvements based on prior studies, which were detailed earlier in this chapter, continues. The studies include the Phase I analysis of east-west corridor alternatives between Avenue 18 1/2 in Madera County and Herndon Avenue in Fresno County. A Phase II analysis identified the most appropriate crossing of the San Joaquin River.

In addition, Fresno COG served as the lead-planning agency for the Herndon Avenue Specific Study. This study's purpose was to analyze future travel demand in the northern Fresno Clovis metropolitan area and determine the appropriate type of transportation improvements beyond those already planned that would be needed on Herndon Avenue in order to accommodate projected population growth and resultant vehicle trips.

Growth in vehicle miles traveled (VMT) continues to outpace growth in population. Large increases in the percent growth in vehicle miles traveled will continue to challenge our ability to demonstrate air quality conformity. Failure to provide for sufficient mobile source reductions (i.e., vehicle emissions) through transportation strategies may result in more stringent regulations.

Proposed Actions

✓ **Short-Range Improvement Plan**

➢ **Air Quality Measures**

The Short-Range Improvement Plan provides actions that will reduce air emissions between 2014 and 2018. As indicated in the Needs Assessment section of this chapter, the majority of short-term measures improving air quality are related to system, demand, and control management strategies. Local governments, Fresno COG, and other regional, state, and federal agencies should take the following actions to facilitate the implementation of strategies necessary to ensure that air quality standards are met:

- Fresno COG will continue to cooperate with the other seven Valley transportation planning agencies and the San Joaquin Valley Air Pollution Control District (SJVAPCD) in providing coordinated transportation/air quality planning.
- Fresno COG and the SJVAPCD will continue to cooperate/consult in activities aimed at achieving both federal and California air quality standards.
- Identified Transportation Demand Measures and Transportation Control Measures shall be considered during SIP development and carried out where appropriate by designated responsible governments and agencies.

- Fresno COG in cooperation with the cities of Fresno and Clovis and Fresno County will continue to evaluate the Fresno/Clovis Metropolitan Area circulation system. Planning efforts require closer evaluation of over-capacity traffic corridors and improved monitoring of the streets and road system. This evaluation will be accomplished through focused corridor analysis, using those corridors as identified in adopted local agencies' General Plans.
- Fresno COG, through ValleyRides.com, will encourage individuals and employers to increase average ridership per vehicle by matching those who are interested in carpooling or vanpooling based on home and work/school locations and schedules. Fresno COG will continue the well-developed programs to incentivize participation.
- Fresno COG will continue to support the efforts of the SJVAPCD to integrate appropriate policies and implementation measures identified in the Air Quality Guidelines for General Plans into local general plans.
- Fresno COG, Fresno County and its fifteen cities will encourage land use patterns which reduce dependency on the automobile, reduce energy consumption, and support the use of transit and other alternative modes.
- Fresno COG will encourage local transit agencies to replace aging fleets with alternative fueled buses.
- Fresno COG and local transit agencies will support greater flexibility from funding sources for bus purchases in order to promote selection of the most energy-efficient models.
- Fresno COG, in cooperation with Caltrans, works to promote the development of park-and-ride lots and parking management strategies where appropriate.
- Fresno COG, Caltrans, cities, and the county support utilization of alternate fuel strategies to reduce the impacts of petroleum fuels. The introduction of alternative fuel technology into the consumer market can have a significant impact on reducing petroleum based fuel consumption.

✓ **Long-Range Plan**

Long-range actions are those that will be implemented to 2040-the horizon year of this RTP and SCS. The policies of the 2014 RTP and SCS work to improve air quality in the region. They build upon the effectiveness and successes of the short-range programs, upon both federal and California air quality policies and mandates, and upon available funding. Long-term strategies are those that will take many years to accomplish because they are often aimed at changing human attitudes and behavior toward the use of new and alternate transportation systems and fuels, alternative means of commuting to work, as well as land use changes over time. The goals, objectives, and policies for air quality attainment and energy conservation stress concerted efforts toward supporting alternative transportation modes including improvement of bicycle and pedestrian systems and upgrading existing public transit and regional rail facilities. The long-range strategies will continue to implement Transportation Control Measures, Transportation System Management and Transportation Demand Management.

Other long-term strategies stress utilizing existing transportation and energy resources more efficiently. Nationwide, transportation planners have come to realize that increasing the "supply" of the transportation system (i.e. building and widening highways and roads) does not alone solve complex transportation problems. With increasingly scarce resources and growing environmental concerns, it will become necessary that we use our existing transportation network more efficiently. This entails changing the "demand" for the transportation system: how we get to and from our destinations, what time we travel, whether we link trips, and how often we drive by ourselves in single occupant vehicles. Fresno COG places much importance on increasing the efficiency and maintenance of existing facilities. Intelligent Transportation Systems will play a larger role in incorporating innovative services to make "smarter" use of transportation networks in long term integrated planning processes.

The "key" to acceptance of long-range strategies involves a commitment to public education by local, regional, state, and federal governments. Even the best transportation alternatives will have a difficult time competing with the perceived benefits of the private automobile. Incentives are necessary to overcome these built-in advantages and to make other types of travel just as economically appealing as driving alone. Examples include subsidized bus and rail passes; preferential, free, or subsidized parking for carpoolers; and subsidized vanpools. Fresno COG continues with our successful Rideshare/vanpool/carpool incentives and implementation procedures. State and federal governments need to continue assisting local governments in providing funding sources to implement such strategies.

Equally important in this educational effort is that cities, the county, Caltrans, and public service and utility districts address transportation/air quality concerns in their long-range plans and programs. Long-range planning strategies that call for mixed land uses, creation of higher density nodes to be supported by public transit systems, and comprehensive bikeway and pedestrian plans are necessary if alternate transportation systems are to be successful.

Climate Change

Greenhouse gases are gases that absorb and emit thermal, infrared radiation trapping heat in the earth's atmosphere and are currently not considered "criteria" air pollutants. There are no "attainment" concentration standards established by the federal or State government for greenhouse gases. Since they are not, at this point, criteria air pollutants they are not subject to regulation by the EPA, ARB, or local air districts. In fact, greenhouse gases are not generally thought of as traditional air pollutants because greenhouse gases, and their impacts, are global in nature, while traditional, criteria air pollutants are those that affect the health of people, and other living things, at ground level and in the general region of their release into the atmosphere. However, there is action at the federal level that is moving toward consideration of greenhouse gases as criteria pollutants. In fact, the U.S. EPA made a very significant finding on December 15, 2009 that greenhouse gases endanger public health and that the combined

emissions from new motor vehicles and new motor vehicle engines endanger public health and welfare. This important finding moves the control of greenhouse gas emissions toward regulation; like the traditional air pollutants. Until formal determination of the intent to regulate greenhouse gas under the federal Clean Air Act is made, federal and California legislation is the primary means being implemented to reduce greenhouse gas levels.

Common greenhouse gases include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and chlorofluorocarbons (CFCs).

Some greenhouse gases occur naturally and are emitted to the atmosphere through both natural processes and human activities. Other greenhouse gases are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are CO_2, CH_4, N_2O, and fluorinated carbons.

- ✓ **Carbon Dioxide** – CO_2 enters the atmosphere through the burning of fossil fuels, solid waste, trees and wood products. CO_2 is also as a result of other chemical reactions (e.g., certain manufacturing processes). CO_2 is removed from the atmosphere through the photosynthesis process (the process in which plants absorb and convert CO_2 into energy).

- ✓ **Methane** – CH_4 is emitted during the production and transport of coal, natural gas, and oil. CH_4 is also the natural result of the ruminant digestive processes in livestock and other agricultural practices and by the decay of organic waste.

- ✓ **Nitrous Oxide –** N_2O is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

- ✓ **Fluorinated Gases** – Hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride are synthetic gases that are emitted from a variety of industrial processes. These gases are typically emitted in smaller quantities, but because of their potency, they are sometimes referred to as High Global Warming Potential gases (High GWP gases).

Detailed discussions of greenhouse gases and current state and federal regulations, and links to other greenhouse gas resources can be found on the SJVAPCD's website at: http://www.valleyair.org/ Programs/CCAP/CCAP_idx.htm.

Legislation regarding the State of California's efforts to reduce greenhouse gases has had a direct impact on many elements of Fresno COG's Resolution to Incorporate/Adopt Greenhouse Gas Policies. The *Climate Change Element* for the 2011 RTP implemented the resolution; and at the same time provided the first phase toward the reduction of greenhouse gas emissions. Fresno COG adopted the 2011 RTP before the final SB 375 emission reduction targets were determined. Therefore, the *Climate Change*

Element in the 2011 RTP was the first phase in Fresno COG's approach to address the issue of global climate change.

The second phase of Fresno COG's approach to address climate change is occurring in this 2014 RTP. As such, it includes a Sustainable Communities Strategy (SCS) in order to be fully compliant with SB 375. Additional information regarding the SCS can be found in Chapter 4 of the 2014 RTP and also Page 2-11 of this Introduction. Subsequent RTP cycles will evaluate the progress of the adopted strategies and make modifications as necessary.

The Fresno region will continue proactive efforts to reduce greenhouse gas emissions; however the only way to truly address global warming is through the cooperative and collaborative efforts of international agreements, federal, State, as well as local efforts.

Financial Element

As required by federal transportation legislation, the Financial Element of the RTP is intended to provide the cost and revenue assumptions necessary for decision makers to implement the RTP and SCS. These assumptions include revenue estimates for specific governmental funding programs, local contributions and tax initiatives. The intent of the financial assumptions is to provide a level of financial detail adequate for options to be exercised by state and local decision makers. The following is a brief summation of the components of the Financial Element:

- ✓ Provides an estimation of the costs and a projection of the revenues available for transportation system improvements recommended in the Action Element of the RTP. In doing so, it contains financial assumptions and projections that set parameters for the Regional Transportation Improvement Program (RTIP).

- ✓ A description of how revenue projection models were analyzed leading to the selection of a preferred financial scenario. It serves as an inventory of existing and potential new transportation funding sources that can be used for transportation system improvements that are most appropriate for implementation in Fresno County.

- ✓ Identifies potential funding shortfalls along with recommendations for potential revenue sources that the region could pursue to implement the transportation vision over the long term.

- ✓ Includes a financially constrained program as required by federal legislation. Fresno COG worked with partnering agencies and used financial models to forecast how much revenue will be available for transportation purposes over the 25-year duration of the plan.

These forecasts are used to plan investments that fit within the "financially constrained" portion of the revenues that are reasonably expected to be available. Also included is a list of projects (financially unconstrained) which are both necessary and desirable should funding become reasonably available.

- ✓ Includes a general discussion of how projects are programmed into the RTP's financially constrained and un-constrained list.

- ✓ Lastly, it discusses how the region will implement the RTP and SCS plan investments through subsequent programming actions.

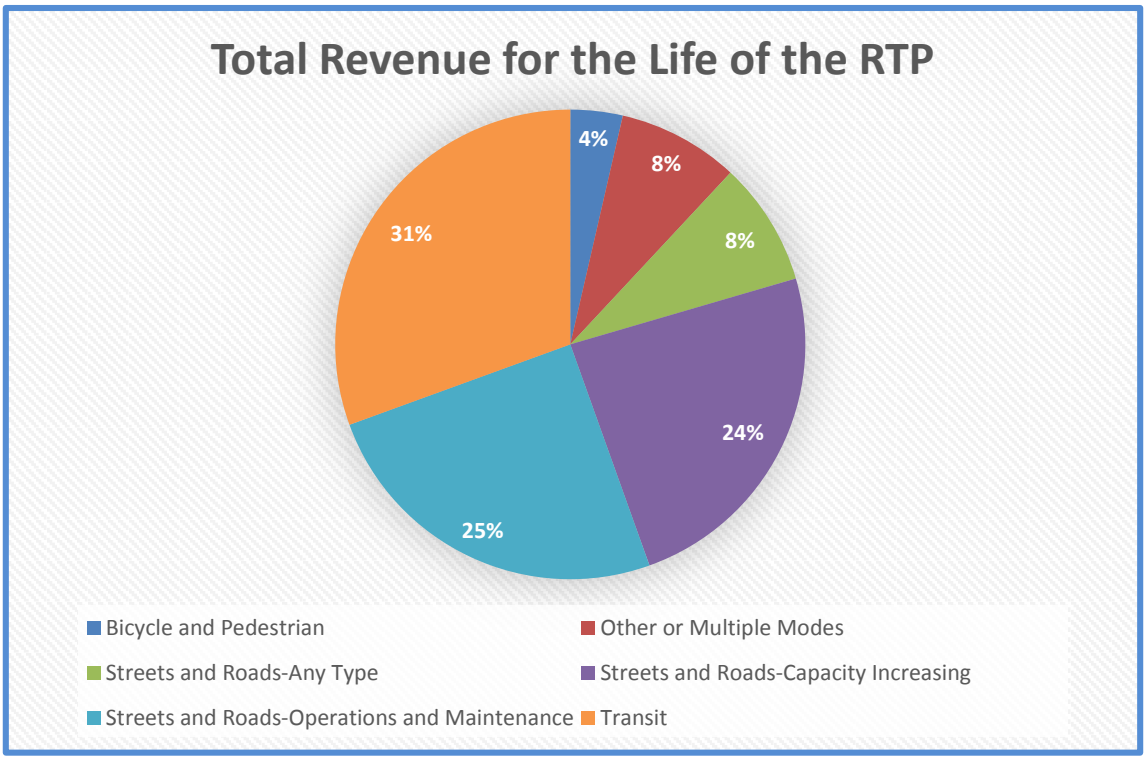
The financial chapter of the 2014 RTP covers the following areas: financial assumptions, unmet financial needs (urban & rural), existing major revenue sources, long-range financial projections, and potential new revenue sources.

Table 2-3 provides a listing of all of the federal, state and local transportation funding programs and their projected revenues on three different levels, an average annual projection, covering the life of the plan. In total, those revenues are anticipated to be approximately $6.5 billion and are identified in a summary manner in Table 2-3 and the funding for each mode is displayed in Figure 2-17.

TABLE 2-3
Total Federal, State and Local Transportation Funding Programs and Their Projected Revenues RTP Revenues (2010 - 2040)

2014 RTP Revenue Projection Totals	
Project Type	**Total Revenue for the Life of the RTP**
Bicycle and Pedestrian	$233,538,368
Other or Multiple Modes	$542,217,566
Streets and Roads-Any Type	$554,470,969
Streets and Roads-Capacity Increasing	$1,563,064,138
Streets and Roads-Operations and Maintenance	$1,618,487,082
Transit	$1,985,803,353
TOTAL	**$6,497,581,476**

FIGURE 2-17
Total Federal, State and Local Transportation Funding Programs and Their Projected Revenues RTP Revenues (2010 – 2040)



Public Involvement

The Fresno Council of Governments developed and implemented a comprehensive, inclusive, public outreach program that spanned a two-year period covering early RTP and SCS planning through the final adoption of Fresno COG's 2014 RTP and SCS.

Fresno COG began the RTP and SCS Public Participation Process by updating the Fresno COG Public Participation Plan (PPP), which was adopted by the Fresno COG Policy Board in March 2012. The PPP provides direction for all public participation activities conducted by Fresno COG. It contains the public participation requirements, procedures, strategies and techniques used by Fresno COG standing committees and staff for public outreach and participation. The approved PPP states that a separate outreach strategy would be developed for the RTP Update that specifically details the strategies used to enlist public participation, and states how members of the public may participate in each step of the RTP and SCS process. In compliance with this commitment, two additional public outreach strategies, one for the Fresno County region and another on behalf of the entire San Joaquin Valley, were developed.

Fresno COG's RTP and SCS Public Outreach Strategy established a process and outlined specific activities for communicating with the public throughout the RTP and SCS development process. The goals, strategies and methods outlined in the Public Outreach Strategy guided Fresno COG's efforts to build awareness of Fresno COG and the Regional Transportation Plan with particular emphasis on the Sustainable Communities Strategy. The Outreach Strategy specifically outlined tactics to reach out to nontraditional as well as traditional audiences to include them in the transportation planning process. It was designed to help ensure that environmental justice (EJ) issues were addressed and that interested members of the public had ample opportunity to understand and provide meaningful input while the RTP and SCS was in its early stages and throughout the planning process.

The Regional Transportation Plan Public Outreach Strategy was developed with input from the general public, Fresno COG's Regional Transportation Plan Roundtable, Transportation Technical Committee, Policy Advisory Committee and Policy Board, and it was adopted in September 2012. The strategies are further outlined in the 2014 RTP and SCS.

Environmental Justice

Although not a CEQA issue, an Environmental Justice (EJ) Analysis of the RTP and SCS is needed to assure that Fresno COG conforms to federal environmental justice principles, policies, and regulations including Title VI of the Civil Rights Act of 1964. Title VI states that, "No person…shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title VI establishes the need for transportation agencies to disclose to the public the benefits and burdens of proposed projects on minority populations. The understanding of civil rights has expanded to include gender, religion, and disability. Title VI was further amended in 1987 to extend non-discrimination requirements for recipients of federal aid to all of their programs and activities, not just those funded with federal funds.

A 1994 Presidential Order (Executive Order 12898) directed every federal agency to make Environmental Justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on underrepresented groups and low-income populations. Reinforcing Title VI, this Presidential Order ensures that every federally funded project nationwide considers the human environment when undertaking the planning and decision-making process. The Presidential memorandum accompanying E.O. 12898 identified Title VI as one of several federal laws that should be applied "to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects."

To implement and ensure compliance with these statutes, federal and state agencies have issued a series of orders, regulations and guidance on environmental justice. In 1994, President Clinton issued Executive Order 12898 on "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." In 1997, the Department of Transportation followed up with an Order on

Environmental Justice designed to implement the Executive Order. In December 1998, the Federal Highway Administration (FHWA) issued its own environmental justice order. As a federally designated metropolitan transportation planning organization (MPO), Fresno COG is required to comply with the rules and policies set forth by FHWA. Fresno COG's three main principles underlying environmental justice are:

- ✓ To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority and low-income populations.
- ✓ Ensure full and fair participation by all potentially affected communities in the transportation decision making process.
- ✓ Prevent denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income groups.

Additionally, Title VI not only bars intentional discrimination, but also unjustified disparate impact discrimination. Disparate impacts result from policies and practices that are neutral on their face (i.e., there is no evidence of intentional discrimination), but have the effect of discrimination on protected groups.

The Environmental Justice Equity Analysis (see Chapter 3: "Environmental Justice Report: Ensuring Meaningful Involvement for All People" of the RTP and incorporated by reference) is intended to measure both the benefits and burdens associated with the transportation investment alternatives included in the 2014 RTP and SCS, and to make sure that the environmental justice communities living within Fresno County share equitably in the benefits of the Plan's investments without bearing a disproportionate share of the burdens.

Conclusions stated in Chapter 3 of the 2014 RTP indicate that that in terms of overall equity, the 2014 RTP projects appear to distribute impacts evenly over Fresno County. In most cases, EJ communities fared better than non-EJ communities. There were only a few instances where the EJ Communities did not fare better than the Non-EJ Communities in the EJ analysis. It is widely known that transportation projects do not achieve immediate transportation goals, but frequently they will create fundamental changes to the physical and socioeconomic environment. Notwithstanding all the enhancements they create, it is inevitable that some transportation projects will produce negative impacts.

Although our EJ analysis focuses on racial minorities and the low-income populations, Fresno COG is very involved with programs for the elderly and disabled populations. Some of these include the Senior Taxi Scrip program, FTA Section 5310 grants (Transportation for Elderly Persons and Persons with Disabilities), Section 5317 grants (help for Americans with Disabilities), and consultation with Social Services Transportation Advisory Council (SSTAC). The SSTAC serves as an advisory body to Fresno COG regarding the transit needs of the transit dependent and transit disadvantaged persons, including the elderly, handicapped, and persons of limited means.

Although improvements are needed in a couple of areas, the analysis in the Environmental Justice Report confirms that the EJ communities are not "disproportionately burdened by high and adverse" effects and do share equitably in the benefits from the 2014 RTP and SCS.

2.6 RELATIONSHIP TO OTHER PLANS AND PROGRAMS

The RTP and SCS is a planning guide containing transportation policy and projects through Fiscal Year 2039/40). The Plan includes programs and policies for transportation management, transit, bicycles and pedestrians, roadways, passenger rail, freight, and finances. The RTP's primary use is as a regional long-range plan for federally funded transportation projects. It also serves as a comprehensive, coordinated transportation plan for all governmental jurisdictions within the region. Numerous jurisdictions have different transportation implementation responsibilities under the Plan, including Caltrans, Fresno County, and each of the cities within the County. RTPs are planning documents developed by RTPAs and Metropolitan Planning Organizations (MPOs) in cooperation with Caltrans and other stakeholders. The plans are developed to provide a clear vision of regional transportation goals, policies, objectives and strategies. Specifically, the Fresno County RTP and SCS has been developed to address the following:

- ✓ Assessment of current modes of transportation and the potential of new travel options within the region.
- ✓ Prediction of future needs for travel and goods movement.
- ✓ Identification and documentation of specific actions necessary to address the region's mobility and accessibility needs.
- ✓ Identification of guidance and documentation of public policy decisions by local, regional, state and federal officials regarding transportation expenditures and financing.
- ✓ Identification of needed transportation improvements.
- ✓ Promotion of consistency between the California Transportation Plan, the regional transportation plan, and other transportation plans developed by cities, counties, districts, private organizations, tribal governments, and state and federal agencies in responding to statewide and interregional transportation issues and needs.
- ✓ Providing a forum for participation and cooperation, and facilitating partnerships that reconcile transportation issues which transcend regional boundaries.
- ✓ Involvement of the public, federal, state and local agencies, as well as local elected officials early in the transportation planning process so as to include them in discussions and decisions on the social, economic, air quality, and environmental issues related to transportation.

Further, the RTP and SCS address the effects of planned growth and development on the existing and planned transportation system. The resultant analysis documents existing and future year (Year 2040) multimodal transportation system conditions. Modes studied include highways and arterials, public

transit, nonmotorized systems, passenger and freight rail, and aviation. The analysis conducted as part of this PEIR considers the effects of projects and programs outlined in the 2014 RTP and SCS.

2.7 STREAMLINING THE CEQA PROCESS

Under SB 375, general consistency with a CARB-approved SCS allows projects to qualify for two types of CEQA streamlining:

- ✓ **Projects consistent with the SCS or APS.** A residential or mixed-use project consistent with the density and policies in an SCS is not required to discuss (1) growth-inducing impacts; or (2) project specific or cumulative impacts from cars and light-duty truck trips on global warming or the regional transportation network if the project incorporates the mitigation measures required by an applicable prior environmental document (Pub. Res. Code, § 21159.28, subd. (a) and (b); Gov. Code, § 65080, subd. (b)(2)(l).

- ✓ **Three Types of Streamlining for Transit Priority Projects**. A "transit priority project" (TPP) is created by SB 375 that must meet three requirements: (1) contain at least 50% residential use; (2) have a minimum net density of 20 units per acre; and (3) be located within one-half mile of a major transit stop or high quality transit corridor included in an RTP (Pub. Res. Code, § 21155, subd. (b).

A TPP is exempt from CEQA if it is not more than 200 units on not more than 8 acres; can be served by existing utilities; does not affect historical resources; buildings are 15% more energy efficient than required and the project is designed to achieve 25 percent less water usage; and the project provides either a minimum of 5 acres/ 1,000 residents of open space, or housing for moderate, low, or very low income residents (Pub. Res. Code, § 21155.2, subd. (b).

A TPP that does not qualify for an exemption may qualify for a sustainable community environmental assessment (SCEA) if the project incorporates mitigation measures, performance standards, or criteria from prior applicable environmental impact reports. A SCEA is similar to a negative declaration under CEQA.

SB 375 also authorizes the adoption of specific traffic mitigation measures that apply to TPPs to include requirements for traffic control improvements, street or road improvements, transit passes, or other measures that will mitigate traffic impacts of transit priority projects. A TPP does not need to comply with any additional mitigation measures for the traffic impacts of that project if traffic mitigation measures have been adopted.

However, it is widely believed that very few development projects in Fresno County could qualify as Transit Priority Project, at least in the near future. TPPs are designed for more urban locations with higher development concentrations such as the Bay Area and the Southern California region.

Local jurisdictions maintain the discretion and will be solely responsible for determining consistency of any future project with the SCS. Fresno COG staff may provide a lead agency at the time of its request readily available data and documentation to help support its finding upon request.

2.8 EIR BASELINE TO DETERMINE SIGNIFICANCE

As previously noted, significant impacts are defined as a "substantial or potentially substantial, adverse change in the environment" (Public Resources Code § 21068). The Program EIR must identify significant impacts that would be expected to result from implementation of the 2014 RTP and SCS. Significant impacts must be determined by applying significance criteria to compare the future Plan conditions to the existing environmental setting (CEQA Guidelines § 15126.2(a)). The existing setting and the criteria for determining significance for each environmental resource issue is described in detail in Chapter 3 of this EIR, and represents the most recent, reliable, and representative data to describe current regional conditions. CEQA Guidelines provide that the existing physical conditions at the time the Notice of Preparation ("NOP") is published will "normally" constitute the baseline (Cal. Code Regs., tit. 14, § 15125 "CEQA Guidelines"). The NOP for the Fresno COG 2014 RTP and SCS was issued on August 27, 2012. Thus, 2008 is the baseline for purposes of the analysis in this Draft PEIR.

While the NOP was released in 2012, the PEIR baseline is considered to be 2008 for the following reasons:

- ✓ Fresno COG began an update of its traffic model in 2010. Fresno COG's travel model requires comprehensive land use, travel and other data, which are built upon baseline land use and travel data. The most recent available land use data when Fresno COG validated and calibrated its traffic model was for the year 2008.
- ✓ Because the baseline must be an integrated set of land use, demographic, traffic count and VMT data, 2008 provides the most complete, integrated data portrait of the existing conditions in the region. In other words, 2008 is the most recent year for which comprehensive land use, demographic, traffic count and VMT data are available for the Fresno region.

However, for some resources, more recent data was used from the years following 2008 as the basis for the analysis. This data, however, is nonetheless representative of 2008 baseline conditions because (i) it was gathered in the years immediately before the NOP was released but since 2008, (ii) it has been updated with additional data as available to provide the most current reflection of existing conditions, and (iii) there have been no substantial changes in county-wide physical conditions between 2008 and

2012 – in part due to the economic downturn and the limited residential and commercial development in the area.

Therefore, for purposes of this Draft PEIR, and unless otherwise states, "existing conditions" refers to the on-the-ground physical conditions that are representative of those in 2008.

2.9 CRITERIA FOR SIGNIFICANCE

CEQA gives the lead agency the responsibility to determine whether an adverse environmental effect identified in an EIR should be classified as "significant" or "less than significant." (CEQA Guidelines § 15064(b).) Under Section 15064(b), "the significance of an activity may vary with the setting" and, as a result, an inflexible definition of what constitutes a significant effect is not always possible. The lead agency has discretion to set its own significance criteria, which requires the lead agency to make a policy judgment about how to distinguish impacts which are adverse, but significant, from impacts which are adverse, but not significant. *(Eureka Citizens for Responsible Gov't v City of Eureka (2007) 147 Cal.App.4th 357).* A lead agency may select a standard of significance based on its judgment about an appropriate standard of significance (*Sierra Club v. City of Orange (2008) 163 Cal.App.4th 523, 541).* The standards of significance used in an EIR may also rely upon policies adopted and implemented by the lead agency *(Mira Mar Mobile Community v. City of Oceanside (2004) 119 Cal.App.4th 477).*

2.10 PROJECT ALTERNATIVES

Urbanization in the region will increase significantly by 2040, regardless of whether or not the 2014 RTP and SCS are implemented. As a result, Chapter 4 of this Draft PEIR includes a comparison between the expected future conditions with implementation of the RTP and SCS and the expected future conditions assuming the 2014 RTP and SCS were not adopted (or a comparison to the No Project Alterative). This evaluation is not included in the determination of significant impacts in the remaining sections of the Draft PEIR; but provides a perspective regarding the effects of implementing the 2014 RTP and SCS.

In addition, Chapter 4 provides a comparison of two additional RTP/SCS land use scenarios developed during preparation of the SCS through an open and engaging public process. Several transportation project scenarios were also initially created, which were eventually narrowed down to one project list and applied to all alternative land use scenarios. The two alternative scenarios identified as alternatives to the Preferred Project Alternative (Project) include:

- ✓ **Alternative A (Scenario A - Public input from November 2012 workshop).** Scenario "A" was based on public input from the November 2012 workshop conducted by the Fresno COG. Participants were

asked to place chips at locations where the participants would prefer growth to happen. They also provided input about types of development at the preferred locations.

- ✓ **Alternative B (Scenario C - Foothill growth allocated to the City of Fresno).** Scenario "C" was proposed by the RTP Roundtable largely at the request of a collection of community-based organizations who expressed their belief that Fresno and Clovis plans were not 'ambitious' enough to make a significant impact on environmental issues. The Scenario would shift foothill growth from unincorporated Fresno County to the downtown and corridors in the City of Fresno.

- ✓ **Scenario D - Foothill growth allocated to existing communities).** Scenario "D" was proposed by the Coalition of Community Organizations after Scenario's A, B and C were presented and vetted through the public process, and as such, was only reviewed by the Fresno COG committee. While Fresno COG Staff did work with the proposing group to model scenario results and discuss basic information in regards to this scenario, Scenario D is not formally analyzed within this PEIR, due to the lack of public process vetting.

The alternative SCS scenarios were designed to:

- ✓ Explore and clearly convey the impact of where the region grows over the next 21 years (Year 2035)
- ✓ To what extent growth is focused within existing cities and towns.
- ✓ How growth occurs or the shape and style of the neighborhoods and transportation systems that will shape growth over the period between 2014 and 2035.

The Fresno COG Policy Board selected Scenario B as the preferred SCS scenario for the Fresno County region in November 2013. As a result, the 2014 RTP and this Draft PEIR contains and reflects Scenario B as the preferred SCS scenario for planning purposes. As such, this PEIR describes the Project as the 2014 RTP and SCS (Scenario B) reflective of the planned transportation system described in the RTP document and the SCS, which is documented in Chapter 4 of the RTP. Both are incorporated in this Draft PEIR by reference.

For purposes of this Draft PEIR, Scenarios A and C were identified as Project Alternatives to the Preferred Project Alternative [2014 RTP and SCS (Scenario B)]. Each of these alternatives along with the No Project Alternative have been reviewed and findings are included in Chapter 4 of this Draft PEIR.

2.11 EIR AND REGIONAL TRANSPORTATION PLAN APPROVAL PROCESS

The process to approve the RTP, SCS, and associated PEIR includes (1) assessing Fresno County's transportation needs, identifying RTP projects to address the needs, and addressing air quality conformity requirements in the Draft and Final PEIR; (2) seeking comments on the PEIR and approval of the RTP and

SCS from the local agencies including the County and each of the fifteen (15) cities; (3) approval of resolutions passed by Fresno COG certifying the PEIR associated with the RTP and SCS, and (4) approval of a resolution passed by Fresno COG approving the RTP and SCS. Public involvement will be encouraged throughout the process.

2.12 CONTENTS OF THE RTP

The RTP is used to guide the development of the Regional Transportation Improvement Program (RTIP). The RTIP is the programming document used to plan the construction of regional transportation projects and requires State Department of Transportation (Caltrans) approval. No project-level assessments of environmental impacts will be addressed by this PEIR. The RTP is also used as a transportation planning document by each of the sixteen member jurisdictions of Fresno COG.

The RTP identifies the region's transportation needs and issues, sets forth an action plan of projects and programs to address the needs consistent with the adopted policies, and documents the financial resources needed to implement the plan.

The RTP consists of required elements referenced in the enabling legislation and is organized into various sections. A description of each section follows.

- ✓ **Chapter 1. Building the RTP: Putting the Pieces Together**
- ✓ **Chapter 2. Public Participation: Working Together for a Better Plan**
- ✓ **Chapter 3. Environmental Justice Report: Ensuring Meaningful Involvement for All People**
- ✓ **Chapter 4. Sustainable Communities Strategy: People. Choices. Community.**
- ✓ **Chapter 5. Actions: Assessing Our Transportation Investment Needs**
- ✓ **Chapter 6. Policies: Foundation of the Plan**
- ✓ **Chapter 7. Financing Mobility: Funding Our Transportation Future**
- ✓ **Appendices**

2.13 INTENDED EIR USES

As a Program EIR, which is a type of first-tier document (CEQA Guidelines Sec. 15152, 15168), this document is prepared for an agency program or series of actions that can be characterized as one large project. Typically, such a project involves actions that are closely related geographically and are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program with generally similar environmental effects and mitigation measures.

When a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine whether an additional CEQA document needs to be prepared. When subsequent activities involve site-specific issues, the Lead Agency should use a written checklist to document its determination that:

- ✓ Environmental effects of the subsequent project were covered in the Program EIR and found to be within the scope of the Program EIR – no additional environmental review is required.
- ✓ A subsequent activity would have effects not within the scope of the Program EIR. The Lead Agency must prepare a new Initial Study leading to either a Negative Declaration, Mitigated Negative Declaration, or an EIR.

This Draft PEIR was prepared as a 'tiered' document. The tiering concept is a multi-level approach to streamline subsequent environmental reviews. The first-tier Program EIR is an analysis of general matters (i.e., in this case –projects contained in the RTP and SCS and related impacts). Subsequent tiers (later EIRs and Negative Declarations) include analyses of narrower, subsequent projects by "incorporating by reference" the general discussions from the broader first-tier EIR. Second-tier environmental reviews focus on the impacts of individual improvement projects that implement the Plan, program, or policy.

The environmental areas addressed in this Draft PEIR were identified from the Notice of Preparation (NOP), which is included as Appendix A. The scope of first-tier EIRs is limited to a description of those impacts and mitigation measures related to project implementation without being highly speculative. Each improvement project will be subsequently reviewed for potential environmental effects.

Fresno COG, Fresno County, the cities, Caltrans, and other responsible and trustee agencies will use this PEIR[2] for:

- ✓ Regional Transportation Plan Updates
- ✓ Transportation Improvement Programs
- ✓ Grants and other funding source projects
- ✓ Project Study Reports
- ✓ Design Studies
- ✓ Corridor Studies
- ✓ Transit Plans and Studies
- ✓ Non-Motorized Plans and Studies
- ✓ Aviation Plans and Studies

[2] For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the Lead Agency, which have discretionary approval power over the project (CEQA Guidelines Sec. 15381). A "trustee agency" means a State agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of California. Trustee agencies include the California Dept. of Fish and Game, the State Lands Commission, and the State Dept. of Parks & Recreation (CEQA Guidelines Sec. 15386).

- ✓ Passenger and Freight Rail Plans and Studies
- ✓ Other Plans and Studies including those for Transportation Demand Management (TDM) and Intelligent Transportation Systems (ITS) Improvement Projects
- ✓ General Plan Amendments
- ✓ Review of transportation and land use development projects
- ✓ Capital Improvement Program budgeting and project priorities
- ✓ Encroachment Permits

The following responsible and trustee agencies will use this PEIR for the potential permits/actions:

- ✓ California Dept. of Fish and Game -- *Improvement projects involving Stream Alteration Permits and California Endangered Species Act*
- ✓ California Dept. of Transportation -- *Local Assistance Projects, Transportation Improvement Program, and development permits/encroachment permits on State highways*
- ✓ Cities -- *regional transportation planning, Capital Improvement Program budgeting and project priorities, review of transportation and land use development projects, General Plan Amendments, and encroachment permits*
- ✓ Fresno County (public, Board of Supervisors, Redevelopment Agency, Planning Commission, Airport Land Use Commission, and County staff) -- *regional transportation planning, Capital Improvement Program budgeting and project priorities, review of transportation and land use development projects, General Plan Amendments, and encroachment permits*
- ✓ Local water departments, Districts and regional irrigation districts/companies -- *Improvement projects involving waterway crossings, channel re-alignments, piping, etc.*
- ✓ San Joaquin Valley Air Pollution Control District (SJVAPCD) -- *air quality attainment plan consistency and air quality mitigation measures for improvement projects*
- ✓ Fresno Council of Governments (Fresno COG) -- *Development of the Regional Transportation Improvement Program and other regional transportation planning documents, tracking of progress in implementing RTP/SCS strategies and monitoring of progress made by other entities*
- ✓ Fresno County Transportation Authority -- *Development and implementation of the Expenditure Plan*
- ✓ School Districts -- *Improvement projects adjacent to or in the vicinity of public schools*
- ✓ Federal agencies such as the Federal Highway Administration, Federal Transit Agency, Fish and Wildlife Service, Housing and Urban Development (Community Development Block Grant program), etc. -- *funding review and subsequent improvement projects funding and U.S. Endangered Species Act*
- ✓ Economic Development Commission -- *Strategic Plan development, identification of infrastructure and road improvements*

2.14 APPROVALS REQUIRED TO IMPLEMENT THE PROJECT

Fresno COG will consider this PEIR prior to the consideration of the 2014 RTP and SCS. Before the RTP and SCS can be implemented, federal review and approval of the 2014 RTP and SCS is required. That approval will follow approval of the RTP and SCS in June 2014.

2.15 EIR DEVELOPMENT/APPROVAL PROCESS

✓ Draft PEIR submitted to Fresno COG for distribution	March 17, 2014
✓ Draft PEIR Notice of Completion submitted to the State Clearinghouse for distribution to state agencies	March 21, 2014
✓ Availability of Draft PEIR for public review published In local newspapers and on Fresno COG website	March 21, 2014
✓ Draft PEIR available at Fresno County Libraries, and Fresno COG offices	March 21, 2014
✓ Draft PEIR emailed to organizations, agencies and individuals for review and comment	March 21, 2014
✓ Public Workshops on Draft PEIR	April 2014
✓ Draft 55-day public comment period closed	May 15, 2014
✓ Public Hearing on Final PEIR by Fresno COG	June 26, 2014

2.16 ORGANIZATION OF THE EIR

This PEIR consists of the following six sections and two appendices. Each one of these begins with an overview of general EIR terminology and/or requirements specific to each of these sections. *These overviews are in italic typeface.*

1.0 Executive Summary
2.0 Introduction/Project Description
3.0 Environmental Setting, Impacts, Mitigation Measures, and Level of Significance
4.0 Project Alternatives
5.0 Cumulative Effects
6.0 List of Preparers, Organization, and Agencies Referenced or Consulted

Appendices

A Notice of Preparation (NOP)
B NOP Comments

Table 2-4 compares the required contents of an EIR to this Draft PEIR. When the required EIR elements are not separated into distinct sections, the document must include a statement where each element is discussed.

2.17 EIR AND 2014 RTP AND SCS AVAILABILITY

The RTP and this environmental review document are available at:

Fresno Council of Governments (Fresno COG)
2035 Tulare Street, Suite 201
Fresno, CA 93721
www.fresnocog.org

Comments and questions should be made to:

Ms. Barbara Steck, Deputy Director
Ph: (559) 233-4148
FAX: (559) 233-9654
Email: bjsteck@fresnocog.org

TABLE 2-4
Required Contents of an EIR

Required (CEQA Guidelines 15120)	***Environmental Impact Report***
Table of Contents or Index *(CEQA Guidelines 15122)*	Table of Contents
Summary *(CEQA Guidelines 15123)*	Executive Summary
Project Description *(CEQA Guidelines 15124)*	Introduction/Project Description
Environmental Setting *(CEQA Guidelines 15125)*	Setting, Impacts, Mitigation & Level of Significance
Effects Not Found to be Significant	Setting, Impacts, Mitigation & Level of Significance
Significant Environmental Impacts *(CEQA Guidelines 15126 & 15126.2)*	Setting, Impacts, Mitigation & Level of Significance
Areas of Known Controversy	Setting, Impacts, Mitigation & Level of Significance
Alternatives *(CEQA Guidelines 15126.6)*	Project Alternatives
Mitigation Measures *(CEQA Guidelines 15126.4)*	Setting, Impacts, Mitigation & Level of Significance
Growth-inducing Impacts *(CEQA Guidelines 15126.2(d))*	Cumulative Effects
Significant Irreversible Changes *(CEQA Guidelines 15126.2(c))*	Cumulative Effects
Cumulative Impacts	Cumulative Effects
Organizations and Persons Consulted	List of Preparers, Organizations, and Agencies Referenced or Consulted

3.0 ENVIRONMENTAL SETTING, IMPACTS, MITIGATION MEASURES, & LEVEL OF SIGNIFICANCE

3.1 INTRODUCTION

An EIR is required to:

- ✓ *Provide a description of the physical environmental conditions in the vicinity of the project (local and regional perspectives). Each environmental condition includes an Introduction, which introduces the topic and provides an overview of the impacts to be evaluated. In addition, this section includes a regulatory setting (as appropriate) or a discussion of the various regulations and regulatory agencies pertinent to each impact category. Finally, this section includes the environmental setting, which normally constitutes the baseline physical conditions, and a discussion of the policy and technical background by which a lead agency determines whether an impact is significant.*

  The environmental setting section is to be no longer than is necessary to get an understanding of the significant effects of the proposed project and its alternatives. The "environment" (CEQA Guidelines 15360) refers the physical conditions, which exist within the area that will be affected by a proposed project. The area involved shall be the area in which significant effects would occur either directly or indirectly because of the project. The environment includes both natural and man-made conditions.

- ✓ *Examine changes to the physical environment in the affected area by identifying direct and indirect significant effects as well as considering long- and short-term effects. This includes a description of significant impacts including those that can be mitigated – but not reduced to a level of insignificance. A "significant effect on the environment" (CEQA Guidelines 15382) means a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.*

  This section must contain a methodology or a description of the methods applied to determine environmental impacts. In addition, this section must include criteria for significance or a description of the criteria used to evaluate the significance of potential environmental impacts. This results in an analysis of the beneficial and adverse effects of the proposed project relative to the criteria for significance. The individual projects will still be required to comply with the requirements of CEQA. Detailed analysis of the projects proposed in the Plan would be the responsibility of the agencies approving those projects.

The CEQA Guidelines recommend tools for determining the potential for significant environmental effects including:

- *Initial Study checklist [(see the Notice of Preparation (NOP) – Appendix A)]*
- *CEQA's Mandatory Findings of Significance (see the NOP, Appendix A)*
- *Consultation with other agencies (See Appendix B – NOP Comments Letters)*
- *Particular agency thresholds of significance*

The NOP determined that a Subsequent Program Environmental Impact Report (SEIR) is required for the Regional Transportation Plan (RTP) or "Project" because it could result in significant environmental impacts considering the following environmental issue areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biotic Resources
- Climate Change
- Cultural Resources
- Geology/Soil/Mineral Resources
- Hazardous Materials
- Hydrology & Water Resources
- Land Use & Planning
- Noise
- Population, Housing & Employment
- Public Utilities, Other Utilities & Services Systems
- Social & Economic Effects
- Transportation/Circulation

After review of the NOP comments, it was determined that this Program EIR should focus on the same environmental issues referenced in the NOP and listed above.

Preferred Project Alternative – 2014 RTP and the preferred SCS alternative (SCS Scenario B)

Based on findings identified in this Section of the Draft EIR, the preferred Project is the 2014 RTP and SCS including transportation improvement projects and future growth and development allocated in accordance with the preferred SCS alternative (SCS Scenario B) contained in Chapter 4 of the 2014 RTP.

- ✓ Development types and densities followed as closely as possible each city's and the County's current general plan, or each community's specific plan—or, in the cases of the cities of Fresno and Clovis,

which are considering revisions to their general plans, their most current preferred land use alternative at the time of scenario development.

- ✓ In general and where possible, infill development and growth closer to city/community centers was preferred to sprawl development.
- ✓ In general and where consistent with local planning visions, mixed-use development was preferred to traditional residential or commercial development.

Improvement projects evaluated and identified under this alternative are "financially constrained" in accordance with MAP-21 – Moving Ahead for Progress in the 21st Century Act, the prior federal reauthorization bill (SAFETEA-LU) or the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users enacted in 2005, and air quality conformity requirements. The goals of Scenario B are as follows:

- ✓ To present a possible land use scenario that is consistent with the vision of local planners.
- ✓ To ensure that each city/community receives its fair share of growth, according to historical trends.
- ✓ To adhere to blueprint principles.

As a result, the designation of planned growth and development is consistent with established land use plans and policies. This includes the designation of urban and rural development consistent with adopted local agency General Plans.

Chapter 3 Contents

- ✓ **Regulatory Setting**

  Section 15125(d) of the CEQA Guidelines requires the EIR to discuss "any inconsistencies between the proposed project and applicable general plans and regional plans." This EIR analyzes adoption of a regional transportation plan; therefore consistency with lower level document like general plans and project plans are not applicable at this programmatic level. Consistency with applicable general plans will be considered as projects are carried forward for project-specific review. Implementing agencies will also be required to comply with any applicable consultation requirements such as those established by Government Code section 65402 in evaluating conformity with applicable general plans. Consistency with air quality attainment plans is addressed in Chapter 4 - Air Quality.

  Regulatory mandates, legislation, and other requirements are provided for federal, state and local or other agencies to address transportation, air quality, and climate change requirements, as well as to inform readers of the regulations that may be applicable to address impacts to be assessed in "project level" environmental review; especially by the implementing agencies.

- ✓ **Environmental Setting**
  The environmental setting of each environmental resource or issue area is included to provide an overview or background of existing or baseline conditions in the Project area.

- ✓ **Methodology**
  This section focuses on the information and analysis applied to determine impacts related to each environmental issue area contained in this Chapter.

- ✓ **Environmental Impacts, Mitigation Measures, and Significance After Mitigation**
  Each section of this Chapter contains a section that identifies significance criteria consistent with CEQA Appendix G Thresholds and other applicable significance criteria (criteria for determining the level of significance and environmental impact); impacts associated with the Project considering the significance criteria or thresholds of significance; feasible mitigation measures that would minimize significant adverse impact; and significance after mitigation intended to identify Impacts found not to be significant, impacts found to be significant, and impacts found to be significant and unavoidable.

Other Considerations

It should be noted that the RTP transportation improvement projects and future land use development projects will be implemented by ***implementing agencies*** such as Caltrans, each of the cities, the County of Fresno, transit agencies, Native American Tribes, and other agencies responsible for the construction and/or operation of transportation facilities, land use development, and other services. For purposes of reviewing the environmental impacts associated with the Fresno COG 2014 RTP, this Draft Program EIR has been prepared because Fresno COG does not know all the details or have all the information it would need regarding each and every transportation improvement project identified in the RTP or the specific information regarding the specific type of land use development that will occur in each local jurisdiction between 2014 and 2040.

It will be the implementing agencies (referenced above) that will approve, design, and implement the transportation improvement projects referenced in the RTP and that will approve the individual land use developments proposed over the duration of the planning period. These implementing agencies would be able to prepare subsequent environmental documents that incorporate by reference the appropriate information from this Program Draft EIR regarding secondary effects, cumulative impacts, project alternatives, and other relevant factors. If the lead agency finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, that activity would not require additional CEQA review. Where subsequent environmental review is required, such review would focus on project-specific significant effects specific to the project, or its site, that have not been considered in this Program Draft EIR.

Fresno COG is a planning agency only responsible for the planning and programming of projects included in the 2014 RTP. Further, the 2014 RTP now contains the SCS, which is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from autos and light trucks (see Chapter 4 of the 2014 RTP for the Fresno COG SCS Development Process and incorporated by reference).

The SCS encourages changes to the urban form that improve accessibility to transit, and create more compact development, thereby yielding a number of transportation benefits to the region. These include reductions in travel time, vehicle miles traveled (VMT), vehicle hours traveled (VHT), and vehicle hours of delay. Concurrently, the plan yielded increased transit use and mode share, and all of these effects lead to both mobility and air quality improvements. The SCS only shows how future growth and development would be allocated to planned growth areas consistent with the general plans of the cities and the County of Fresno. The merits of the 2014 RTP and SCS (reflected in SCS Scenario B chosen as the preferred project scenario) are summarized as follows:

- ✓ An ***ambitious plan*** for sustainability with significant advancements over the status quo
- ✓ A growth plan that ***acknowledges current planning assumptions and local land use authority***
- ✓ On track to ***meet the goals set in the San Joaquin Valley Blueprint***
- ✓ ***Meets the requirement of SB 375***.
- ✓ A ***realistic and feasible growth scenario*** that allows the Fresno County region to grow at its own pace and retain its own character

As growth and development occurs, it will be the cities and the County that review and approve development proposals and determine consistency with their plans, programs, and policies; not Fresno COG. Fresno COG has no land use authority to approve future growth development as it occurs over the life of the RTP (Year 2040).

3.2 AESTHETICS

Issues related to visual and aesthetic quality including the character, condition, and quality of a scenic landscape or other visual resource are addressed in this section. Also included are aesthetic impacts results from the 2014 RTP and SCS, and a list of associated mitigation measures intended to reduce impacts.

Regulatory Setting

A number of federal, state, and local agencies establish policies and programs relative to visual resources and impacts on those resources, as follows:

Federal Highway Administration (FHWA) – National Scenic Byways Program - The FHWA National Scenic Byways Program designates selected highways as "All American Road" (a roadway that is a destination unto itself) or "National Scenic Byway" (a roadway that possesses outstanding qualities that exemplify regional characteristics).

United States Bureau of Land Management (BLM) – Scenic Areas - The BLM designates some of its holdings as Scenic Areas and some roadways in remote areas as Back Country Byways.

United States Forest Service (USFS) – National Scenic Byways Program - The USFS also has a National Scenic Byways Program, independent from the BLM program, to indicate roadways of scenic importance that pass through national forests.

National Environmental Policy Act (NEPA) - Provides information on potential impacts to the environment, including aesthetic resources (Section 101 [b]). NEPA is implemented by regulations included in the Code of Federal Regulations (40CFR6), which require careful consideration of the harmful effects of federal actions or plans, including projects that receive federal funds, if they may have a significant adverse affect on the environment. Impacts on scenic resources (40CFR6, Section 6.108 [f]) and conflicts with state, regional, or local plans and policies (4040CFR6, Section 6.108 [b]) are among the considerations included in the regulations. While NEPA compliance is not required for the Project, NEPA compliance will be required for transportation improvement projects that will be financed using federal funds. The regulations also require projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality as much as possible.

The Wild and Scenic Rivers Act - The Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271-1287), as set forth herein, consists of Public Law 90-542 (October 2, 1968) and amendments thereto. The Act established a method for providing federal protection for certain of the country's remaining free-flowing rivers, preserving them and their immediate environments for the use and enjoyment of present and

future generations. Eligible rivers can be designated as Wild River Areas, Scenic River Areas, or Recreational River Areas. Recreational River Areas are "those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past."

United States Department of Transportation Act, Section 4(f) - Section 4(f) of the Department of Transportation Act (DOT Act) of 1966 (49 U.S.C. § 303) was enacted to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) requires a comprehensive evaluation of all environmental impacts resulting from federal-aid transportation projects administered by the Federal Highway Administration, Federal Transit Administration, and Federal Aviation Administration that involve the use-or interference with use-of the following types of land:

- ✓ Public park lands;
- ✓ Recreation areas;
- ✓ Wildlife and waterfowl refuges; and
- ✓ Publicly- or privately-owned historic properties of federal, state, or local significance.

This evaluation, called the Section 4(f) statement, must be sufficiently detailed to permit the U.S. Secretary of Transportation to determine that:

- ✓ There is no feasible and prudent alternative to the use of such land;
- ✓ The program includes all possible planning to minimize harm to any park, recreation area, wildlife and waterfowl refuge, or historic site that would result from the use of such lands; or that
- ✓ If there is a feasible and prudent alternative, a proposed project using Section 4(f) lands cannot be approved by the Secretary; or if there is no feasible and prudent alternative, the proposed project must include all possible planning to minimize harm to the affected lands.

Detailed inventories of the locations and likely impacts on resources that fall into the Section 4(f) category are required in project-level environmental assessments. In August 2005, Section 4(f) was amended to simplify the process for approval of projects that have only minimal impacts on lands affected by Section 4(f). Under the new provisions, the U.S. Secretary of Transportation may find such a minimal impact if consultation with the State Historic Preservation Officer (SHPO) results in a determination that a transportation project will have no adverse effect on the historic site or that there will be no historic properties affected by the proposed action. In this instance, analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete.

California Environmental Quality Act (CEQA) - Similar to NEPA, CEQA affords protection for the environment, including aesthetic resources. The CEQA Guidelines provide four criteria that may be used to evaluate the significance of visual quality impacts: negative effects on a scenic vista, damage to scenic resources within a State scenic highway, degradation of the visual character or quality of a site and its surroundings, and creation of a new source of substantial light or glare affecting views.

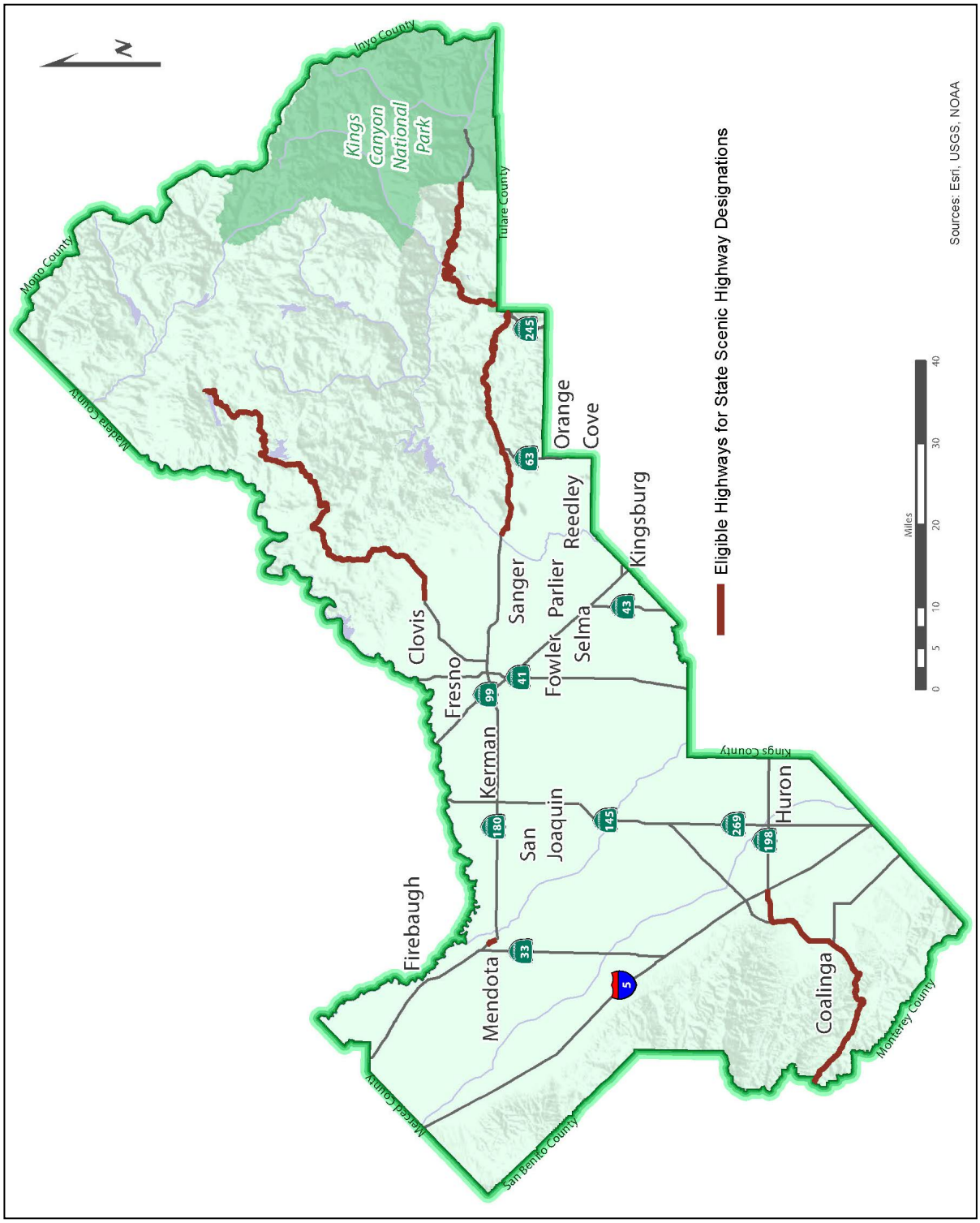
California Department of Transportation (Caltrans) - The State Legislature created the California Scenic Highways Program in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. To be included in the State program, the highways proposed for designation must meet Caltrans' eligibility requirements and have visual merit. According to the Caltrans California Scenic Highway Mapping System, while there are no designated State Scenic Highways in Fresno County, four (4) State Routes (SR) are eligible for designation. The highways are displayed in Figure 3-1 and are listed below.

- ✓ SR 33: from SR 198 near Coalinga to SR 198 near Oilfields
- ✓ SR 168: from SR 65 near Clovis to Huntington Lake (SR 65 is designated as the limit in the State's database even though it does not exist)
- ✓ SR 180: from SR 65 near Minkler to General Grant Grove section of Kings Canyon National Park (SR 65 is designated as the limit in the State's database even though it does not exist)
- ✓ SR 198:
  - From SR 101 near San Lucas to SR 33 near Coalinga
  - From SR 33 near Oilfields to Interstate 5 (I-5)

County and City Controls - Most local planning guidelines to preserve and enhance visual quality and aesthetic resources of urban and natural areas are established in a jurisdiction's General Plan. The value attributed to a visual resource generally is based on the characteristics and distinctiveness of the resource and the number of persons who view it. Vistas of undisturbed natural areas, unique or unusual features forming an important or dominant portion of a view shed, and distant vistas offering relief from less attractive nearby features are often considered scenic resources. In some instances, a case-by-case determination of scenic value may be needed, but often there is agreement within the relevant community about which features are valued as scenic resources.

In addition to federal and State designations, counties and cities have their own scenic highway designations, which are intended to preserve and enhance existing scenic resources. Criteria for designation are commonly included in the conservation/open space element of the city or county general plan.

FIGURE 3-1
Eligible Scenic Highways



Cities and counties can use open space easements as a mechanism to preserve scenic resources, if they have adopted open-space plans, as provided by the Open Space Easement Act of 1974 and codified in California Government Code (Section 51070 et seq.). According to the Act, a city may acquire or approve an open-space easement through a variety of means, including use of public money.

Environmental Setting

The aesthetic quality of the Fresno County regional transportation system is comparable to other transportation systems in the San Joaquin Valley. The County is relatively flat within the Valley region. The Valley areas are bounded on the east and west by foothill and mountain ranges and are dominated by the agricultural landscape. The majority of cities and communities in Fresno County are located in the Valley area. Valley communities and cities include Biola, Burrel, Calwa, Cantua Creek, Caruthers, Centerville, Clovis, Conejo, Del Rey, Easton, Five Points, Firebaugh, Fowler, Fresno, Helm, Huron, Kerman, Kingsburg, Laton, Malaga, Mendota, Minkler, Navelencia, Orange Cove, Pinedale, Parlier, Raisin, Raisin City, Reedley, Riverdale, Rolinda, San Joaquin, Sanger, Selma, Three Rocks, and Tranquillity.

The Valley areas are met in the east and west by foothill and mountain ranges such as the Sierra Nevada foothills, the High Sierra Nevada Mountain Range, and the Inner South Coast Range. Eastern Sierra Nevada foothill areas generally include gently rolling grass-covered hills sprinkled with oak trees, occasional water features, and rock formations. Agriculture and range animals may or may not be included. Eastern foothill communities include Auberry, Dunlap, Friant, Piedra, Prather, Squaw Valley, and Tollhouse. Western foothill areas within the Inner South Coastal Range are similar to eastern foothills, but are much drier and contain significantly fewer trees. Coalinga is the only community of significance in the western foothill area of Fresno County. Mountain areas in the northeast Sierra Nevada Foothills and the High Sierra Nevada Mountain Range usually include numerous pine trees, some rock formations and changing elevation. Mountain communities include Big Creek, Dinkey Creek, Hume, Huntington Lake, Lakeshore, Miramonte, Mono Hot Springs, Pinehurst, Pineridge, Shaver Lake, and Trimmer.

Various forms of transportation have affected the aesthetic quality of the County. As a result, the existing and planned multi-modal transportation system is considered to have a significant impact on the aesthetic quality in the County. The aesthetic appearance of the Fresno County urban and rural area is a function of both the natural landscape and man-made elements that create an urban and rural character and design. Because transportation facilities can have a major influence on human perception of the visual environment, this section of the PEIR addresses the general aesthetic landscape of the Fresno region and assesses the potential impacts from region-wide construction of at- and above-grade facilities.

Definitions

- ✓ View shed: A view shed is the area within the field of view of an observer and is commonly used to describe the extent of a scenic resource. A number of intervening elements, including trees and other vegetation, built structures, or topography, such as hills and mountains, can limit the extent of a view shed.
- ✓ Various jurisdictions within the Fresno region, such as cities, counties or federal or regional agencies, provide the guidelines regarding the preservation and enhancement of visual quality in their plans or regulations. Because of the size and diversity of Fresno County, there are no uniform standards that apply to all areas of the region. The analysis does utilize the State CEQA Guidelines Appendix G thresholds to evaluate impacts.

Transportation systems have a major influence on human perception of the visual environment. In urban areas, roadway rights-of-way comprise 20-30 percent of the total land area. As most vehicular movement occurs along transportation corridors, their placement largely determines what parts of the area will be seen. Even for people not using the transportation system at a particular time, or who never use certain modes of travel, transportation systems are usually a dominant element of the visual environment.

View sheds and visual quality are affected by air quality and more specifically, visibility. In Fresno County, high pollutant emissions – combined with poor natural ventilation in the San Joaquin Valley Air Basin – result in degraded visibility. Of particular note is photochemical smog and airborne particulates, finely divided solids or liquids, such as soot, dust, aerosols, and mists that absorb sunlight, producing haze and reducing visibility.

Aesthetically Significant Resources

Aesthetically significant features occur in a diverse array of environments within the region, ranging in character from urban centers to rural agricultural lands to natural woodlands. The mixture of climate topography affords the extraordinary range of visual features in the region and flora and fauna found in the natural environment, and the diversity of style, composition, and distribution of the built environment.

Natural features include land and open spaces such as park and open space areas, mountain areas, beaches, and natural water sources. Included, as natural features, are elements of the visual environment, which have been constructed to resemble natural features, such as man-made lakes. The loss of natural aesthetic features, reduction of vistas, or the introduction of contrasting urban features may diminish the value of natural resources in the region.

From a regional perspective, views of the various mountain ranges from locations in the region are considered valuable visual resources. Other natural features that may contain visual significance include the numerous rivers such as the San Joaquin and Kings Rivers, streams, creeks, lakes such as Millerton, Pine Flat, and Shaver Lakes and reservoirs located within the region. Features of the built environment that may have visual significance include individual or groups of structures that are distinctive due to their aesthetic, historical, social, or cultural significance or characteristics. Examples of the visually significant built environment may include bridges or overpasses, architecturally appealing buildings or groups of buildings, landscaped freeways, or a location where an historic event occurred.

Designated State and Local Scenic Highways

While there are no designated State Scenic Highways in Fresno County, according to the Caltrans California Scenic Highway Mapping System, there are four (4) highways eligible for designation including SR 33, SR 168, SR 180 and SR 198. Figure 3-1 depicts the location of these eligible highways. These designations represent recognition of the high scenic and visual qualities of these corridors. Specific design guidelines are required by local regulation for all designated highways, and the state-designated corridors must be reviewed when improvements are proposed to determine if the highway will remain eligible for designation as a scenic corridor. The remainder is locally designated highways or streets.

The County also has a system of designated local scenic highways including two scenic highways, SR 168 and SR 180, which extend down from the Sierras and terminate in the Eastside Valley area. In addition, there are several scenic drives that wind their way through the High Sierra Nevada and the Sierra Nevada Foothill areas. Due to the continuous unrestrictive views of adjacent Inner South Coastal Range foothills, Interstate 5 (I-5) is an officially designated local scenic highway[1].

Light and Glare

General sources of light can be categorized as follows:

- ✓ Man-made interior lighting that can be seen from the exterior of a building.
- ✓ Man-made exterior lighting such as lampposts, signs, or headlights.
- ✓ Naturally occurring light such as sunlight or moonlight.
- ✓ Indirect light that is reflected from a direct source of light.

Examples of direct light associated with transportation systems can include highway signs, car headlights, and street/highway lights, as well as illumination from the interior of transit facilities. An

[1] Fresno County General Plan, 2000

example of indirect light can include the reflection of sunlight from a new lightly colored road surface or highly reflective noise wall.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Potential impacts to scenic resources and vista points were based on available data on state-designated highways and vista points. This analysis discusses and assesses potential impacts to designated scenic resources, including scenic highways or vista points that may be generated from projects proposed in the RTP and SCS, as well as other projects contained in the RTP financially constrained project lists. This analysis also discusses the potential impact of additional light and glare from proposed improvement projects within the RTP and new development planned within the SCS. Mitigation measures are provided if the impact has been identified as being potentially significant.

Generally, greater changes from existing conditions result in impacts that are more significant. For example, the construction of a new roadway generally has a greater impact on scenic resources than the widening of an existing one. Road widening, however, can have significant local impacts especially when requiring the removal of trees and other important landscape buffers, or when construction of noise barriers or other visual impediments are necessary. New land use development can also result in significant changes and impacts to the existing landscape and view shed.

Criteria for Significance

The following significance criteria were used to determine the level of significance of impacts on scenic resources resulting from the proposed Project. Significance criteria were developed based on Appendix G of the State CEQA Guidelines and on professional judgment. In general, an individual improvement project and new development project contained within the RTP and SCS would result in a significant visual impact if it:

- ✓ Have a substantial adverse effect on a scenic vista.
- ✓ Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state or county designated scenic highway or county designated scenic road.
- ✓ Substantially degrade the existing visual character or quality of the site and its surroundings, which are open to public view
- ✓ Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Generally, proposed projects are of the following two types:

- ✓ New Systems (new highway and transit facilities).
- ✓ Modifications to Existing Systems (widening roads, addition of carpool lanes, grade crossings, intelligent transportation systems, maintenance, and service alterations).

Methodology

Impacts to aesthetic resources resulting from these proposed Project would depend on several factors such as the type of individual improvement or land use development project proposed for the given area, scenic resources in the given area, and duration of the proposed construction activities.

In general, scenic resources could be significantly impacted by transportation improvement projects or future land use development projects proposing new systems. Specifically, construction and operation of transportation improvement projects and future land use development proposed within the RTP and SCS could significantly impact aesthetic resources located in the vicinities of these "new or future" transportation improvement or land use development projects.

Impact 3.2.1 – Obstruction of views

Construction and implementation of individual transportation improvement projects and future land use development projects could potentially impede or block views of scenic resources as seen from the transportation facility or from the surrounding area. This could be a potentially significant impact.

Construction of new facilities or development of previously undisturbed sites for transportation improvements or future land use development could potentially block or impede views of scenic resources in a given area. For example, construction of highways or new residential areas could block or impede views of area mountains such as the Sierra Nevada Mountain Range and other scenic resources. Grade separated facilities could block or impede views of surrounding scenic resources during and after construction. Moreover, the elevation and scale of the proposed grade separated facilities or high-rise development could be visually intrusive to surrounding areas (depending on the degree of visibility of the transportation facility).

Construction of transportation facilities that involve modifications like widening or upgrading existing roadways would involve lesser changes to the visual environment. These "modification projects" would most likely occur within existing roadway facilities and/or could require acquisition of right-of-way property. However, such changes may not block or impede views of scenic resources to a greater extent than at present.

Implementation of the proposed RTP and SCS will result in more compact development than existing conditions. By developing more compactly, the RTP and SCS directs more growth to the areas that are already urbanized and potentially lessens the amount of undeveloped land or lands with aesthetic resources from being converted or lost to urban uses. Focusing growth in areas that are already developed limits the amount of growth that takes place at the urban edge, adjacent to aesthetic resources.

Mitigation Measures

The specific impacts on obstruction of views will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Implement design guidelines, local policies, and programs aimed at protecting views of scenic corridors and avoiding visual intrusions.

- ✓ To the extent feasible, noise barriers that will not degrade or obstruct a scenic view will be constructed. Noise barriers will be well landscaped, complement the natural landscape and be graffiti-resistant.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.2.2 – Altered appearance of scenic resources

Construction and implementation of the projects and new development could alter the appearance of scenic resources along or near eligible scenic highways such as along SR 180 east of the City of Sanger and vista points. This could be a potentially significant impact.

The State Legislature created California Department of Transportation's (Caltrans) State Scenic Highway Program in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are stated in the California Streets and Highways Code, Section 260.

The State Scenic Highway System includes a list of highways that have been designated by Caltrans as scenic highways or are eligible for designation as scenic highways. These highways are designated in Section 263 of the Streets and Highways Code. Scenic highway designation can offer the following benefits.

- ✓ Protection of the scenic values of an area.
- ✓ Enhancement of community identity and pride, encouraging citizen commitment to preserving community values.
- ✓ Preservation of scenic resources to enhance land values and make the area more attractive.
- ✓ Promotion of local tourism that is consistent with the community's scenic values.

According to Caltrans, a scenic corridor is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. Caltrans outlines the following minimum requirements for scenic corridor protection: regulation of land use and density of development; detailed land and site planning; control of outdoor advertising; careful attention to, and control of, earthmoving and landscaping; and careful attention to design and appearance of structures and equipment.

Some of the proposed projects in the RTP include countywide improvements to highways, arterials and transit systems. These improvements could potentially fall within a designated eligible state scenic highway. There are no designated scenic highways in Fresno County. The highways eligible for designation as a state scenic highway are referenced in Figure 3-1.

Mitigation Measures

The specific impacts on altered appearance of scenic resources will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation

agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Avoid construction of transportation facilities and new development in state and locally designated scenic highways and vista points.

- ✓ If transportation facilities and new development are constructed in state and locally designated scenic highways and/or vista points, design, construction, and/or operation of the transportation facility or new development will be consistent with applicable guidelines and regulations for the preservation of scenic resources along the designated scenic highway.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.2.3 – Development of previously undeveloped sites with visual qualities

Construction and implementation of improvement projects or new development could create significant contrasts with the overall visual character of the existing landscape setting. This could be a potentially significant impact.

There is an extraordinary range of urban characteristics and urban-natural environmental contrasts throughout the proposed RTP Project area. Given the size and diversity of the region, there are no standards that apply to all areas. Therefore, local planning guidelines regarding visual quality of urban areas must be researched and adhered to. A component of the urban environment is the transportation infrastructure and areas designated for new development by local general plans. Many roads have been built throughout the region, which connect urban concentrations with natural areas found in the rural area. Transportation systems have a major effect on the visual environment. As most vehicular movement occurs along transportation corridors, their placement largely determines what parts of the

region will be seen. Arterials and freeways comprise a major component of the existing visual environment in the region. In addition, new land use development consistent with the SCS could impact visual resources by obstructing existing view sheds.

Development of previously undeveloped sites could result in impacts to visual resources. Construction of a new transportation system or new land use development could result in land use changes that could also result in impacts to visual resources. For example, the extension of a highway through an urban area could require some acquisition of residential, commercial or industrial property, thereby changing the land use, and consequently, visual quality of the given area. "Modification projects" that involve the widening or upgrading of existing roadways can be designed to complement the existing system, and therefore, would involve lesser changes to the visual character of the existing landscape setting. Therefore, impacts from "modification projects" would be less-than-significant.

Mitigation Measures

The specific impacts on development of previously undeveloped sites with visual qualities will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Where appropriate, encourage the development of design guidelines for each type of transportation facility and land use that make elements of proposed projects visually compatible with surrounding areas. Visual guidelines will, at a minimum, include setback buffers, landscaping, color, texture, signage, and lighting criteria. The following methods will be employed whenever possible:
  - Transportation systems and new development will be designed in a manner where the surrounding landscape dominates.
  - Transportation systems and new development will be developed to be compatible with the surrounding environment (i.e., colors and materials of construction material).
  - If exotic vegetation is used, it will be used as screening and landscaping that blends in and complements the natural landscape.
  - Trees bordering highways will remain or be replaced so that clear cutting is not evident.
  - Grading will blend with the adjacent landforms and topography.
- ✓ Project implementation agencies should design transportation and new development projects to minimize contrasts in scale and massing between the project and surrounding natural forms and

development. Project implementation agencies should design projects to minimize their intrusion into important viewsheds and use contour grading to better match surrounding terrain. To the maximum extent feasible, landscaping along highway corridors should be designed to add significant natural elements and visual interest to soften the hard-edged, linear travel experience that would otherwise occur.

- ✓ Project implementation agencies should use natural landscaping to minimize contrasts between the Project (RTP and SCS) and surrounding areas. Wherever possible, interchanges and transit lines should be designed at the grade of the surrounding land to limit view blockage. Edges of major cut-and-fill slopes should be contoured to provide a more natural looking finished profile. Project implementation agencies should replace and renew landscaping to the greatest extent possible along corridors with road widenings, interchange projects, and related improvements. New corridor landscaping should be designed to respect existing natural and man-made features and to complement the dominant landscaping of surrounding areas.

- ✓ Project implementation agencies should construct sound walls of materials whose color and texture complements the surrounding landscape and development and to the maximum extent feasible, use color, texture, and alternating facades to "break up" large facades and provide visual interest. Where there is room, project sponsors should landscape the sound walls with plants that screen the sound wall, preferably with either native vegetation or landscaping that complements the dominant landscaping of surrounding areas.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.2.4 – New sources of light and glare

Construction and implementation of individual transportation and land use development projects could potentially create a new source of substantial light or glare that would affect day or nighttime views of

scenic resources as seen from the transportation facility or from the surrounding area. This could be a potentially significant impact.

There is an extraordinary range of urban characteristics and urban-natural environmental contrasts throughout the proposed Project area. Given the size and diversity of the region, there are no standards that apply to all areas. Therefore, local planning guidelines regarding visual quality of urban areas must be researched and adhered to. Urban areas, due to numerous buildings in a concentrated space, experience significant light from all light source categories. Fresno County includes large, medium, and small sized cities, and vast rural areas that are either located in the Valley region or are mountainous. The rural areas are primarily used for agricultural purposes. In smaller communities and in rural areas of the County, where urban development is less dense, light and glare impacts are not as frequent.

Mitigation Measures

The specific impacts on new sources of light and glare will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Where appropriate, encourage the development of design guidelines for each type of transportation facility and land use development that make light elements of proposed facilities visually compatible with surrounding areas. The following methods will be employed whenever possible:

  - Transportation systems and new development areas will be designed in a manner where the surrounding landscape dominates.
  - Transportation systems and new development areas will be developed to be compatible with the surrounding environment.
  - Lighting devices will be employed such as downward facing light, light shields, and amber lumens.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable

that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.3 AGRICULTURAL RESOURCES

This section provides information about the impacts of RTP and SCS improvement projects and future planned land use development on agricultural resources. The methodology and the criteria used to evaluate the significance of agricultural-related impacts as well as mitigation measures are discussed.

Regulatory Setting

Federal Agencies and Regulations

- ✓ **The Environmental Protection Agency (EPA) implements NEPA -** NEPA provides information on expected environmental effects of federally funded projects. Impacts on land uses and conflicts with state, regional, or local plans and policies are among the considerations included in the regulations. The regulations also require that projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions and restore and enhance environmental quality as much as possible.

- ✓ **U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) -** The NRCS maps soils and farmland uses to provide comprehensive information necessary for understanding, managing, conserving and sustaining the nation's limited soil resources. The NRCS manages the Farmland Protection Program, which provides funds to help purchase development rights to keep productive farmland in agricultural uses.

- ✓ **United States Bureau of Land Management (BLM) -** The California Desert Conservation Area Plan is used to manage BLM controlled areas. The BLM also implements biological resource management policies through its designation of Areas of Critical Environmental Concern.

- ✓ **United States Fish and Wildlife Service (USFWS) -** The USFWS administers the Federal Endangered Species Act (FESA) and designates critical habitat for endangered species. The USFWS also manages the National Wildlife Refuges

- ✓ **United States Army Corps of Engineers (USACE) -** Among its responsibilities, the USACE administers Section 404 of the Clean Water Act (CWA), which governs specified activities in waters of the United States, including wetlands. In this role, the USACE requires that a permit be obtained if a project would place structures, including dredged or filled materials, within navigable waters or wetlands, or result in alteration of such areas.

- ✓ **Federal Farm and Ranchland Protection Program (FRPP) -** The FRPP, also referred to as the Farmland Protection Program (FPP), is a voluntary easement purchase program that helps farmers and ranchers

keep their land in agriculture. Pursuant to the Farmland Protection Policy Act (FPPA) of 1981 Sections 1539-1549, the Secretary of Agriculture is directed to establish and carry out a program to "minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to the extent practicable, will be compatible with state, unit of local government, and private programs and policies to protect farmland." (7 USC 4201-4209 & 7 USC 658).

The program provides matching funds to state, tribal, or local governments and nongovernmental organizations with existing farmland protection programs to purchase conservation easements or other interests in land. FPP is reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill). The NRCS manages the program. Technical Committee, awards funds to qualified entities to conduct their farmland protection programs. Although a minimum of 30 years is required for conservation easements, priority is given to applications with perpetual easements.

- ✓ **Farmland Mapping and Monitoring Program (FMMP) -** In 1982, the State of California created the Farmland Mapping and Monitoring Program (FMMP) within the Department of Conservation to carry on the mapping activity from the NRCS on a continuing basis. The FMMP is a non-regulatory program that provides consistent and impartial analysis of agricultural land use and land use changes throughout California for use by decision-makers in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. The FMMP produces Important Farmland Maps, which are a hybrid of resource quality (soils) and land use information. Information from the FMMP was used to identify agricultural resources within Fresno County. The FMMP is the primary system by which the extent, distribution, and quality of farmland is evaluated and monitored. Maps of Important Farmland are prepared approximately every two years by the FMMP for most of the state's agricultural regions, based on soil survey information and land inventory and monitoring criteria developed by the NRCS.

  The classification system employed by FMMP consists of eight mapping categories: five categories of agricultural lands and three categories of nonagricultural lands. The characteristics of these eight categories are summarized below.

  - Prime Farmland. Prime farmlands are lands with the combination of physical and chemical features best able to sustain long-term production of agricultural crops. The land must be supported by a developed water supply that is dependable and of adequate quality during the growing season. It must also have been used for the production of irrigated crops at some time during the four years before the mapping data were collected.
  - Farmland of Statewide Importance. Farmland of statewide importance are lands with agricultural land use characteristics, irrigation water supplies, and physical characteristics similar to prime

farmland but with minor shortcomings, such as steeper slopes or less ability to hold and store moisture.

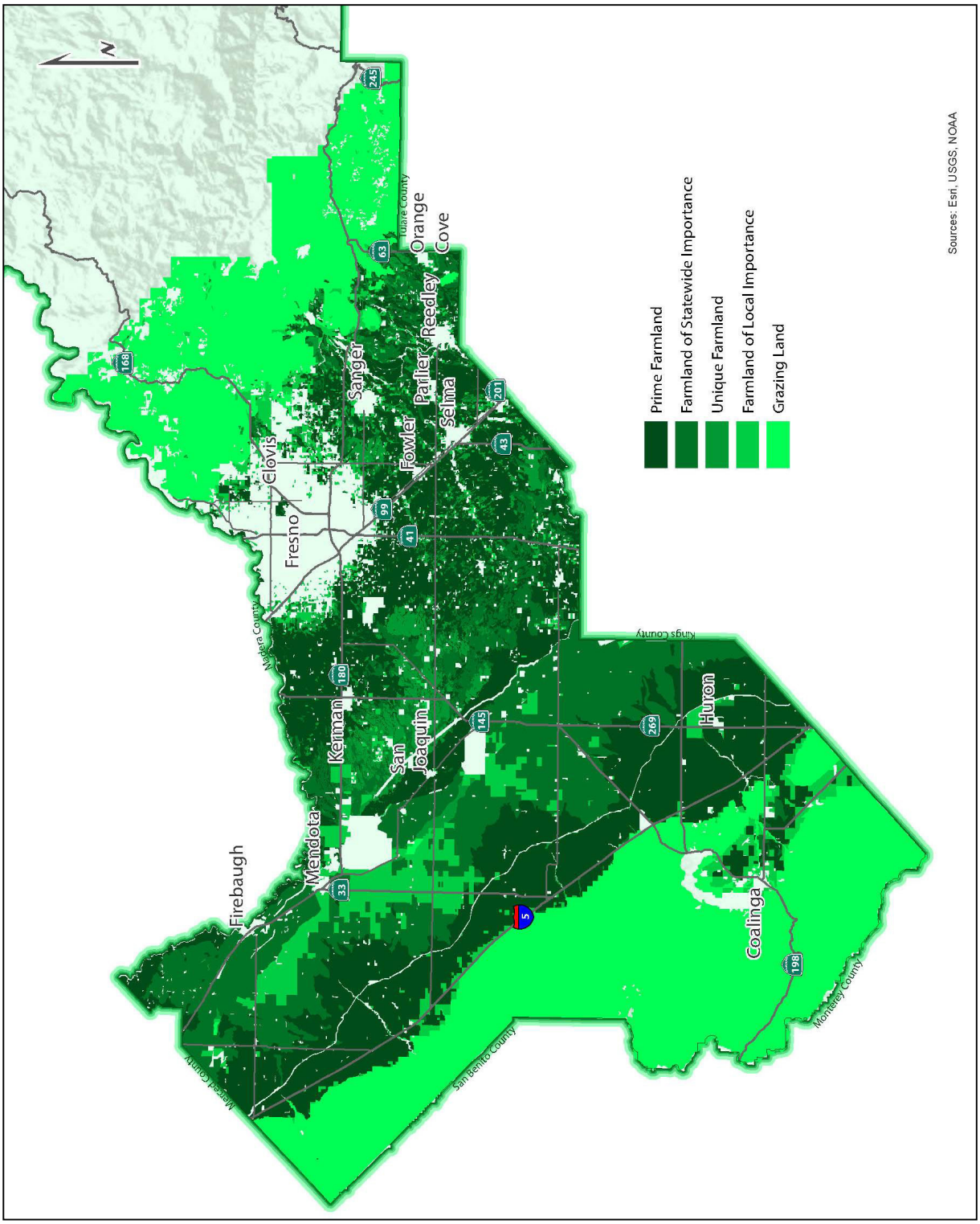
- Unique Farmland. Unique farmlands are lands with lesser quality soils used for the production of California's leading agricultural cash crops. These lands are usually irrigated but may include non-irrigated orchards or vineyards as found in some of the state's climatic zones.
- Farmland of Local Importance. Farmlands of local importance are important to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.
- Grazing Land. Grazing lands are lands on which the existing vegetation is suited to the grazing of livestock.
- Urban and Built-Up Land. This category describes land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a ten-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- Other Land. This category encompasses land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; vacant and nonagricultural land surrounded on all sides by urban development; confined livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres.
- Water. This category describes perennial bodies of water with an extent of at least 40 acres.

Figure 3-2 depicts areas devoted to prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance (California Department of Conservation, 2010). Table 3-1 provides the FMMP acres listing of existing important farmland by type and the amount of grazing land within Fresno County.

TABLE 3-1
Important Farmland by Type in Fresno County

Important Farmland Type	Acres
Prime	685,362
Statewide Importance	415,655
Unique	92,642
Local Importance	164,038
Grazing	825,716
TOTAL	2,183,413

FIGURE 3-2
Agricultural Land



Federal Environmental Quality Incentives Program (EQIP)

EQIP is a voluntary program that provides assistance to farmers and ranchers who face threats to soil, water, air, and related natural resources on their land.

✓ **Federal Forest Legacy Program (FLP)**

The FLP (16 U.S.C. § 2103c) was part of the 1990 Federal Farm Bill. The FLP's purpose is to protect environmentally-important forestland under private ownership from conversion to non-forest uses, such as residential or commercial development. The FLP promotes the use of voluntary conservation easements on these properties. Participating landowners may sell or transfer particular rights, while retaining ownership of the property and the right to use it in any way consistent with the terms of the easement.

The easement holder is responsible for managing the rights it acquires and for monitoring compliance by the landowner. Forest management activities, such as timber harvesting, hunting, fishing, and hiking are encouraged, provided they are consistent with the program's purpose.

State Agencies and Regulations

✓ **California Department of Conservation**
In 1982, the State of California created the Farmland Mapping and Monitoring Program within the California Department of Conservation to carry on the mapping activity from the NRCS on a Conservation Act of 1965, also known as the Williamson Act, for the conservation of farmland and other resource-oriented laws.

✓ **California Department of Transportation (Caltrans) -** The Caltrans jurisdiction includes right-of-ways of state and interstate routes within California. Any work within the right-of-way of a federal or state transportation corridor is subject to Caltrans regulations governing allowable actions and modifications to the right-of-way. Caltrans includes the Division of Aeronautics, which is responsible for airport permitting and establishing a county Airport Land Use Commission (ALUC) for each county with one or more public airports. ALUCs are responsible for the preparation of land use plans for areas near aviation facilities.

✓ **California Department of Forestry and Fire Protection (CDF) -** The CDF reviews and approves plans for timber harvesting on private lands. In addition, through its responsibility for fighting wildland fires, the CDF plays a role in planning development in forested areas.

- ✓ **California Department of Parks and Recreation (CDPR) -** The CDPR manages and provides sites for a variety of recreational and outdoor activities. The CDPR is a trustee agency that owns and operates all state parks and participates in land use planning that affects state parkland.

- ✓ **California Department of Fish and Game (CDFG) -** The land use mandate of the CDFG is to protect rare, threatened, and endangered species by managing habitat in legally designated ecological reserves or wildlife areas.

Public Agencies

Public agencies are entrusted with compliance with CEQA and its provisions are enforced, as necessary, through litigation and the threat thereof. CEQA defines a significant effect on the environment as a substantial, or potentially substantial, adverse change in the physical conditions within the area affected by the project. Agricultural resources is a required impact assessment category under CEQA.

- ✓ **California Land Conservation Act of 1965 (Williamson Act) -** The Williamson Act is the only established program that directly involves state government in an administrative or fiscal capacity. The Act creates an arrangement (contract) whereby private landowners voluntarily restrict their land to agricultural and compatible open space uses under a rolling ten-year contract. In return parcels are assessed for property tax purpose at a rate consistent with their actual use, rather than potential market value.

- ✓ **Farmland Security Zone -** August of 1998, the Legislature enhanced the Williamson Act with the farmland security zone (FSZ) provisions. The FSZ provisions offer landowners greater property tax reduction in return for a minimum rolling contract term of 20 years.

- ✓ **California Farmland Conservancy Program -** The CFCP seeks to encourage the long-term, private stewardship of agricultural lands through the voluntary use of agricultural conservation easements. The CFCP provides grant funding for projects which use and support agricultural conservation easements for protection of agricultural lands. As of April 2005, the CFCP has funded more than 50 easement projects in California, including nearly 25,000 acres in more than a dozen counties. CFCP has also funded a number of planning grants, including some with regional or statewide value. Within the eight-county study area, CFCP has awarded grants for planning and policy projects within the counties of Kern and Ventura.

Local Agencies and Regulations

- ✓ **Land Conservation Trust -** Land conservation trust is another type of organization devoted to protecting open space, agricultural lands, wildlife habitats, and natural resource lands. A land trust is

a nonprofit organization that, as all or part of its mission, actively works to conserve land by undertaking or assisting in land or conservation easement acquisition, or by its stewardship of such land or easements. There are approximately 80 established trusts in California. Local and regional land trusts, organized as charitable organizations under federal tax laws, are directly involved in conserving land for its natural, recreational, scenic, historical and productive values.

- ✓ **Local Agency Formation Commissions -** The local agency formation commission (LAFCO) is the agency that has the responsibility to create orderly local government boundaries, with the goal of encouraging "planned, well-ordered, efficient urban development patterns," the preservation of open-space lands, and the discouragement of urban sprawl. While LAFCO has no direct land use authority, its actions determine which local government will be responsible for planning new areas. LAFCO addresses a wide range of boundary actions, including creation of spheres of influence for cities, adjustments to boundaries of special districts, annexations, incorporations, detachments of areas from cities, and dissolution of cities.

- ✓ **General Plans -** The most comprehensive land use planning in the Fresno region is provided by city and county general plans, which local governments are required by state law to prepare as a guide for future development. The general plan contains goals and policies concerning topics that are mandated by state law or which the jurisdiction has chosen to include. Required topics are land use, circulation, housing, conservation, open space, noise, and safety. Other topics that local governments frequently choose to address are public facilities, parks and recreation, community design, and growth management, among others. The cities' and the County's general plans must be consistent with each other. The County's general plan must cover areas not included by city general plans (i.e., unincorporated areas). A few representative agricultural policies from general plans for the County of Fresno (rural area and rural unincorporated communities), City of Fresno (large urban area) and the City of Reedley (small urban area) are provided below to highlight the commitment to agricultural, Williamson Act contract lands, and forest/timber lands. This sampling of policies highlight's Fresno COG's support for the preservation of these lands, while at the same time respecting and understanding the local jurisdictions' land use authority and process. These local agricultural policies also provide the greatest mitigation potential that can be applied given each local agency's land use authority.

  - Fresno County
    - Policy LU-A.1 - The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.

- Policy LU-A.2 - The County shall allow by right in areas designated Agriculture activities related to the production of food and fiber and support uses incidental and secondary to the on-site agricultural operation.
- Policy LU-A.3 - The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally-related activities, including value-added processing facilities, and certain non-agricultural uses
- Policy LU-B.1 - The County shall maintain areas designated Westside Rangeland for grazing and other appropriate open space uses and shall direct development to areas specifically planned for more intensive uses.
- Policy LU-C.1 - The County shall regulate land use along the Kings River in accordance with policies of the Kings River Regional Plan.
- Policy LU-D.1 - The County may designate in its Zoning Ordinance interchanges along Interstate 5 as either major or minor commercial centers. Existing designated major commercial centers at the Panoche Road, Manning Avenue, Dorris Avenue, and Jayne Avenue interchanges, and existing designated minor commercial centers at the Nees Avenue, Derrick Avenue, and Lassen Avenue interchanges will continue to be designated as such.
- Policy LU-E.15 - The County shall not designate additional land for Rural Residential or Foothill Rural Residential development, except for unique circumstances to be determined by the Board of Supervisors.

➢ Reedley
- LU 2.5A - Establish urban growth management policies which seek to minimize the premature conversion of productive and potentially productive agricultural land to urban uses.
- LU 2.5B - Minimize urban sprawl and leapfrog development.

➢ City of Fresno
- G-5-a. Policy - Establish a cooperative research and planning program with the County of Fresno, City of Clovis, and other public agencies to conserve agricultural land resources.
- G-5-b. Policy – Plan for the location and intensity of urban development in a manner that efficiently utilizes land area located within the planned urban boundary, including the North and Southeast Growth Areas, while promoting compatibility with agricultural uses located outside of the planned urban area.
- G-5-c. Policy – The City of Fresno shall encourage project development proposals that result in the infilling of the existing urban area.
- G-5-d. Policy – New urban development should be compact within the constraints of service capability to conserve land resources and forestall conversion of agricultural land by preventing urban sprawl.
- G-5-e. Policy – Amend the urban referral and “holding zone” provisions of the 1983 City of Fresno/City of Clovis/Fresno County Joint Resolution on Metropolitan Planning, and negotiate a memorandum of understanding with these adjoining jurisdictions to prevent further development or rural residential development as well as all forms of urban development not

consistent with the 2025 General Plan strategies for compact contiguous development within the city general plan boundaries.

- City of Coalinga
  - Policy LU7-1 New Development on the fringes of the City shall recognize the right of agriculture to exist and continue to operate in proximity to the development. Residential deed restrictions may be required which inform future residents of the right of agriculture to continue within the limits of the law without interference or protest from nearby property owners. Associated Implementation Measures include.
  - Policy LU7-2 - City recognizes the loss of farmland as a result of urbanization of the City of Coalinga as a significant and unavoidable impact and shall require development projects to mitigate for the loss of farmland.
- City of Kerman
  - D.1 Policy - Preserve and protect agricultural lands as a means for providing open space and for the managed production of resources.
  - D.2 Policy - Develop buffers and transition areas between urban uses and agricultural land to reduce incompatibility issues that are associated with cultivation, pest control and harvesting of crops.
  - D.3 Policy - Explore with owners of agricultural parcels that are not within the 2027 growth boundary of Kerman's Land Use Element the possibility of entering the agricultural preserve program.
- City of Selma
  - Policy 1.1 – The following agricultural land use category identifies land throughout the Planning Area that is intended primarily for agricultural uses.

    Agriculture (AG) 0 to 0.05 Units Per Gross Acre.

    This designation provides for agriculture and agriculturally–related uses with a 20-acre minimum lot size, and is generally applied to lands outside of urbanized areas or areas planned for future urbanization. Although lands designated Agriculture are not always under the direct control of the City of Selma, the agricultural designation of these lands is intended to express the City's preference that these areas remain in agricultural use and production.

  - Policy 1.2 – In order to preserve them as a natural resource and provide a buffer between existing and future development in the City and neighboring cities, prime agricultural lands should not be designated for urban development to the extent feasible.

- City of Clovis
  - Policy 4.1 – Designate Multi-Use Open Space Areas on the Land Use Plan that preserve and enhance open space and water features and provide for a variety of open space uses designed

to meet local needs, including: Stormwater runoff detention water basins with joint-use park facilities; managed wildlife habitat; agriculture; regional open space with recreational opportunities, community edges and natural amenities; and a beltway trail system.

- Policy 4.2 – The Beltway System should be viewed as a comprehensive system when individual segments are being implemented. Proposed linkages should be maintained within the Project Area and ultimately to the surrounding region.
- Policy 4.3 – Preserve visual resources along existing expressways, the designated entries to the City and the proposed inner and outer beltway system, and other roadways within the Project Area.
- Policy 5.1 – Limit encroachment of urban uses into agricultural areas, unless consistent with General Plan policies.
- Policy 5.2 – Work with Fresno County to develop policy regarding protection of Agriculture lands needed for continuation of commercial agricultural enterprises, small scale farming operations, and preservation of open space.

✓ **Specific and Master Plans -** A city or the County may also provide land use planning by developing community or specific plans for smaller, more specific areas within their jurisdiction. These more localized plans provide for focused guidance for developing a specific area, with development standards tailored to the area, as well as systematic implementation of the general plan.

✓ **Zoning -** The city or county zoning code is the set of detailed requirements that implement the general plan policies at the level of the individual parcel. The zoning code presents standards for different uses and identifies which uses are allowed in the various zoning districts of the jurisdiction. Since 1971, state law has required a city or county zoning code to be consistent with a jurisdiction's general plan.

Environmental Setting

Fresno County is home to over two million acres of the world's most productive farmland, with agricultural operations covering nearly half of the county's entire land base of 3.84 million acres. Farmers here raise more than 350 different crops, contributing directly more than $6.6 billion to the California economy and supporting 12 percent of all jobs in the Fresno area. Many of the county's crops are not grown commercially anywhere else in the nation. Every $1 generated on the farm produces another $3.50 in the local and regional economy. Near year-round sun and rich, productive soil has kept Fresno the nation's number one agricultural county since 1949.

Agricultural Land

Fresno County is located in the center of California's San Joaquin Valley, the richest agricultural area in the world. The County is home to over 1 million acres of the world's most productive farmland, with agricultural operations covering nearly half of the County's entire land base of 3.84 million acres. Over six thousand (6,000) farmers grow more than 350 different crops, contributing more than $5.3 billion a year to the California economy and supporting 20 percent of all jobs in the Fresno area. Many of the County's crops are not grown commercially anywhere else in the nation. Based on the 2007 USDA Census of Agriculture, Fresno County leads the state in the following categories:

- ✓ Highest number of farms - 6,081 with 1.6 million farm acres
- ✓ Harvested cropland - 978,948 acres (Fresno County is 2nd in the nation for total cropland, with 1.25 million acres)
- ✓ Farms with sales of $100,000 or more - 2,041 farms
- ✓ Irrigated land - 984,455 million acres

Despite the low precipitation in the area, and the County's dependence upon the availability of irrigation water, agriculture remains one of the primary industries in the County, with much of the level and moderately sloping land used for the production of agricultural crops. The foothills and mountain areas are used for livestock grazing. In 2012, Fresno County's 10 leading crops included: grapes, almonds, poultry, milk, tomatoes, cattle and calves, cotton, pistachios, peaches, and plums. These top ten crops had a value of $4.8 billion.

Williamson Act Lands

Fresno County currently contains over 1.5 million acres of prime and nonprime agricultural land under Williamson Act preserve status. Prime agricultural land is defined as those lands containing the best combination of physical and chemical characteristics for the production of crops. Table 3-2 illustrates the type and amount of agricultural land enrolled in Williamson Act Land contracts within Fresno County.

The Fresno County Planning Department has Williamson Act files for each contract in force. The files are incorporated by reference.

TABLE 3-2
Lands Enrolled in Williamson Act Preserve, 2011

Description		Acres
Land Conservation Act	Prime	982,032
	Non-prime	483,245
Farmland Security Zone	Urban Prime	-
	Non-urban Prime	25,799
	Non-urban Non-prime	3,482
Total		1,494,558

Source: Division of Land Resource Protection, Williamson Act Status Report 2012, Appendix A

Forest/Timber Lands

Timber lands are defined as land available for timber production and capable of growing at least 20 cubic feet of industrial quality wood per acre per year. Almost all of the timberlands in Fresno County lie within the southern part of the Sierra National Forest and the northern portion of the Sequoia National Forest. The National Forest system falls within the jurisdiction of the U.S. Forest Service (USFS) under the U.S. Department of Agriculture. The boundaries of the Sierra National Forest include portions of Fresno, Inyo, Madera, Mariposa, and Mono counties. The boundaries of the Sequoia National Forest include portions of Fresno, Kings, Tulare, and Inyo counties. Approximately 17,000 acres in the County have been zoned as Timberland Preserve Zone. There is no timber production in the incorporated communities in the East Valley or West Valley. Annual yields within the Sierra National Forest have averaged approximately 40 million board feet in recent years.

Private timberlands in California are governed by the Forest Taxation Reform Act of 1976. The Act created the Timberland Production Zone (TPZ) to preserve forest lands from encroachment by other incompatible land uses. The Act identifies five compatible uses: management for watershed, management for fish and wildlife, or hunting and fishing; uses related to the growing, harvesting, processing of forest products; construction, alteration, or maintenance of utility facilities; and grazing.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Criteria for Significance

- ✓ Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

- ✓ Conflict with existing zoning for agriculture use, or a Williamson Act contract.
- ✓ Involve other changes in the existing environment, which due to their location or nature could result in the conversion of farmland, to non-agricultural use.
- ✓ Conflict with existing zoning or land use designation for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220(G)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104(G)).
- ✓ Result in the loss of "Forest Land" as defined in the California Forest Legacy Act of 2007 (Pub. Resources Code, § 12220(G)) or conversion of Forest Land into non-forest use.

Methodology

Impacts are assessed in terms of both land use and transportation impacts. By 2040, implementation of the proposed RTP and SCS will result in a land use pattern and transportation network that is different from existing conditions. Unless otherwise stated, "existing conditions" in the proposed RTP and SCS refers to conditions in the baseline of 2008. The proposed RTP and SCS uses 2008 because it is the most recent year for which comprehensive land use, demographic, traffic count, and VMT data are available for the Fresno COG region. Chapter 2 of this Draft EIR – Introduction includes a more detailed discussion of the baseline for the proposed RTP and SCS. For descriptions of the agriculture environment, 2008 or the most recent data between 2008 and 2012 was used to reflect existing conditions. Data sources used to analyze the agriculture environment included the California Department of Conservation's Farmland Monitoring and Mapping Program (FMMP) data to analyze impacts to agricultural resources. These data classify agricultural resources into a number of categories. For purposes of this analysis Prime Farmland, Unique Farmland, and Farmland of Statewide Importance were considered.

In addition, the California Department of Conservation's Williamson Act data were used to analyze agriculture impacts. These data include any lands that are currently enrolled under a California Land Conservation Act contract in 2009. This analysis does not include lands that are in a nonrenewal status. In addition, general plan data from each of the jurisdictions were used to analyze lands designated for agriculture and forest uses.

Impact 3.3.1 – Conversion of important farmland or forest/timber lands

Strategies aimed at addressing transportation needs and future growth patterns were considered during development of the proposed RTP and SCS. The RTP promotes a preferred land use scenario and alternative transportation system to the automobile through enhanced funding for transit and other alternative modes of transportation such as bicycle facilities, trails, airport improvements, and others. Implementation of strategies proposed in the RTP and SCS could result in positive changes to land uses and reduced impacts on important farmland or Forest/Timber Lands. Reducing the footprint of new

development as reflected in the 2014 RTP and SCS protects farmland, Williamson Act contract land, forest/timber land, and other open space lands in the Fresno region.

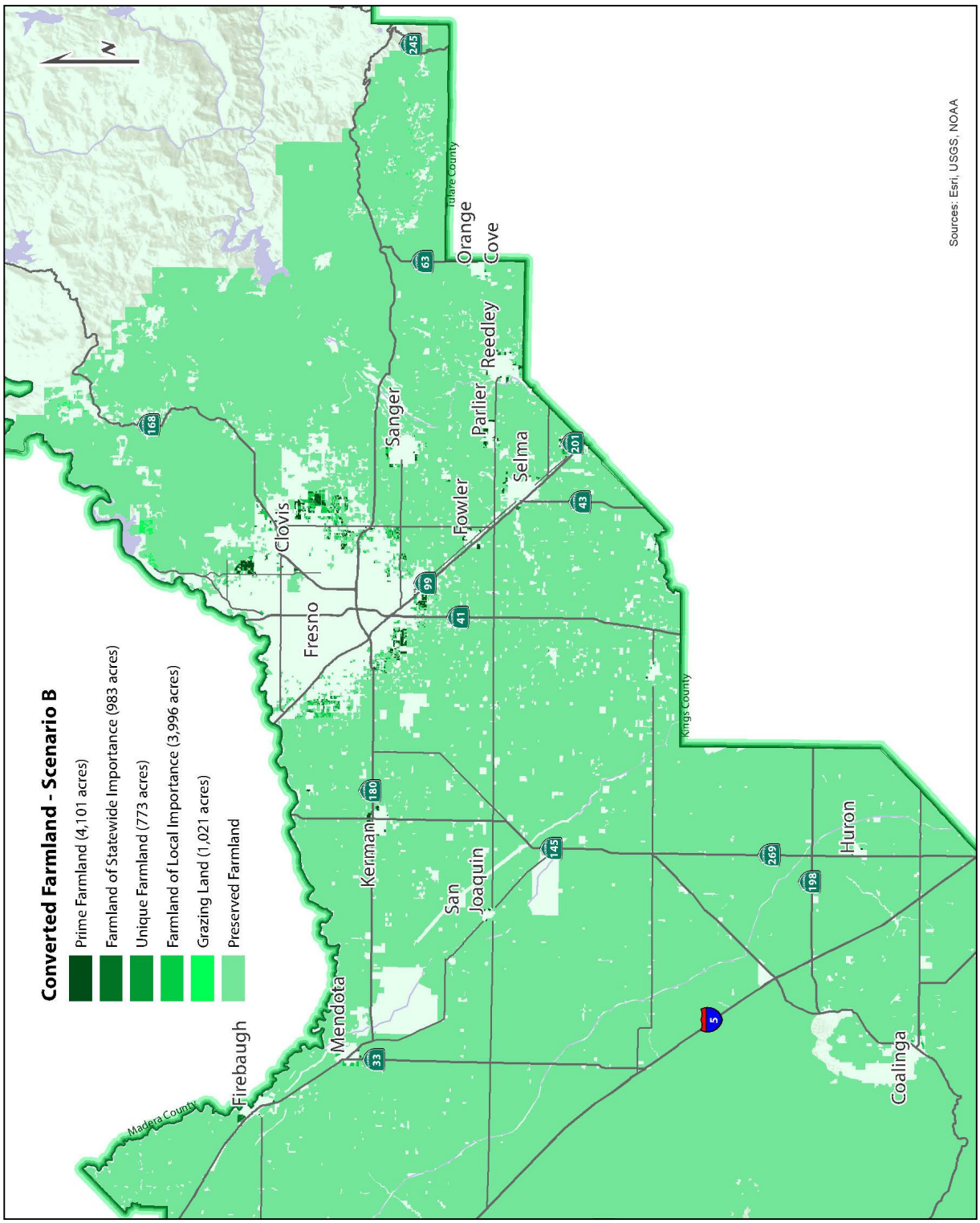
Figure 3-3 depicts the encroachment of important farmland region-wide resulting from the preferred RTP and SCS or the Preferred Project Alternative by 2035. As shown, 4,101 acres of prime farmland will be converted by transportation and new land use development projects. In addition, 983 acres of agricultural lands of statewide importance will be impacted or converted by new development and transportation improvements. Another 773 acres of unique farmland will be converted by the RTP and SCS. Finally 3,996 acres of agricultural lands of local importance will be converted. Approximately 1,021 acres of grazing land will also be affected by the Project. These figures include total land consumption both outside of, and within, the existing spheres of influence of the local agencies.

While CEQA requires all agricultural land consumption to be analyzed, SB 375 only requires Fresno COG to assess the amount of important farmland consumed by or converted to urban uses outside of the recorded-year 2008 spheres of influence of each of the local jurisdictions or agencies with the County (for total farmland consumed, including lands within existing spheres of influence, see Table 3-4). Referencing Table 3-3, future land use proposed in the SCS will encroach on 91.8 acres of Important Farmland as defined by SB 375 and categorized as follows:

Table 3-3
SCS Impact to Important Farmland by Type in Fresno County (per SB 375)

Important Farmland Type	Acres
Prime	75.7
Statewide Importance	16.1
Unique	0
TOTAL	91.8

FIGURE 3-3
Converted Farmland



In addition, the RTP and SCS would convert an estimated 1,021 acres of grazing land and 51.6 acres of farmland of local importance bringing the total farmland conversion to 1,164 acres, or 7.9% of the total land consumed for new growth between 2008 and 2035. As can be seen, important farmland affected by the SCS is fairly slight when acreage converted or consumed by new growth and development within the spheres of influence is removed from the total consumed or converted to other land uses throughout the region.

Referencing Table 3-4, future land use proposed in the SCS including that land located within the spheres of influence (for amounts identified per SB 375, which does not include lands within existing spheres of influence, please reference Table 3-3) will encroach on 4,695 acres of Important Farmland as defined by CEQA and categorized as follows:

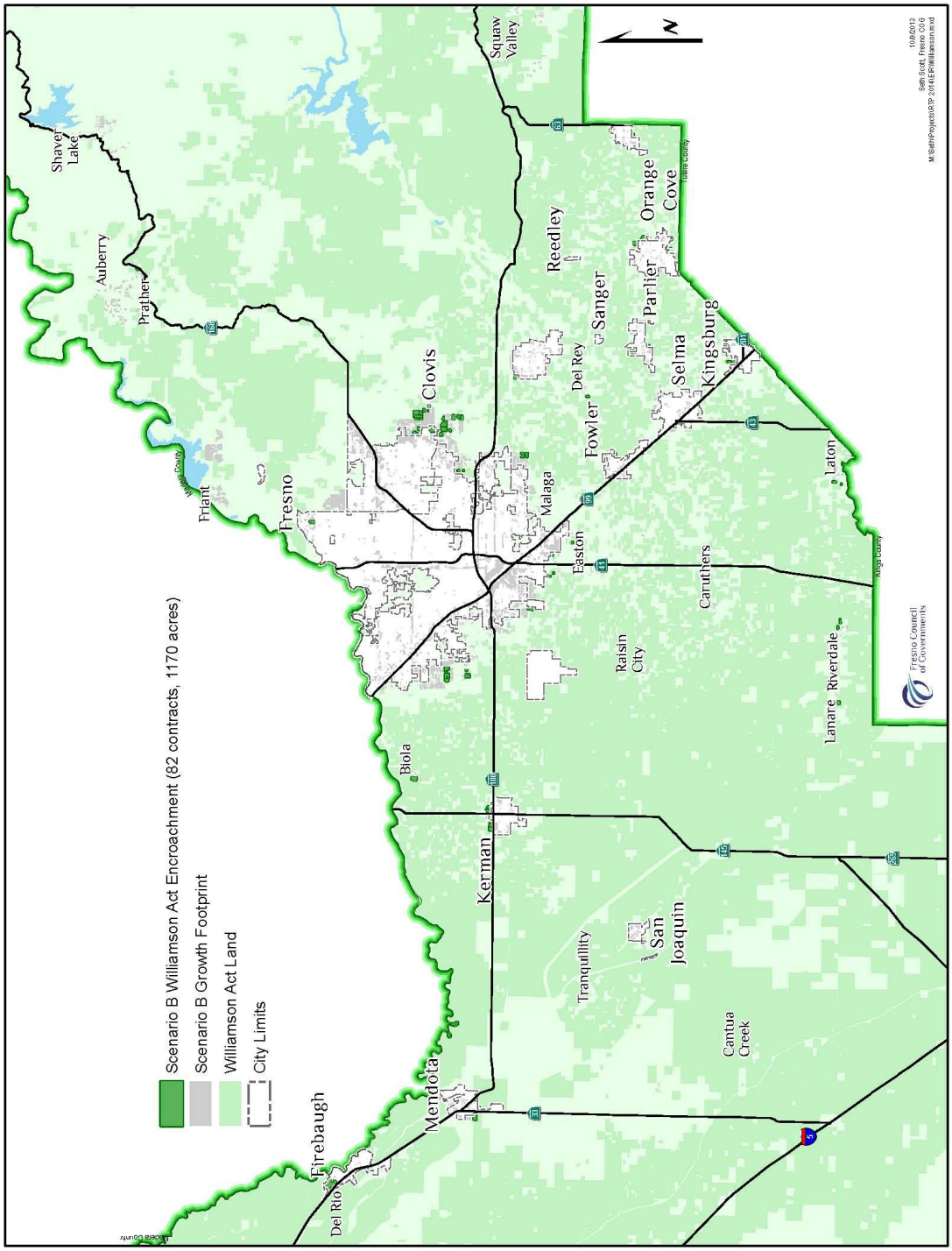
Table 3-4
Project Impact to Important Farmland by Type in Fresno County (per CEQA)

Important Farmland Type	Acres
Prime	4,101
Statewide Importance	983
Unique	773
TOTAL	**5,857**

Figure 3-4 depicts the encroachment of Williamson Act lands resulting from the Project (2014 RTP and SCS). According to the map, 1,170 acres of lands currently enrolled under the Williamson Act will be impacted by the proposed Project.

Implementation of transportation improvements included in the RTP could influence land use patterns throughout the region as shown in the SCS and result in the conversion of important agricultural lands (reference Table 3-4 and Figure 3-4). Land use and transportation policies are emphasized in the RTP in order to address automobile traffic and air quality concerns. Growth patterns that promote alternatives to the automobile by creating mixed-use developments, which would include residences, shops, parks, and civic institutions, linked to pedestrian-and-bicycle friendly public transportation centers, are also discussed in the RTP and in the SCS. Implementation of enhanced alternative modes as provided by the RTP could result in more balanced land use conditions throughout the region, as the mixed-use developments would result in a concentration of jobs and residences in close proximity to one another. Reducing the footprint of new development as reflected in the 2014 RTP and SCS protects farmland, Williamson Act contract land, forest/timber land, and other open space lands in the Fresno region.

FIGURE 3-4
Project Encroachment of Williamson Acts Land



Approximately 17,000 acres in the County have been zoned as Timberland Preserve Zone. It is not expected that the RTP and SCS will significantly impact lands designated for forest land or timber production since the growth allocations provided by the SCS encourage focused growth and development consistent with the general, community, and specific plans of the cities and the County of Fresno. Forest and timber lands are located primarily in the easternmost portion of Fresno County. Growth allocations and transportation improvement projects included in the 2014 RTP and SCS are primarily located in the Valley areas of the Fresno region. While there are mountain communities within the forest and timber areas, the County's general, community and specific plans identify the extent of lands that are currently planned for future growth and development. Growth and development outside of those planned growth areas would not be consistent with the goals and policies of the Fresno County General Plan.

Mitigation Measures

The specific impacts on conversion of important farmlands or forest/timber lands will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ As part of the RTP and SCS formulation process; and at the request of a collection of community-based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on possible policies aimed at preservation of agricultural, natural and working lands; sustainable planning and infrastructure programs; and needs assessment activities, for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:

    - Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects.
    - Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities.

- ✓ Implementing agencies should encourage in-fill development, in place of development in rural and environmentally sensitive areas. Agencies should seek funding to prepare specific plans and related

environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries.

- ✓ Implementing agencies should consider agricultural resource lands when considering project designs. Prior to the design approval of RTP and SCS projects, the implementing agency should assess the project area for agricultural resources and constraints. For federally funded projects, implementing and local agencies are required to follow the rules and regulations of Farmland Protection Policy Act including determining the impact by completing the Farmland Conversion Impact Rating form (AD-1006). For non-federally funded projects, implementing and local agencies should assess projects for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance), and if present, perform a Land Assessment and Site Evaluation (LESA).

- ✓ Implementing agencies should consider agricultural resources in all projects, and seek to avoid or minimize the encroachment and/or impact on these areas. Agencies should consider measures such as, but not limited to, relocation or redesign of site features, reduction of the project footprint, or compensation and/or preservation activities to lessen the overall impact on resource lands. Prior to final approval of each individual transportation improvement project, the implementing agency should consider inclusion into a conservation easement program, or arrange for the enrollment of agricultural lands into the Williamson Act program.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation resulting mitigation strategies intended to avoid or reduce the significant impacts on identified.

Impact 3.3.2 – Conflict with existing zoning for agriculture use, Williamson Act Contract, or forest/timber Lands

Transportation improvement projects and future land use development projects have the potential to impact agricultural uses zoned for agricultural uses noted in Tables 3-2 and 3-3, Williamson Act contract

lands noted in Table 3-4 and in Figure 3-4, and forest/timberlands. The amount of agricultural and forest/timber zoned lands impacted by the 2014 RTP and SCS is not available but would be consistent with the lands quantified and reflected in Tables 3-2 through 3-4. The total amount of important farmland estimated to be consumed by the SCS is relatively small or 91.8 acres; however when land consumed within the existing spheres of influence are also added to the total, a total of 5,587 acres could be potentially consumed by future land use development. The amount of Williamson Act contract lands that could potentially be impacted by the Project include 1,170 acres. Conversion of forest and timberland is not anticipated since the growth within rural areas of the County has been allocated to existing communities and cities in the rural areas consistent with adopted or draft general plans for the County of Fresno and each of the affected cities. The amount of important farmland, Williamson Act contract lands or forest/timber lands impacted by transportation improvement projects cannot be fully estimated since the actual design and extent of improvements for projects contained in the RTP and SCS is not known. As a result, development of the proposed Project could potentially result in the disturbance or loss of some of these designated areas. Specifically, new transportation and future land use development projects involving construction would be most likely to result in impacts to these areas.

Mitigation Measures

The specific impacts on conflict with existing zoning for agriculture use, or a Williamson Act contract will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Mitigation Measures referenced in Section 3.3.1, above are also included by reference.
- ✓ Individual projects will be consistent with federal, state, and local policies that preserve agricultural lands and support the economic viability of agricultural activities, as well as policies that provide compensation for property owners if preservation is not feasible.
- ✓ For projects in agricultural areas, project implementation agencies should contact the California Department of Conservation and the Agricultural Commissioner's office to identify the location of prime farmlands and lands that support crops considered valuable to the local or regional economy.
- ✓ Prior to final approval of each individual improvement project, the implementing agency should avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.3.3 - Other changes in the existing environment

Implementation of the proposed RTP and SCS will result in more compact development than existing conditions. By developing more compactly, the RTP and SCS directs more growth to the areas that are already urbanized and prevents undeveloped land from being converted to urban uses. Focusing growth in areas that are already developed limits the amount of growth that takes place at the urban edge, adjacent to agricultural areas. As discussed in Impact sections 3.2.1 and 3.2.2, implementation of the Project will result in the conversion of important farmland and lands under Williamson Act contracts. Lands that remain agricultural lands, but are located near to lands that will be converted to urban uses, may feel pressure to develop, as nearby land values increase or as nuisances from urban development spread to agricultural lands. As a result, indirect impacts to agricultural lands from this development pressure are considered potentially significant.

The region will see numerous multi-modal transportation improvements implemented over the RTP and SCS planning period. While much of this transportation infrastructure will serve urban uses in urbanized areas of the region, it is likely that implementation of transportation improvements at the urban edge could increase urban traffic patterns on roads that serve urban development and agricultural lands. Increased urban traffic on roads at the urban edge can lead to increased conflict between uses, which could result in the conversion of additional agricultural lands.

As noted above, the proposed RTP and SCS will result in more compact development than existing conditions. The RTP and SCS is designed to improve transportation options and increase capacity within urbanized areas. Enhanced transportation adjacent to agricultural uses may improve opportunities by creating better access and increasing the viability of activities such as farm-to-market retail. However, owners of agricultural lands nearest to urbanized areas may feel pressure to develop as transportation improvements within proximity of these lands are improved or implemented. Pressure may also increase

as land uses surrounding these properties continue to urbanize. As a result, the impacts on farmland related to transportation improvements from implementation of the proposed RTP and SCS are considered potentially significant.

Mitigation Measures

The specific impacts regarding other changes to the existing environment will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction.

- ✓ Reference the mitigation measure reflected in Impacts 3.3.1 and 3.3.2.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.4 AIR QUALITY

This section describes the environmental and regulatory setting for air quality in the Fresno County region and analyzes the potential air quality impacts resulting from the implementation of Fresno COG's 2040 RTP. This section portrays the existing air quality conditions in the Fresno County region, related air quality regulations, the air quality impacts of project construction and operation, and where necessary and feasible, identification of any mitigation measures required to reduce impacts.

Regulatory Setting

Air quality within the Project area is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies primarily responsible for improving the air quality within Fresno County are discussed below along with their individual responsibilities.

Federal Agencies

- ✓ **U.S. Environmental Protection Agency (EPA) -** The Federal Clean Air Bill first adopted in 1967 and periodically amended since then, established federal ambient air quality standards. A 1987 amendment to the Bill set a deadline for the attainment of these standards. That deadline has since passed. The other federal Clean Air Bill Amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources. The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the 1990 amendments.

  The Federal Clean Air Act (FCAA) and the national ambient air quality standards identify levels of air quality for six "criteria" pollutants, which are considered the maximum levels of ambient air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants include ozone, CO, nitrogen dioxide, sulfur dioxide, particulate matter, and lead.

  The Clean Air Act Section 176(c) (42 U.S.C. 7506(c)) and EPA transportation conformity regulations (40 CFR 93 Subpart A) require that each new RTP and TIP be demonstrated to conform to the State Implementation Plan (SIP) before the RTP and TIP are approved by the MPO or accepted by the U.S. Department of Transportation (DOT). The conformity analysis is a federal requirement designed to demonstrate compliance with the national ambient air quality standards. However, because the San Joaquin Valley State Implementation Plan (SIP) for CO, PM_{10}, $PM_{2.5}$ and Ozone address attainment of both the state and federal standards, for these pollutants, demonstrating conformity to the federal standards is also an indication of progress toward attainment of the state standards. Compliance with the state air quality standards is provided on the pages following this federal conformity discussion.

The EPA approved San Joaquin Valley reclassification of the ozone (8-hour) designation to extreme nonattainment in the Federal Register on May 5, 2010, even though the San Joaquin Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard. In accordance with the FCAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. The revised more-stringent primary standard for ozone was set at 0.075 parts per million (ppm) measured over an 8-hour period. EPA also revised the secondary standard, designed to protect welfare, at 0.075 ppm, making it identical to the primary standard. The existing ozone standard was set in 1997 at 0.08ppm.

Fresno County is considered to be in nonattainment of ozone and $PM_{2.5}$ standards.

Federal Regulations

- ✓ **National Environmental Policy Act (NEPA) -** The National Environmental Policy Act (NEPA) provides general information on the effects of federally funded projects. The act was implemented by regulations included in the Code of Federal Regulations (40CFR6). The code requires careful consideration concerning environmental impacts of federal actions or plans, including projects that receive federal funds. The regulations address impacts on land uses and conflicts with state, regional, or local plans and policies, among others. They also require that projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions and to restore and enhance environmental quality as much as possible.

- ✓ **Transportation Conformity Requirements**

The Federal transportation conformity regulations (40 Code of Federal Regulations Parts 51 and 93) specify criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. The Federal transportation conformity regulation was first promulgated in 1993 by the U.S. EPA, following the passage of amendments to the Federal Clean Air Act in 1990. The Federal transportation conformity regulation has been revised several times since its initial release to reflect both EPA rule changes and court opinions.

The conformity regulation applies nationwide to "all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan" (40 CFR 93.102). Currently, the San Joaquin Valley (or portions thereof) is designated as nonattainment with respect to Federal air quality standards for ozone, and particulate matter under 2.5 microns in diameter ($PM_{2.5}$); and has a maintenance plan for particulate matter under 10 microns in diameter (PM_{10}), as well as a maintenance plan for carbon monoxide (CO) for the urbanized/metropolitan areas of Kern, Fresno, Stanislaus and San Joaquin Counties. Therefore,

transportation plans and programs for the nonattainment areas for the Fresno County area must satisfy the requirements of the Federal transportation conformity regulation.

Under the transportation conformity regulation, the principal criteria for a determination of conformity for transportation plans and programs are:

- The TIP and RTP must pass an emissions budget test using a budget that has been found to be adequate by EPA for transportation conformity purposes, or an interim emission test;
- The latest planning assumptions and emission models specified for use in conformity determinations must be employed;
- The TIP and RTP must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and
- Interagency and public consultation.

On-going interagency consultation is conducted through the San Joaquin Valley Interagency Consultation Group to ensure Valley-wide coordination, communication and compliance with FCAA and CCAA requirements. Each of the eight Valley MPOs and the SJVAPCD are represented. The Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the U.S. EPA, CARB and Caltrans are also represented on the committee. The final determination of conformity for the TIP and RTP is the responsibility of FHWA, and FTA within the U.S. DOT.

On March 14, 2012, EPA published the Transportation Conformity Rule Restructuring Amendments, effective April 13, 2012 (EPA, 2012). The amendments restructure several sections of the rule so that they apply to any new or revised National Ambient Air Quality Standards. In addition, several clarifications to improve implementation of the rule were finalized.

✓ **Transportation Control Measures -** One particular aspect of the SIP development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically also created to address mobile or transportation sources. These are known as Transportation Control Measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

State Agencies

- ✓ **California Air Resources Board (ARB) -** The California Air Resources Board (ARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing its own air quality legislation called the California Clean Air Act (CCAA), adopted in 1988. The ARB was created in 1967 from the merging of the California Motor Vehicle Pollution Control Board and the Bureau of Air Sanitation and its Laboratory.

  The ARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the National Ambient Air Quality Standards (NAAQS) established by the EPA. Whereas the ARB has primary responsibility and produces a major part of the SIP for pollution sources that are statewide in scope, it relies on the local air districts to provide additional strategies for sources under their jurisdiction. The ARB combines its data with all local district data and submits the completed SIP to the EPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by the ARB, and attainment plans adopted by the Air Pollution Control Districts (APCDs) and Air Quality Management District's (AQMDs) and approved by the ARB.

  States may establish their own standards, provided the state standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to California Health and Safety Code (CH&SC) [§39606(b)] and its predecessor statutes.

  The CH&SC [§39608] requires the ARB to "identify" and "classify" each air basin in the state on a pollutant-by-pollutant basis. Subsequently, the ARB designated areas in California as nonattainment based on violations of the CAAQSs. Designations and classifications specific to the SJVAB can be found in the next section of this document. Areas in the state were also classified based on severity of air pollution problems. For each nonattainment class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five-percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. In addition, air districts in violation of CAAQS are required to prepare an Air Quality Attainment Plan (AQAP) that lays out a program to attain and maintain the CCAA mandates.

  Other ARB duties include monitoring air quality. The ARB has established and maintains, in conjunction with local APCDs and air quality management districts, a network of sampling stations (called the State and Local Air Monitoring [SLAMS] network), which monitor the present pollutant levels in the ambient air.

  Fresno County is in the ARB-designated, SJVAB. A map of the SJVAB is provided in Figure 3-5. In addition to Fresno County, the SJVAB includes San Joaquin, Kern, Kings, Madera, Merced, Stanislaus, and Tulare Counties. Federal and State standards for criteria pollutants are provided in Table 3-5.

FIGURE 3-5
California Air Basins

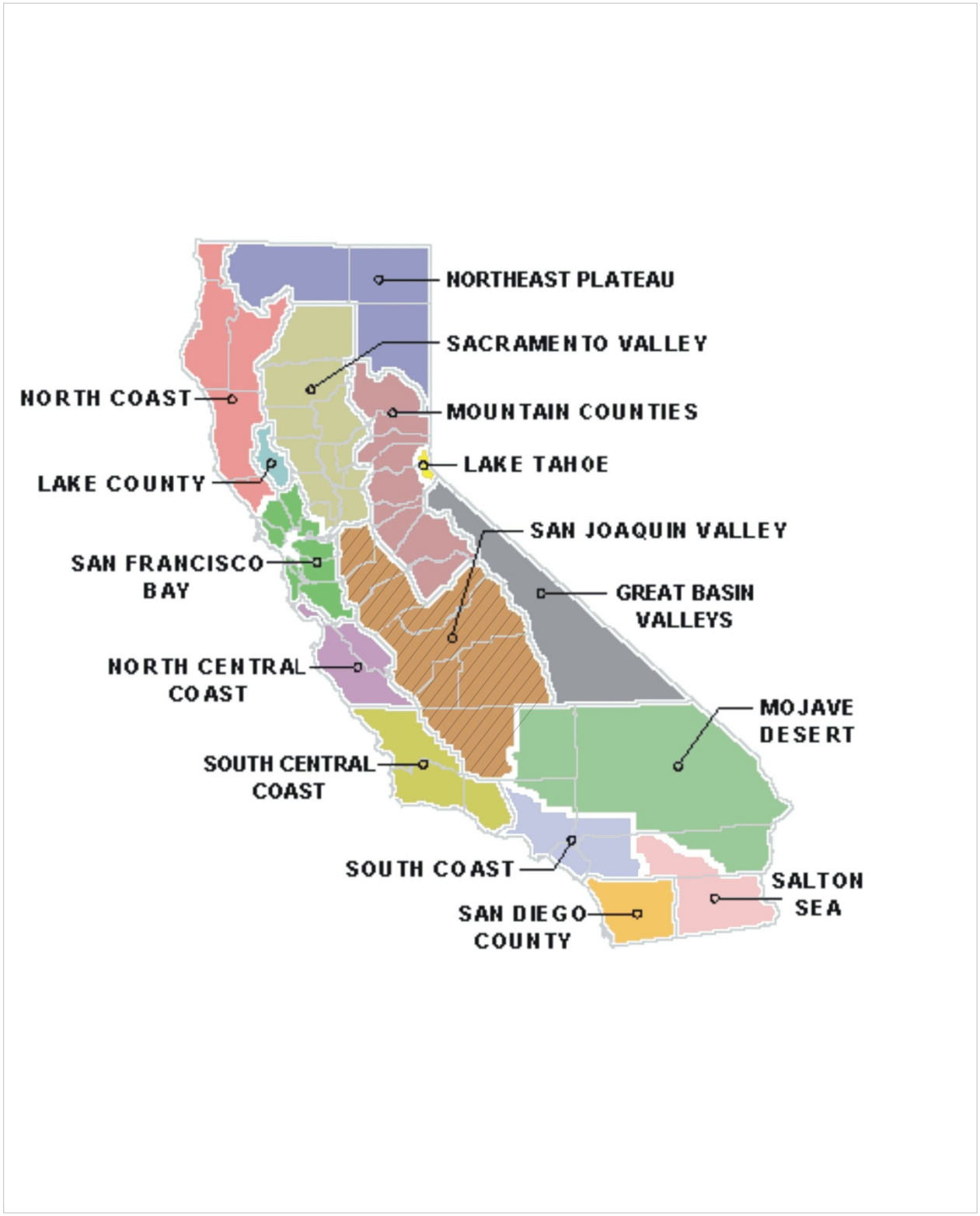


TABLE 3-5
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM10)[8]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[8]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[9]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[10]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[10]	—	
Lead[11,12]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[13]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

Footnotes:

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.
8. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
9. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the

California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

10. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

11. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

12. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

13. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

State Regulations

- ✓ **ARB Mobile-Source Regulation -** The State of California is responsible for controlling emissions from the operation of motor vehicles in the state. Rather than mandating the use of specific technology or the reliance on a specific fuel, the ARB's motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the ARB has adopted regulations, which required auto manufacturers to phase in less polluting vehicles.

- ✓ **California Clean Air Act -** The CCAA was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. The CCAA establishes more stringent ambient air quality standards than those included in the FCAA. The ARB is the agency responsible for administering the CCAA. The ARB established ambient air quality standards pursuant to the CH&SC [§39606(b)], which are similar to the federal standards. The San Joaquin Valley Air Pollution Control District (SJVAPCD) is one of 35 air quality management districts that have prepared air quality management plans to accomplish a five percent annual reduction in emissions documenting progress toward the state ambient air quality standards.

- ✓ **Tanner Air Toxics Act -** California regulates Toxic Air Contaminants (TACs) primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and has adopted EPA's list of Hazardous Air Pollutants (HAPs) as TACs. Most recently, diesel PM was added to the ARB list of TACs. Once a TAC is identified, ARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

  AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, ARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. The ARB adopted amendments to the public-transit bus-fleet rule in October 2003, as well as adopt interim certification procedures for hybrid-electric vehicles in the urban bus and heavy-duty vehicle classes. All transit agencies are expected to be in compliance with all emission reduction requirements of the regulation since the ultimate phase-in date for all urban bus and transit fleet

vehicles was December 31, 2010. Urban Bus (UB) fleets are required to exhibit an 85% reduction of PM from the 2002 baseline and a NOx fleet average of 4.8 g/bhp-hr. Transit Fleet Vehicle (TFV) are required to exhibit an 80% reduction of PM from the 2005 baseline and a NOx fleet average of 2.4 g/bhp-hr.

These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule.

- ✓ **California Environmental Quality Act (CEQA) -** CEQA defines a significant impact on the environment as a substantial, or potentially substantial, adverse change in the physical conditions within the area affected by the project. Land use is a required impact assessment category under CEQA. CEQA documents generally evaluate land use in terms of compatibility with the existing land uses and consistency with local general plans and other local land use controls (zoning, specific plans, etc.).

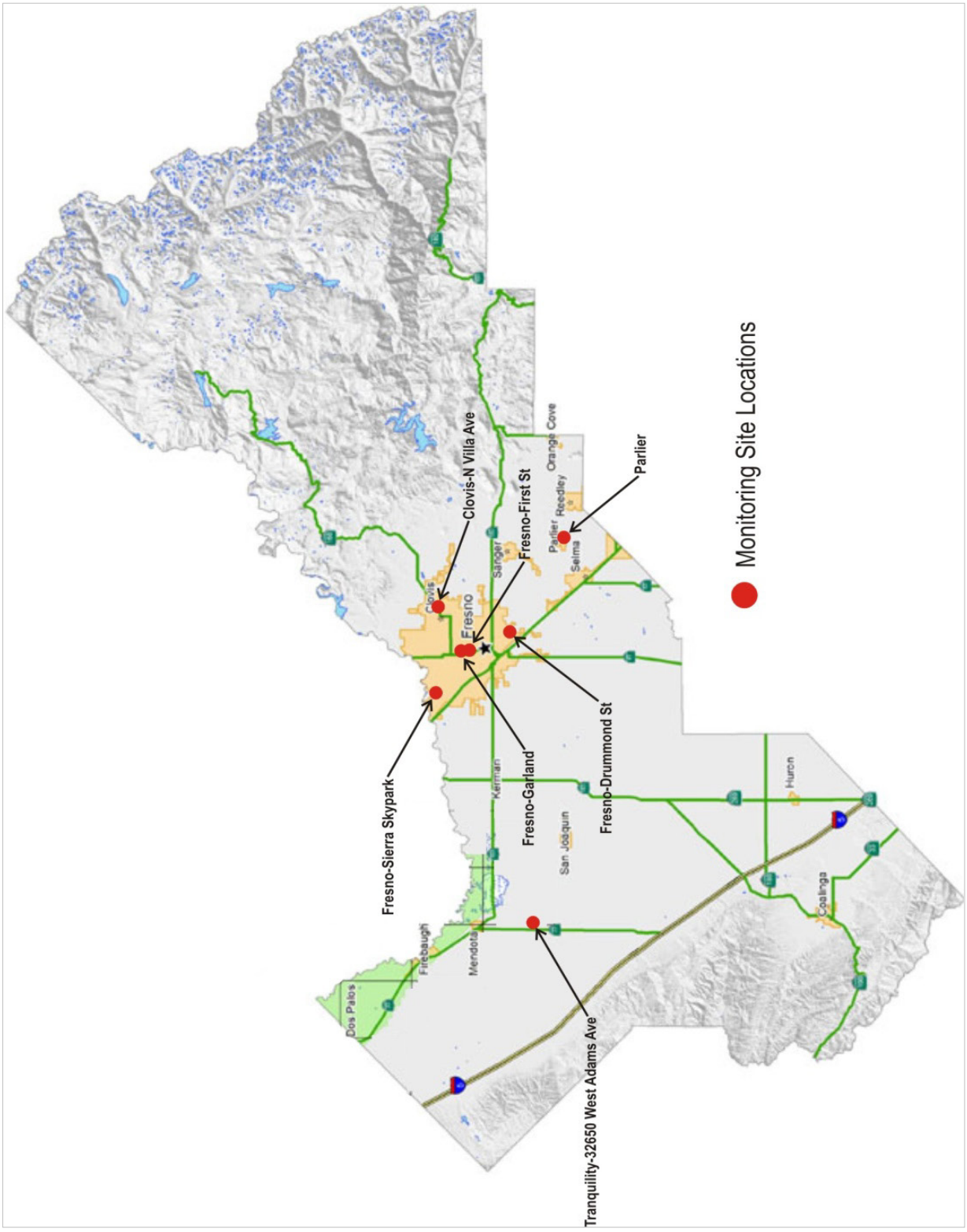
Regional Agencies

- ✓ **San Joaquin Valley Air Pollution Control District -** The SJVAPCD is the agency responsible for monitoring and regulating air pollutant emissions from stationary, area, and indirect sources within Fresno County and throughout the SJVAB. The District also has responsibility for monitoring air quality and setting and enforcing limits for source emissions. The ARB is the agency with the legal responsibility for regulating mobile source emissions. The District is precluded from such activities under State law.

  The District was formed in mid-1991 and prepared and adopted the San Joaquin Valley Air Quality Attainment Plan (AQAP), dated January 30, 1992, in response to the requirements of the State CCAA. The CCAA requires each non-attainment district to reduce pertinent air contaminants by at least five percent (5%) per year until new, more stringent, 1988 State air quality standards are met. There are seven (7) air quality-monitoring sites located throughout Fresno County, which are shown below and illustrated in Figure 3-6.

  - Clovis-N Villa Avenue
  - Fresno-1st Street
  - Fresno-Garland (New)
  - Fresno-Drummond Street
  - Fresno-Sierra Skypark
  - Parlier
  - Tranquility's-32650 West Adams Avenue

FIGURE 3-6
Air Quality Monitoring Sites



Activities of the SJVAPCD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

The SJVAPCD has prepared the *2007 Ozone Plan* to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone. The *2007 Ozone Plan* provides a comprehensive list of regulatory and incentive-based measures to reduce emissions of ozone and particulate matter precursors throughout the SJVAB. The 2007 Ozone Plan calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution. The *2007 Ozone Plan* calls for a 75-percent reduction in ozone-forming oxides of nitrogen emissions.

The SJVAPCD has also prepared the *2007 PM10 Maintenance Plan and Request for Redesignation* (2007 PM10 Plan). On April 24, 2006, the SJVAPCD submitted a Request for Determination of PM10 Attainment for the Basin to the ARB. The ARB concurred with the request and submitted the request to the EPA on May 8, 2006. On October 30, 2006, the EPA issued a Final Rule determining that the Basin had attained the NAAQS for PM10. However, the EPA noted that the Final Rule did not constitute a redesignation to attainment until all of the FCAA requirements under Section 107(d)(3) were met.

The SJVAPCD has prepared the *2008 PM.2.5 Plan* to achieve Federal and State standards for improved air quality in the SJVAB. The *2008 PM.2.5 Plan* provides a comprehensive list of regulatory and incentive based measures to reduce PM2.5.

In addition to the *2007 Ozone Plan, the 2008 PM2.5 Plan,* and the *2007 PM10 Plan*, the SJVAPCD prepared the *Guide for Assessing and Mitigation Air Quality Impacts* (GAMAQI).

The GAMAQI is an advisory document that provides Lead Agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality impacts in environmental documents. Local jurisdictions are not required to utilize the methodology outlined therein. This document describes the criteria that SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. The SJVAPCD is currently in the process of updating the GAMAQI and was used as a guidance document for this analysis.

The SJVAPCD 2007 Ozone, 2007 PM_{10}, 2008 PM2.5 as well as the 2004 Revision to the California State Implementation Plan contain statewide technology controls mandated by the California Air Resources

Board (ARB). A summary of the ARB mandated control measures applicable to the 2014 RTP can be found in the Draft Fresno COG 2014 Conformity Analysis for the 2014 Federal Transportation Improvement Program and the 2014 Regional Transportation Plan (Conformity Analysis), which is included in the 2014 RTP and SCS Appendices.

The SJVAPCD Plans identified above represent that SJVAPCD's plan to achieve both state and federal air quality standards. The regulations and incentives contained in these documents must be legally enforceable and permanent. These plans break emissions reductions and compliance into different emissions source categories. For this EIR only on-road mobile sources are considered as the 2014 RTP does not impact the implementation of any SJVAPCD regulations or incentives on other emissions source categories.

Each of the SJVAPCD plans (2007 Ozone Plan, 2008 $PM_{2.5}$ Plan, and 2007 PM10 Maintenance Plan, which relies on the 2003 PM_{10} Plan for emissions reductions measures) identifies a "budget" for measuring progress toward achieving attainment of the national air quality standard. A "budget" is, in effect, an emissions "threshold" or "not to exceed value" for specific years in which progress toward attainment of the standard must be measured. These specific years can also be described as "budget years" and are established to ensure achievement of the "budget" to demonstrate continued progress toward attainment of the national air quality standard. The term "base year" also reflects a "threshold" or "not to exceed" value against which future emissions from the 2014 RTP are measured.

The EPA defines specific years in which attainment of the federal standards must be reached, and therefore each of these SJVAPCD plans for which the SJVAB is nonattainment contains different "budget years" in which progress must be made toward achievement of the federal standards. These years are documented below. Again the emissions budgets in Tables 3-6 through 3-9 below reflect "thresholds" or "not to exceed" values in the "budget years" for the identified pollutant in order to achieve attainment.

The SJVAPCD has adopted numerous rules and regulations to implement its air quality plans. Following, are significant rules that will apply to the proposed project.

TABLE 3-6
On-Road Motor Vehicle CO Emissions Budgets
(Winter tons/day)

County	2003	2010	2018
Fresno	240	240	240

TABLE 3-7
On-Road Motor Vehicle Budgets (Summer tons/day)

County	2011		2014		2017		2020		2023	
	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx	ROG	NOx
Fresno	14.3	36.2	10.7	30	9.3	22.6	8.3	17.7	8.0	13.5

TABLE 3-8
On-Road Motor Vehicle PM-10 Emissions Budgets
(Tons per average annual day)

County	2005		2020	
	PM10	NOx	PM10	NOx
Fresno	13.5	59.2	16.1	23.2

TABLE 3-9
On-Road Motor Vehicle PM-2.5 Emissions Budgets
(Tons per average annual day)

County	2012		2014	
	PM2.5	NOx	PM2.5	NOx
Fresno	1.5	35.7	1.1	31.4

Environmental Setting

- **Regulation VIII – Fugitive PM10 Prohibitions -** Regulation VIII is comprised of District Rules 8011 through 8081, which are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

- **Rule 8021 – Construction, Demolition, Excavation, and Other Earthmoving Activities -** District Rule 8021 requires owners or operators of construction projects to submit a Dust Control Plan to the District if at any time the project involves non-residential developments of five or more acres of disturbed surface area or moving, depositing, or relocating of more than 2,500 cubic yards per day of bulk materials on at least three days of the project. The proposed project will meet these criteria and will be required to submit a Dust Control Plan to the District in order to comply with this rule.

- **Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations -** If asphalt paving will be used, then paving operations of the proposed project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

This section describes existing air quality within the San Joaquin Valley Air Basin and in Fresno County, including the identification of air pollutant standards, meteorological and topological conditions affecting air quality, and current air quality conditions. Air quality is described in relation to ambient air quality standards for criteria pollutants such as, ozone, carbon monoxide, and particulate matter. Air quality can be directly affected by the type and density of land use change and population growth in urban and rural areas.

Geographic Location

The SJVAB is comprised of eight counties: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Encompassing 24,840 square miles, the San Joaquin Valley is the second largest air basin in California. Cumulatively, counties within the Air Basin represent approximately 16 percent of the State's geographic area. The Air Basin is bordered by the Sierra Nevada Mountains on the east (8,000 to 14,492 feet in elevation), the Coastal Range on the west (4,500 feet in elevation), and the Tehachapi Mountains on the south (9,000 feet elevation). The San Joaquin Valley is open to the north extending to the Sacramento Valley Air Basin.

Topographic Conditions

Fresno County is located within the San Joaquin Valley Air Basin [as determined by the California Air Resources Board (CARB)]. Air basins are geographic areas sharing a common "air shed." A description of the Air Basin in the County, as designated by CARB, is provided below. Air pollution is directly related to the region's topographic features, which impact air movement within the Basin.

Wind patterns within the SJVAB result from marine air that generally flows into the Basin from the San Joaquin River Delta. The Coastal Range hinders wind access into the Valley from the west, the Tehachapis prevent southerly passage of airflow, and the high Sierra Nevada Mountain Range provides a significant barrier to the east. These topographic features result in weak airflow that becomes restricted vertically by high barometric pressure over the Valley. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500-3,000 feet).

Climatic Conditions

Fresno County is located in one of the most polluted air basins in the country; the San Joaquin Valley Air Basin. The surrounding topography includes foothills and mountains to the east and west. These mountain ranges direct air circulation and dispersion patterns. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Fresno County is classified as Mediterranean, with moist cool winters and dry warm summers.

Ozone, classified as a "regional" pollutant, often afflicts areas downwind of the original source of precursor emissions. Ozone can be easily transported by winds from a source area. Peak ozone levels tend to be higher in the southern portion of the Valley, as the prevailing summer winds sweep precursors downwind of northern source areas before concentrations peak. The separate designations reflect the fact that ozone precursor transport depends on daily meteorological conditions.

Other primary pollutants, carbon monoxide (CO), for example, may form high concentrations when wind speed is low. During the winter, Fresno County experiences cold temperatures and calm conditions that increase the likelihood of a climate conducive to high CO concentrations.

Precipitation and fog tend to reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog block the required radiation. CO is slightly water-soluble so precipitation and fog tends to "reduce" CO concentrations in the atmosphere. PM-10 is somewhat "washed" from the atmosphere with precipitation. Precipitation in the San Joaquin Valley is strongly influenced by the position of the semi-permanent subtropical high-pressure belt located off the Pacific coast. In the winter, this high- pressure system moves southward, allowing Pacific storms to move through the San Joaquin Valley. These storms bring in moist, maritime air that produces considerable precipitation on the western, upslope side of the Coast Ranges. Significant precipitation also occurs on the western side of the Sierra Nevada. On the valley floor, however, there is some down slope flow from the Coast Ranges and the resultant evaporation of moisture from associated warming results in a minimum of precipitation. Nevertheless, the majority of the precipitation falling in the San Joaquin Valley is produced by those storms during the winter. Precipitation during the summer months is in the form of convective rain showers and is rare. It is usually associated with an influx of moisture into the San Joaquin Valley through the San Francisco area during an anomalous flow pattern in the lower layers of the atmosphere. Although the hourly rates of precipitation from these storms may be high, their rarity keeps monthly totals low.

Precipitation on the San Joaquin Valley floor and in the Sierra Nevada decreases from north to south. Stockton in the north receives about 20 inches of precipitation per year, Fresno in the center, receives about 10 inches per year, and Bakersfield at the southern end of the valley receives less than 6 inches per year. This is primarily because the Pacific storm track often passes through the northern part of the state while the southern part of the state remains protected by the Pacific High. Precipitation in the San Joaquin

Valley Air Basin (SJVAB) is confined primarily to the winter months with some also occurring in late summer and fall. Average annual rainfall for the entire San Joaquin Valley is approximately 5 to 16 inches. Snowstorms, hailstorms, and ice storms occur infrequently in the San Joaquin Valley and severe occurrences of any of these are very rare.

The winds and unstable air conditions experienced during the passage of storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong low-level temperature inversions and very stable air conditions. This situation leads to the San Joaquin Valley's famous Tule Fogs. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog is more likely to occur inland. Cooling may also be accomplished by heat radiation losses or by horizontal movement of a mass of air over a colder surface. This second type of fog, known as advection fog, generally occurs along the coast.

Conditions favorable to fog formation are also conditions favorable to high concentrations of CO and PM-10. Ozone levels are low during these periods because of the lack of sunlight to drive the photochemical reaction. Maximum CO concentrations tend to occur on clear, cold nights when a strong surface inversion is present and large numbers of fireplaces are in use. A secondary peak in CO concentrations occurs during morning commute hours when a large number of motorists are on the road and the surface inversion has not yet broken.

The water droplets in fog, however, can act as a sink for CO and nitrogen oxides (NOx), lowering pollutant concentrations. At the same time, fog could help in the formation of secondary particulates such as ammonium sulfate. These secondary particulates are believed to be a significant contributor of winter season violations of the PM-10 and PM-2.5 standards.

Other Air Quality Determinants

In addition to climatic conditions (wind, lack of rain, etc.), air pollution can be caused by human/socioeconomic conditions. Air pollution in the SJVAB can be directly attributed to human activities, which cause air pollutant emissions. Human causes of air pollution in the Valley consist of population growth, urbanization (gas-fired appliances, residential wood heaters, etc.), mobile sources (i.e., cars, trucks, airplanes, trains, etc.), oil production, and agriculture. These are called anthropogenic, or human-caused, sources of emissions. The most significant factors, which are accelerating the decline of air quality in the SJVAB, are the Valley's rapid population growth and its associated increases in traffic, urbanization, and industrial activity.

Carbon monoxide emissions overwhelmingly come from mobile sources in the San Joaquin Valley; on-road vehicles contribute 65 percent, while other mobile vehicles, such as trains, planes, and off-road vehicles, contribute another 17 percent. Motor vehicles account for significant portions of regional

gaseous and particulate emissions. Local large employers such as industrial plants can also generate substantial regional gaseous and particulate emissions. In addition, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.).

Ozone is the result of a photochemical reaction between Oxides of nitrogen (NO_x) and Reactive Organic Gases (ROG). Mobile sources contribute 64 percent of all NO_x emitted from anthropogenic sources. In addition, mobile sources contribute 53 percent of all the ROG emitted from sources within the San Joaquin Valley.

The principal factors that affect air quality in and around Fresno County are:

- ✓ The sink effect, climatic subsidence and temperature inversions and low wind speeds
- ✓ Automobile and truck travel
- ✓ Increases in mobile and stationary pollutants generated by local urban growth

Automobiles, trucks, buses and other vehicles using hydrocarbon fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.

Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters; animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Fresno County, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities. Finally, industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Fresno County consist of agricultural production and processing operations, wine production, and marketing operations.

The primary contributors of PM_{10} emissions in the San Joaquin Valley are fugitive windblown dust from "open" fields (38%) and road dust, both paved and unpaved (38%). Farming activities only contribute 14 percent of the PM_{10}.

Air Pollution Sources

The four major sources of air pollutant emissions in the SJVAB include industrial plants, motor vehicles, construction activities, and agricultural activities. Industrial plants account for significant portions of regional gaseous and particulate emissions. Motor vehicles, including those from large employers, generate substantial regional gaseous and particulate emissions. Finally, construction and agricultural activities can generate significant temporary gaseous and particulate emissions (dust, ash, smoke, etc.). In addition to these primary sources of air pollution, urban areas upwind from Fresno County, including

areas north and west of the San Joaquin Valley, can cause or generate emissions that are transported into Fresno County. All four of the major pollutant sources affect ambient air quality throughout the Air Basin.

- ✓ **Motor Vehicles**

  Automobiles, trucks, buses and other vehicles using hydrocarbon fuels release exhaust products into the air. Each vehicle by itself does not release large quantities; however, when considered as a group, the cumulative effect is significant.

- ✓ **Agricultural and Other Miscellaneous Activities**

  Other sources may not seem to fit into any one of the major categories or they may seem to fit in a number of them. These could include agricultural uses, dirt roads, animal shelters, animal feed lots, chemical plants and industrial waste disposal, which may be a source of dust, odors, or other pollutants. For Fresno County, this category includes several agriculturally related activities, such as plowing, harvesting, dusting with herbicides and pesticides and other related activities.

- ✓ **Industrial Plants**

  Industrial contaminants and their potential to produce various effects depend on the size and type of industry, pollution controls, local topography, and meteorological conditions. Major sources of industrial emissions in Fresno County consist of agricultural production and processing operations, wine production, and marketing operations.

San Joaquin Valley Air Basin Monitoring

The SJVAB consists of eight counties, from Fresno County in the north to Kern County in the south. SJVAPCD and CARB maintain numerous air quality monitoring sites throughout each County in the Air Basin to measure ozone, PM2.5, and PM10. It is important to note that the federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. Data obtained from the monitoring sites throughout the SJVAB between 2009 and 2012 is summarized in Tables 3-10 through 3-12.

TABLE 3-10
SJVAB Ambient Air Quality Monitoring Data Summary - Ozone 2009-2012

Year	Days > Standard				1-Hour Observations			8-Hour Averages				Year Coverage	
	State		National			State	Nat'l	State		National			
	1-Hr	8-Hr	1-Hr	'08 8-Hr	Max.	D.V.[1]	D.V.[2]	Max.	D.V.[1]	Max.	'08 D.V.[2]	Min	Max
2012	72	134	*3*	105	0.135	0.14	*0.130*	0.116	0.116	0.116	0.098	0	100
2011	71	131	*3*	109	0.134	0.13	*0.130*	0.105	0.114	0.105	0.099	78	100
2010	59	115	*7*	93	0.140	0.14	*0.140*	0.115	0.122	0.114	0.104	70	100
2009	82	122	*4*	98	0.135	0.14	*0.140*	0.110	0.124	0.110	0.105	0	100

Notes:
All concentrations expressed in parts per million.
The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in italics.
D.V.[1] = State Designation Value.
D.V.[2] = National Design Value.
Source: California Air Resources Board (ADAM) Air Pollution Summaries.

TABLE 3-11
SJVAB Ambient Air Quality Monitoring Data Summary - PM 2.5 2009-2012

Year	Est. Days > Nat'l '06 Std.	Annual Average		Nat'l Ann. Std. D.V.[1]	State Annual D.V.[2]	Nat'l '06 Std. 98th Percentile	Nat'l '06 24 Hr Std. D.V.[1]	High 24-Hour Average		Year Coverage	
		Nat'l	State					Nat'l	State	Min	Max
2012	29.4	16.0	17.9	16.0	18	93.4	71	93.4	93.4	29	100
2011	39.3	20.4	18.1	18.2	21	69.5	62	80.3	82.8	34	100
2010	28.7	17.9	17.2	21.2	21	56.2	65	107.8	112.0	10	100
2009	50.5	22.5	21.2	22.6	25	66.7	70	195.5	195.5	14	100

Notes:
All concentrations expressed in parts per million.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
D.V.[1] = National Design Value.
D.V.[2] = State Designation Value.
Source: California Air Resources Board (ADAM) Air Pollution Summaries.

TABLE 3-12
SJVAB Ambient Air Quality Monitoring Data Summary - PM 10 2009-2012

Year	Est. Days > Std.		Annual Average		3-Year Average		High 24-Hr Average		Year
	Nat'l	State	Nat'l	State	Nat'l	State	Nat'l	State	Coverage
2012	0.0	89.4	45.1	41.4	38	44	138.6	125.8	100
2011	0.0	116.4	44.8	44.2	41	47	151.8	154.0	100
2010	1.0	67.4	43.5	35.0	46	56	235.6	238.0	100
2009	1.9	123.4	57.5	46.5	57	56	423.8	139.5	100

Notes:
All concentrations expressed in parts per million.
The national annual average PM10 standard was revoked in December 2006 and is no longer in effect. Statistics related to the revoked standard are shown in *italics*.
Statistics may include data that are related to an exceptional event.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.
State statistics for 1998 and later are based on *local* conditions (except for sites in the South Coast Air Basin, Where State statistics for 2002 and later are based on *local* conditions). National statistics are based on *standard* conditions.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Source: California Air Resources Board (ADAM) Air Pollution Summaries.

Tables 3-13 through 3-18 reflect the ambient air quality classifications for monitoring sites in Fresno County. Table 3-19 identifies Fresno County's attainment status. As indicated, Fresno County is nonattainment for Ozone (1 hour and 8 hour) and PM. In accordance with the FCAA, EPA uses the design value at the time of standard promulgation to assign nonattainment areas to one of several classes that reflect the severity of the nonattainment problem; classifications range from marginal nonattainment to extreme nonattainment. The FCAA contains provisions for changing the classifications using factors such as clean air progress rates and requests from States to move areas to a higher classification.

TABLE 3-13
Maximum Pollutant Levels at Clovis' N Villa Avenue Monitoring Station

Pollutant	Time Averaging	2010 Maximums	2011 Maximums	2012 Maximums	Standards National	Standards State
Ozone (O_3)	1 hour	0.133 ppm	0.133 ppm	0.124 ppm	-	0.09 ppm
Ozone (O_3)	8 hour	0.106 ppm	0.103 ppm	0.109 ppm	0.075 ppm	0.070 ppm
Carbon Monoxide (CO)	8 hour	1.43 ppm	1.42 ppm	*	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.055 ppm	0.050 ppm	0.050 ppm	100 ppb	0.18 ppm
Nitrogen Dioxide (NO_2)	Annual Average	0.010 ppm	*	0.010 ppm	0.053 ppm	0.030 ppm
Particulates (PM_{10})	24 hour	62.2 µg/m3	77.0 µg/m3	78.3 µg/m3	150 µg/m^3	50 µg/m^3
Particulates (PM_{10})	Federal Annual Arithmetic Mean	28.2 µg/m3	30.4 µg/m3	29.2 µg/m3	-	20 µg/m3
Particulates ($PM_{2.5}$)	24 hour	75.2 µg/m3	76.4 µg/m3	80.8 µg/m3	35 µg/m3	-
Particulates ($PM_{2.5}$)	Federal Annual Arithmetic Mean	14.6 µg/m3	17.9 µg/m3	15.3 µg/m3	12 µg/m3	12 µg/m3

Source: CARB Website, 2014

* Means there was insufficient data available to determine the value.

TABLE 3-14
Maximum Pollutant Levels at Fresno's First Street Monitoring Station

Pollutant	Time Averaging	2010 Maximums	2011 Maximums	2012 Maximums	Standards National	Standards State
Ozone (O_3)	1 hour	0.127 ppm	0.119 ppm	0.041 ppm	-	0.09 ppm
Ozone (O_3)	8 hour	0.107 ppm	0.096 ppm	0.033 ppm	0.075 ppm	0.070 ppm
Carbon Monoxide (CO)	8 hour	2.03 ppm	2.29 ppm	2.22 ppm	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.077 ppm	0.061 ppm	0.059 ppm	100 ppb	0.18 ppm
Nitrogen Dioxide (NO_2)	Annual Average	0.013 ppm	0.012 ppm	*	0.053 ppm	0.030 ppm
Particulates (PM_{10})	24 hour	88.6 µg/m3	94.3 µg/m3	*	150 µg/m3	50 µg/m3
Particulates (PM_{10})	Federal Annual Arithmetic Mean	25.8 µg/m3	29.2 µg/m3	*	-	20 µg/m3
Particulates ($PM_{2.5}$)	24 hour	58.3 µg/m3	77.3 µg/m3	93.4 µg/m3	35 µg/m3	-
Particulates ($PM_{2.5}$)	Federal Annual Arithmetic Mean	13.0 µg/m3	15.4 µg/m3	*	12 µg/m3	12 µg/m3

Source: CARB Website, 2014

* Means there was insufficient data available to determine the value.

TABLE 3-15
Maximum Pollutant Levels at Fresno's Drummond Street Monitoring Station

Pollutant	Time Averaging	2010 Maximums	2011 Maximums	2012 Maximums	Standards National	Standards State
Ozone (O_3)	1 hour	0.108 ppm	0.129 ppm	0.127 ppm	-	0.09 ppm
Ozone (O_3)	8 hour	0.092 ppm	0.105 ppm	0.108 ppm	0.075 ppm	0.070 ppm
Carbon Monoxide (CO)	8 hour	1.45 ppm	1.73 ppm	*	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.062 ppm	0.069 ppm	0.070 ppm	100 ppb	0.18 ppm
Nitrogen Dioxide (NO_2)	Annual Average	*	*	0.013 ppm	0.053 ppm	0.030 ppm
Particulates (PM_{10})	24 hour	66.5 µg/m3	91.3 µg/m3	114.3 µg/m3	150 µg/m3	50 µg/m3
Particulates (PM_{10})	Federal Annual Arithmetic Mean	26.9 µg/m3	31.4 µg/m3	42.9 µg/m3	-	20 µg/m3
Particulates ($PM_{2.5}$)[a]	24 hour	58.3 µg/m3	77.3 µg/m3	93.4 µg/m3	35 µg/m3	-
Particulates ($PM_{2.5}$)[a]	Federal Annual Arithmetic Mean	13.0 µg/m3	15.4 µg/m3	*	12 µg/m3	12 µg/m3

Source: CARB Website, 2014

* Means there was insufficient data available to determine the value.

[a] Fresno's First Street Monitoring Station

TABLE 3-16
Maximum Pollutant Levels at Fresno's Sierra Skypark #2 Monitoring Station

Pollutant	Time Averaging	2010 Maximums	2011 Maximums	2012 Maximums	Standards National	Standards State
Ozone (O_3)	1 hour	0.138 ppm	0.115 ppm	0.130 ppm	-	0.09 ppm
Ozone (O_3)	8 hour	0.115 ppm	0.100 ppm	0.109 ppm	0.075 ppm	0.070 ppm
Carbon Monoxide (CO)	8 hour	0.90 ppm	1.58 ppm	*	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.034 ppm	0.039 ppm	0.043 ppm	100 ppb	0.18 ppm
Nitrogen Dioxide (NO_2)	Annual Average	*	*	*	0.053 ppm	0.030 ppm
Particulates (PM_{10})[a]	24 hour	88.6 µg/m3	94.3 µg/m3	*	150 µg/m3	50 µg/m3
Particulates (PM_{10})[a]	Federal Annual Arithmetic Mean	25.8 µg/m3	29.2 µg/m3	*	-	20 µg/m3
Particulates ($PM_{2.5}$)[a]	24 hour	58.3 µg/m3	77.3 µg/m3	93.4 µg/m3	35 µg/m3	-
Particulates ($PM_{2.5}$)[a]	Federal Annual Arithmetic Mean	13.0 µg/m3	15.4 µg/m3	*	12 µg/m3	12 µg/m3

Source: CARB Website, 2014

* Means there was insufficient data available to determine the value.

[a] Fresno's First Street Monitoring Station

TABLE 3-17
Maximum Pollutant Levels at Parlier's Monitoring Station

Pollutant	Time Averaging	2010 Maximums	2011 Maximums	2012 Maximums	Standards National	Standards State
Ozone (O_3)	1 hour	0.139 ppm	0.134 ppm	0.126 ppm	-	0.09 ppm
Ozone (O_3)	8 hour	0.102 ppm	0.097 ppm	0.097 ppm	0.075 ppm	0.070 ppm
Carbon Monoxide (CO)[a]	8 hour	2.03 ppm	2.29 ppm	2.22 ppm	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.040 ppm	0.044 ppm	0.042 ppm	100 ppb	0.18 ppm
Nitrogen Dioxide (NO_2)	Annual Average	*	*	*	0.053 ppm	0.030 ppm
Particulates (PM_{10})[a]	24 hour	88.6 µg/m3	94.3 µg/m3	*	150 µg/m3	50 µg/m3
Particulates (PM_{10})[a]	Federal Annual Arithmetic Mean	25.8 µg/m3	29.2 µg/m3	*	-	20 µg/m3
Particulates ($PM_{2.5}$)[a]	24 hour	58.3 µg/m3	77.3 µg/m3	93.4 µg/m3	35 µg/m3	-
Particulates ($PM_{2.5}$)[a]	Federal Annual Arithmetic Mean	13.0 µg/m3	15.4 µg/m3	*	12 µg/m3	12 µg/m3

Source: CARB Website, 2014

* Means there was insufficient data available to determine the value.

[a] Fresno's First Street Monitoring Station

TABLE 3-18
Maximum Pollutant Levels at Tranquility's 32650 West Adams Avenue Monitoring Station

Pollutant	Time Averaging	2010 Maximums	2011 Maximums	2012 Maximums	Standards National	Standards State
Ozone (O_3)	1 hour	0.096 ppm	0.098 ppm	0.101 ppm	-	0.09 ppm
Ozone (O_3)	8 hour	0.090 ppm	0.081 ppm	0.091 ppm	0.075 ppm	0.070 ppm
Carbon Monoxide (CO)[a]	8 hour	2.03 ppm	2.29 ppm	2.22 ppm	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)[a]	1 hour	0.077 ppm	0.061 ppm	0.059 ppm	100 ppb	0.18 ppm
Nitrogen Dioxide (NO_2)[a]	Annual Average	0.013 ppm	0.012 ppm	*	0.053 ppm	0.030 ppm
Particulates (PM_{10})[a]	24 hour	88.6 µg/m3	94.3 µg/m3	*	150 µg/m3	50 µg/m3
Particulates (PM_{10})[a]	Federal Annual Arithmetic Mean	25.8 µg/m3	29.2 µg/m3	*	-	20 µg/m3
Particulates ($PM_{2.5}$)	24 hour	39.3 µg/m3	38.4 µg/m3	34.4 µg/m3	35 µg/m3	-
Particulates ($PM_{2.5}$)	Federal Annual Arithmetic Mean	*	8.2 µg/m3	7.1 µg/m3	12 µg/m3	12 µg/m3

Source: CARB Website, 2014

* Means there was insufficient data available to determine the value.

[a] Fresno's First Street Monitoring Station

TABLE 3-19
Fresno County Attainment Status

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone - 1 Hour	Revoked in 2005	Nonattainment/Severe
Ozone - 8 Hour	Nonattainment/Extreme [a]	No State Standard
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon Monoxide	Unclassified/Attainment	Attainment
Nitrogen Dioxide	Unclassified/Attainment	Attainment
Sulfur Dioxide	Unclassified	Attainment
Lead (Particulate)	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: CARB Website, 2014

a. Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

Notes:

National Designation Categories

Non-Attainment Area: Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Unclassified/Attainment Area: Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant or meets the national primary or secondary ambient air quality standard for the pollutant.

State Designation Categories

Unclassified: A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non-attainment.

Attainment: A pollutant is designated attainment if the State standard for that pollutant was not violated at any site in the area during a three-year period.

Non-attainment: A pollutant is designated non-attainment if there was at least one violation of a State standard for that pollutant in the area.

Non-Attainment/Transitional: A subcategory of the non-attainment designation. An area is designated non-attainment/transitional to signify that the area is close to attaining the standard for the pollutant.

On April 16, 2004 EPA issued a final rule classifying the SJVAB as extreme nonattainment for Ozone, effective May 17, 2004 (69 FR 20550). The (federal) 1-hour ozone standard was revoked on June 6, 2005. However, many of the requirements in the 1-hour attainment plan (SIP) continue to apply to the SJVAB. The current ozone plan is the (federal) 8-hour ozone plan adopted in 2007. The SJVAB was reclassified from a "serious" nonattainment area for the 8-hour ozone standard to "extreme' effective June 4, 2010.

Air Quality Standards

The FCAA, first adopted in 1963, and periodically amended since then, established National Ambient Air Quality Standards (NAAQS). A set of 1977 amendments determined a deadline for the attainment of these standards. That deadline has since passed. Other CAA amendments, passed in 1990, share responsibility with the State in reducing emissions from mobile sources.

In 1988, the State of California passed the CCAA (State 1988 Statutes, Chapter 568), which set forth a program for achieving more stringent California Ambient Air Quality Standards. The ARB implements State ambient air quality standards, as required in the CCAA, and cooperates with the federal government in implementing pertinent sections of the FCAA Amendments (FCAAA). Further, CARB regulates vehicular emissions throughout the State. The SJVAPCD regulates stationary sources, as well as some mobile sources. Attainment of the more stringent State PM_{10} Air Quality Standards is not currently required.

The EPA uses six "criteria pollutants" as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called the NAAQS.

The SJVAPCD operates regional air quality monitoring networks that provide information on average concentrations of pollutants for which State or federal agencies have established ambient air quality standards. Descriptions of the six pollutants of importance in Fresno County follow.

- ✓ **Ozone (1-hour and 8-hour)**

  The most severe air quality problem in the Air Basin is the high level of ozone. Ozone occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. Here, ground level, or "bad" ozone, is an air pollutant that damages human health, vegetation, and many common materials. It is a key ingredient of urban smog. The troposphere extends to a level about 10 miles up, where it meets the second layer, the stratosphere. The stratospheric, or "good" ozone layer, extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

  "Bad" ozone is what is known as a photochemical pollutant. It needs reactive organic gases (ROG), NOx, and sunlight. ROG and NOx are emitted from various sources throughout Fresno County. In

order to reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors.

Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. Ozone, the primary constituent of smog, is the most complex, difficult to control, and pervasive of the criteria pollutants. Unlike other pollutants, ozone is not emitted directly into the air by specific sources. Ozone is created by sunlight acting on other air pollutants (called precursors), specifically NOx and ROG. Sources of precursor gases to the photochemical reaction that form ozone number in the thousands. Common sources include consumer products, gasoline vapors, chemical solvents, and combustion products of various fuels. Originating from gas stations, motor vehicles, large industrial facilities, and small businesses such as bakeries and dry cleaners, the ozone-forming chemical reactions often take place in another location, catalyzed by sunlight and heat. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins. Approximately 50 million people lived in counties with air quality levels above the EPA's health-based national air quality standard in 1994. The highest levels of ozone were recorded in Los Angeles, closely followed by the San Joaquin Valley. High levels also persist in other heavily populated areas, including the Texas Gulf Coast and much of the Northeast.

While the ozone in the upper atmosphere absorbs harmful ultraviolet light, ground-level ozone is damaging to the tissues of plants, animals, and humans, as well as to a wide variety of inanimate materials such as plastics, metals, fabrics, rubber, and paints. Societal costs from ozone damage include increased medical costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

Health Effects

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems, such as: forests and foothill communities; agricultural crops; and some man-made materials, such as rubber, paint, and plastic. High levels of ozone may negatively affect immune systems, making people more susceptible to respiratory illnesses, including bronchitis and pneumonia. Ozone accelerates aging and exacerbates pre-existing asthma and bronchitis and, in cases with high concentrations, can lead to the development of asthma

in active children. Active people, both children and adults, appear to be more at risk from ozone exposure than those with a low level of activity. Additionally, the elderly and those with respiratory disease are also considered sensitive populations for ozone.

People who work or play outdoors are at a greater risk for harmful health effects from ozone. Children and adolescents are also at greater risk because they are more likely than adults to spend time engaged in vigorous activities. Research indicates that children under 12 years of age spend nearly twice as much time outdoors daily than adults. Teenagers spend at least twice as much time as adults in active sports and outdoor activities. In addition, children inhale more air per pound of body weight than adults, and they breathe more rapidly than adults. Children are less likely than adults to notice their own symptoms and avoid harmful exposures.

Ozone is a powerful oxidant—it can be compared to household bleach, which can kill living cells (such as germs or human skin cells) upon contact. Ozone can damage the respiratory tract, causing inflammation and irritation, and it can induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthmatic symptoms. Ozone in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. Exposure to levels of ozone above the current ambient air quality standard leads to lung inflammation and lung tissue damage and a reduction in the amount of air inhaled into the lungs.

The ARB found ozone standards in Fresno County nonattainment of Federal and State standards.

✓ **Suspended PM (PM_{10} and $PM_{2.5}$)**

Particulate matter pollution consists of very small liquid and solid particles that remain suspended in the air for long periods. Some particles are large or concentrated enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter is emitted from stationary and mobile sources, including diesel trucks and other motor vehicles; power plants; industrial processes; wood-burning stoves and fireplaces; wildfires; dust from roads, construction, landfills, and agriculture; and fugitive windblown dust. PM_{10} refers to particles less than or equal to 10 microns in aerodynamic diameter. $PM_{2.5}$ refers to particles less than or equal to 2.5 microns in aerodynamic diameter and are a subset of PM_{10}. Particulates of concern are those that are 10 microns or less in diameter. These are small enough to be inhaled, pass through the respiratory system and lodge in the lungs, possibly leading to adverse health effects.

In the western United States, there are sources of PM_{10} in both urban and rural areas. Because particles originate from a variety of sources, their chemical and physical compositions vary widely. The composition of PM_{10} and $PM_{2.5}$ can also vary greatly with time, location, the sources of the material and meteorological conditions. Dust, sand, salt spray, metallic and mineral particles, pollen,

smoke, mist, and acid fumes are the main components of PM_{10} and $PM_{2.5}$. In addition to those listed previously, secondary particles can also be formed as precipitates from chemical and photochemical reactions of gaseous sulfur dioxide (SO_2) and NO_x in the atmosphere to create sulfates (SO_4) and nitrates NO_3. Secondary particles are of greatest concern during the winter months where low inversion layers tend to trap the precursors of secondary particulates.

The ARB 2008 PM2.5 Plan builds upon the aggressive emission reduction strategy adopted in the 2007 Ozone Plan and strives to bring the valley into attainment status for the 1997 NAAQS for $PM_{2.5}$. The 2008 $PM_{2.5}$ Plan indicates that all planned reductions (from the 2007 Ozone Plan and state standard.

The following new controls considered in the 2008 $PM_{2.5}$ Plan include:

- Tighter restrictions on residential wood burning and space heating
- More stringent limits on $PM_{2.5}$, SO_2, and NO_x emissions from industrial sources
- Measures to reduce emissions from prescribed burning and agricultural burning
- More effective work practices to control $PM_{2.5}$ in fugitive dust

The control strategy in this plan would also bring the valley closer to attainment status for the 2006 daily $PM_{2.5}$ standard. The district presented the draft 2008 $PM_{2.5}$ Plan to the District Governing Board on April 17, 2008, following a 30-day public comment period. This plan was delivered to the EPA in April 2008. The 2008 PM2.5 Plan for the 1997 PM2.5 standard (as revised in 2011) was approved by EPA on November 9, 2011, which contains motor vehicle emission budgets for PM2.5 and NOx established based on average annual daily emissions, as well as a trading mechanism. The motor vehicle emissions budget for PM2.5 includes directly emitted PM2.5 motor vehicle emissions from tailpipe, brake wear and tire wear. VOC, SOx, ammonia, and dust (from paved roads, unpaved roads, and road construction) were found to be insignificant and not included in the motor vehicle emission budgets for conformity purposes.

Health Effects

PM_{10} and $PM_{2.5}$ particles are small enough—about one-seventh the thickness of a human hair, or smaller—to be inhaled and lodged in the deepest parts of the lung where they evade the respiratory system's natural defenses. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health-related effects include reduced visibility and soiling of buildings. PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight

infections. PM_{10} and $PM_{2.5}$ can aggravate respiratory disease and cause lung damage, cancer, and premature death.

Although particulate matter can cause health problems for everyone, certain people are especially vulnerable to adverse health effects of PM_{10}. These "sensitive populations" include children, the elderly, exercising adults, and those suffering from chronic lung disease such as asthma or bronchitis. Of greatest concern are recent studies that link PM_{10} exposure to the premature death of people who already have heart and lung disease, especially the elderly. Acidic PM_{10} can also damage manmade materials and is a major cause of reduced visibility in many parts of the United States.

The ARB found PM_{10} standards in Fresno County in attainment of Federal standards and nonattainment for State standards. The ARB found $PM_{2.5}$ standards in Fresno County nonattainment of Federal and State standards.

✓ **Carbon Monoxide (CO)**

Carbon monoxide (CO) is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO is an odorless, colorless, poisonous gas that is highly reactive. CO is a byproduct of motor vehicle exhaust, contributes more than two thirds of all CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and fuel combustion in sources such as boilers and incinerators. Despite an overall downward trend in concentrations and emissions of CO, some metropolitan areas still experience high levels of CO.

Health Effects

CO enters the bloodstream and binds more readily to hemoglobin than oxygen, reducing the oxygen-carrying capacity of blood and thus reducing oxygen delivery to organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. Healthy individuals are also affected but only at higher levels of exposure. At high concentrations, CO can cause heart difficulties in people with chronic diseases and can impair mental abilities. Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, difficulty performing complex tasks, and in prolonged, enclosed exposure, death.

The adverse health effects associated with exposure to ambient and indoor concentrations of CO are related to the concentration of carboxyhemoglobin (COHb) in the blood. Health effects observed may include an early onset of cardiovascular disease; behavioral impairment; decreased exercise performance of young, healthy men; reduced birth weight; sudden infant death syndrome (SIDS); and increased daily mortality rate.

Most of the studies evaluating adverse health effects of CO on the central nervous system examine high-level poisoning. Such poisoning results in symptoms ranging from common flu and cold symptoms (shortness of breath on mild exertion, mild headaches, and nausea) to unconsciousness and death.

The ARB found CO standards in Fresno County in attainment of Federal standards and unclassified for State standards.

✓ **Nitrogen Dioxide (NO_2)**

Nitrogen oxides (NO_x) is a family of highly reactive gases that are primary precursors to the formation of ground-level ozone and react in the atmosphere to form acid rain. NO_x is emitted from combustion processes in which fuel is burned at high temperatures, principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A brownish gas, NO_x is a strong oxidizing agent that reacts in the air to form corrosive nitric acid, as well as toxic organic nitrates.

Health Effects

NO_x is an ozone precursor that combines with Reactive Organic Gases (ROG) to form ozone. See the ozone section above for a discussion of the health effects of ozone.

Direct inhalation of NO_x can also cause a wide range of health effects. NO_x can irritate the lungs, cause lung damage, and lower resistance to respiratory infections such as influenza. Short-term exposures (e.g., less than 3 hours) to low levels of nitrogen dioxide (NO_2) may lead to changes in airway responsiveness and lung function in individuals with preexisting respiratory illnesses. These exposures may also increase respiratory illnesses in children. Long-term exposures to NO_2 may lead to increased susceptibility to respiratory infection and may cause irreversible alterations in lung structure. Other health effects associated with NO_x are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NO_x can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NO_x can also impair visibility. NO_x is a major component of acid deposition in California. NO_x may affect both terrestrial and aquatic ecosystems. NO_x in the air is a potentially significant contributor to a number of environmental effects such as acid rain and eutrophication in coastal waters. Eutrophication occurs when a body of water suffers an increase in nutrients that reduce the amount of oxygen in the water, producing an environment that is destructive to fish and other animal life.

NO_2 is toxic to various animals as well as to humans. Its toxicity relates to its ability to combine with water to form nitric acid in the eye, lung, mucus membranes, and skin. Studies of the health impacts of NO_2 include experimental studies on animals, controlled laboratory studies on humans, and observational studies.

In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of NO_2, can suffer lung irritation and, potentially, lung damage. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes as well as hospital admissions for respiratory conditions.

NO_x contributes to a wide range of environmental effects both directly and when combined with other precursors in acid rain and ozone. Increased nitrogen inputs to terrestrial and wetland systems can lead to changes in plant species composition and diversity. Similarly, direct nitrogen inputs to aquatic ecosystems such as those found in estuarine and coastal waters can lead to eutrophication as discussed above. Nitrogen, alone or in acid rain, also can acidify soils and surface waters. Acidification of soils causes the loss of essential plant nutrients and increased levels of soluble aluminum, which is toxic to plants. Acidification of surface waters creates conditions of low pH and levels of aluminum that are toxic to fish and other aquatic organisms.

The ARB found NO_2 standards in Fresno County in attainment of Federal and State standards.

✓ **Sulfur Dioxide (SO_2)**

The major source of sulfur dioxide (SO_2) is the combustion of high-sulfur fuels for electricity generation, petroleum refining and shipping. High concentrations of SO_2 can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposures of asthmatic individuals to elevated SO_2 levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms such as wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of SO_2, in conjunction with high levels of PM, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in the lungs' defenses. SO_2 also is a major precursor to $PM_{2.5}$, which is a significant health concern and a main contributor to poor visibility. In humid atmospheres, sulfur oxides can react with vapor to produce sulfuric acid, a component of acid rain.

The ARB found SO_2 standards in Fresno County as unclassified for Federal standards and attainment for State standards.

- ✓ **Lead (Pb)**

  Lead, a naturally occurring metal, can be a constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used until recently to increase the octane rating in automobile fuel. Since the 1980s, lead has been phased out in gasoline, reduced in drinking water, reduced in industrial air pollution, and banned or limited in consumer products. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels; however, the use of leaded fuel has been mostly phased out. Since this has occurred the ambient concentrations of lead have dropped dramatically.

  Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children. Effects on the nervous systems of children are one of the primary health risk concerns from lead. In high concentrations, children can even suffer irreversible brain damage and death. Children 6 years old and under are most at risk, because their bodies are growing quickly.

  The ARB found Lead standards in Fresno County in attainment of Federal and State standards.

Toxic Air Contaminants (TACs)

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination. The ten TACs are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (diesel PM). Caltrans' guidance for transportation studies references the Federal Highway Administration (FHWA) memorandum titled "Interim Guidance on Air Toxic Analysis in NEPA Documents" which discusses emissions quantification of six "priority" compounds of 21 Mobile Source Air Toxics (MSAT) identified by the United States Environmental Protection Agency (USEPA). The six diesel exhaust (particulate matter and organic gases), benzene, 1,3-butadiene, acetaldehyde, formaldehyde, and acrolein.

Some studies indicate that diesel PM poses the greatest health risk among the TACs listed above. A 10-year research program (California Air Resources Board 1998) demonstrated that diesel PM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to diesel PM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have

other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

Diesel PM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a diesel PM exposure method. This method uses the ARB emissions inventory's PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of diesel PM. Table 3-20 depicts the ARB Handbook's recommended buffer distances associated with various types of common sources.

Existing air quality concerns within Fresno County and the entire SJVAB are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

- ✓ **Odors**

  Typically odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

  With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

TABLE 3-20
Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*

SOURCE CATEGORY	ADVISORY RECOMMENDATIONS
Freeways and High-Traffic Roads	- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). - Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	- Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. - Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	- Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	- Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	- Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. - Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

*Notes:
• These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.
• Recommendations are based primarily on data showing that the air pollution exposures addressed here (i.e., localized) can be reduced as much as 80% with the recommended separation.
• The relative risk for these categories varies greatly (see Table 1-2). To determine the actual risk near a particular facility, a site-specific analysis would be required. Risk from diesel PM will decrease over time as cleaner technology phases in.
• These recommendations are designed to fill a gap where information about existing facilities may not be readily available and are not designed to substitute for more specific information if it exists. The recommended distances take into account other factors in addition to available health risk data (see individual category descriptions).
• Site-specific project design improvements may help reduce air pollution exposures and should also be considered when siting new sensitive land uses.
• This table does not imply that mixed residential and commercial development in general is incompatible. Rather it focuses on known problems like dry cleaners using perchloroethylene that can be addressed with reasonable preventative actions.
• A summary of the basis for the distance recommendations can be found in the ARB Handbook: Air Quality and Land Use Handbook: A Community Health Perspective.

Source: SJVAPCD 2014

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor.

Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The SJVAPCD District has identified some common types of facilities that have been known to produce odors in the SJV Air Basin. The types of facilities that are known to produce odors are shown in Table 3-21 along with a reasonable distance from the source within which, the degree of odors could possibly be significant. Information presented in Table 3-21 will be used as a screening level of analysis for potential odor sources for the proposed project.

✓ **Sensitive Receptors**

A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals and schools.

Existing TCMs and Air Quality Mitigation

The FCAA defines a TCM as including, but not limited to: programs for improved public transit; high occupancy vehicle lanes; employer-based transportation management plans; trip reduction ordinances; traffic flow improvements; park-a-ride lots; programs to restrict vehicle use during peak periods; rideshare services; bicycle and pedestrian programs; programs to control vehicle idling; flexible work schedules; programs and ordinances to facilitate non-automobile travel; and programs to encourage the voluntary removal of pre-1980 light duty vehicles and trucks. Best available control measures (BACM) are an example of a transportation control measure.

TABLE 3-21
Screening Levels for Potential Odor Sources

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Compositing Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

Source: SJVAPCD 2014

A description of the various TCMs that have been incorporated into the SJVAPCD AQAP, Rate of Progress (ROP) Plans, and the SJVAPCD TCM Program, or have been identified as necessary to provide for positive air quality conformity findings, is included in the latest Air Quality Conformity Finding for the 2014 RTP and Federal Transportation Improvement Program (FTIP), dated June 26, 2014. The Conformity Finding includes a complete description of each TCM contained in the current SIP, the SJVAPCD AQAP, the TCM Program, and in the ROP Plans.

Fresno County and its fifteen incorporated cities, private business, and government offices implement some of these programs including traffic flow improvements, public transit, park and ride lots, bicycling programs, and alternate work schedules.

Central Valley Ridesharing provides rideshare programs in Fresno County and is administered by Fresno COG. It also provides ride matching within the four counties of Madera, Kings, Fresno, and Tulare.[1] A complete description of the current air quality requirements is provided in the 2014 RTP and the latest Air Quality Conformity Findings are included the 204 RTP and SCS Appendices.

[1] Fresno COG – 2014 Regional Transportation Plan (RTP)

Air Quality Management

Until the passage of the CCAA, the primary role of air districts in California was the control of stationary sources of pollution such as industrial processes and equipment. With the passage of the FCAA and CCAA, air districts were required to implement transportation control measures (TCMs) and were encouraged to adopt indirect source control programs to reduce mobile source emissions. These mandates created the necessity for the SJVAPCD to work closely with cities and counties and with regional transportation planning agencies (RTPAs) to develop new programs.

A description of various TCMs incorporated into the SJVAPCD Air Quality Attainment Plan (AQAP), Rate of Progress (ROP) Plans, and the SJVAPCD TCM Program, together with TCMs that have been identified as necessary to provide for positive air quality conformity findings is included in 2014 RTP Air Quality Conformity Determination. The Conformity Determination includes a complete description of each TCM contained in the current SIP, the SJVAPCD AQAP, the TCM Program, and in the ROP Plans.

Responsibility for managing air quality in California is becoming increasingly regionalized. Air districts have the primary responsibility to control air pollution from all sources other than emissions directly from motor vehicles, which are the responsibility of EPA and CARB. Air districts regulate air quality through their permit authority for most types of stationary emission sources and through their planning and review activities for other sources. Further, air districts adopt and enforce rules and regulations to achieve State and federal ambient air quality standards and enforce applicable State and federal law. The CCAA requires each nonattainment district to reduce pertinent air contaminants by at least five percent per year until State Quality Standards are met.

Environmental Impacts, Mitigation Measures, and Significance after Mitigation

Methodology

This section analyzes the air quality impacts associated with the implementation of Fresno COG's 2014 RTP. This analysis evaluates each significance criterion individually, assessing how implementation of Fresno COG's 2014 RTP, including changes to the land use pattern and transportation network, may impact the air quality in the Fresno County region. The analysis for each significance criteria includes a discussion of program-level impacts for the planning horizon year of 2040. Appropriate mitigation measures are applied where a significant impact has been determined.

Criteria of Significance

According to the California Environmental Quality Act (CEQA), a project will normally have a significant adverse impact on air quality if it will "violate any ambient air quality standard, conflict with or obstruct implementation of an applicable air quality plan, result in a cumulatively considerable net increase of any

criteria pollutant for which the project region is non-attainment, create substantial objectionable odors, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations."

An impact is considered significant if one or more of the following conditions occur from implementation of Fresno COG's 2014 RTP:

- ✓ Conflict with or obstruct implementation of the applicable air quality plan.
- ✓ Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- ✓ Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- ✓ Expose sensitive receptors to substantial pollutant concentrations.
- ✓ Create objectionable odors affecting a substantial number of people.

Impact 3.4.1 – Conflict with or obstruct implementation of an applicable air quality plan

The following analysis is a summary of the Conformity Analysis for the 2015 Federal Transportation Improvement Program (FTIP) and the 2014 Regional Transportation Plan (RTP). The complete Air Quality Conformity Analysis is included in the 2014 RTP and SCS Appendices.

- ✓ **Fresno County Conformity Tests**

  The conformity tests specified in the Federal transportation conformity regulations are: (1) the emissions budget test, and (2) the interim emission test. For the emissions budget test, predicted emissions for the TIP/RTP must be less than or equal to the motor vehicle emissions budget specified in the approved air quality implementation plan or the emissions budget found to be adequate for transportation conformity purposes. If there is no approved air quality plan for a pollutant for which the region is in nonattainment or no emission budget has been found to be adequate for transportation conformity purposes, the interim emission test applies. The Air Quality Conformity summarizes the applicable air quality implementation plans and conformity tests for ozone, PM_{10}, and $PM_{2.5}$.

  Each of the SJVAPCD plans (2007 Ozone Plan, 2008 PM2.5 Plan, and 2007 PM_{10} Maintenance Plan, which relies on the 2003 PM_{10} Plan for emissions reductions measures) identifies a "budget" for measuring progress toward achieving attainment of the national air quality standard. A "budget" is, in effect, an emissions "threshold" or "not to exceed value" for specific years in which progress toward attainment of the standard must be measured. These specific years can also be described as "budget years" and are established to ensure achievement of the "budget" to demonstrate continued progress

toward attainment of the national air quality standard. The term "base year" also reflects a "threshold" or "not to exceed" value against which future emissions from the 2014 RTP are measured.

The conformity regulation (Section 93.118[b] and [d]) requires documentation of the "budget years" for which consistency with motor vehicle emission "budgets" must be shown. In addition, any interpolation performed to meet tests for "budget years" in which specific analysis is not required need to be documented. For the selection of the analysis years, the conformity regulation requires: (1) that if the attainment year is in the time span of the transportation plan, it must be modeled; (2) the last year forecast in the transportation plan must be an analysis year; and (3) analysis years may not be more than ten years apart. In addition, the conformity regulation requires that conformity must be demonstrated for each "budget year." It is important to note, that although the conformity regulation requires modeling of several analysis years in addition to the “budget years," those additional analysis years must demonstrate that emissions in those years are less than the applicable motor vehicle emissions "budget." For example the 2014 RTP analysis models Ozone motor vehicle emissions from the 2014 RTP in the years 2014, 2017, 2020, 2023, 2032, and 2040. As Table 3-22 below shows, 2014, 2017, and 2020, are “budget years" and 2023 is the year of attainment. As described above, Ozone emissions for the 2023, 2032, and 2040 analysis years must be less than or equal to the 2017 "budget" to demonstrate compliance with the SJVAPCD 2008 Ozone Plan.

Section 93.118(b)(2) clarifies that when a maintenance plan has been submitted, conformity must be demonstrated for the last year of the maintenance plan and any other years for which the maintenance plan establishes budgets in the time frame of the transportation plan. Section 93.118(d)(2) indicates that a regional emissions analysis may be performed for any years, the attainment year, and the last year of the plan’s forecast. Other years may be determined by interpolating between the years for which the regional emissions analysis is performed.

Section 93.118(d)(2) indicates that the regional emissions analysis may be performed for any years in the time frame of the transportation plan provided they are not more than ten years apart and provided the analysis is performed for the attainment year (if it is in the time frame of the transportation plan) and the last year of the plan’s forecast period. Emissions in years for which consistency with motor vehicle emissions budgets must be demonstrated, as required in paragraph (b) of this section (i.e., each budget year), may be determined by interpolating between the years for which the regional emissions analysis is performed.

For $PM_{2.5}$, the attainment year is 2014 for both the 1997 and 2006 Standards. On March 8, 2005, EPA issued Guidance for Determining the “Attainment Year” for Transportation Conformity in new 8-hour ozone and $PM_{2.5}$ nonattainment areas (EPA, 2005b). Per FCAA section 172(a)(2), all $PM_{2.5}$ nonattainment areas will have an initial maximum statutory attainment date of April 5, 2010. However, the submitted 2008 $PM_{2.5}$ Plan shows that the San Joaquin Valley $PM_{2.5}$ nonattainment area

can attain the annual $PM_{2.5}$ NAAQS in 2014. In addition, the attainment year for the 2006 $PM_{2.5}$ areas will be 2014.

TABLE 3-22
San Joaquin Valley Conformity Analysis Years

Pollutant	Budget Years[1]	Attainment/ Maintenance Year	Intermediate Years	RTP Horizon Year
CO	N/A	2018	2017/2025/2035	2040
Ozone	2014/2017/2020 /2023	2032	N/A	2040
PM10	N/A	2020	2025/2035	2040
PM2.5	N/A	2014	2017/2025/2035	2040

1 Budget years that are not in the time frame of the transportation plan are not included as analysis years (e.g., CO 2003 and 2010, Ozone 2008, PM10 2005, PM2.5 2009), although they may be used to demonstrate conformity.
Source: San Joaquin Valley Air Pollution Control District, 2014

- **Ozone Precursors**

The regional emissions analysis and forecasts for ozone precursors (ROG and NO_X) are summarized in Table 3-23. The summary of emissions forecasts is derived from outputs of the EMFAC 2011 model performed by Fresno COG staff during the preparation of the Air Quality Conformity. As indicated above, the words "budget" refers to the emissions "threshold" or "not to exceed value" for “budget years" in order demonstrate continued progress toward attainment of the state air quality standard.

- **Particulate Matter**

The regional emissions analysis and forecasts for particulate matter (PM_{10} and $PM_{2.5}$) are summarized in Table 3-23. The summary of emissions forecasts is derived from outputs of the EMFAC 2011 model performed by Fresno COG staff during the preparation of the Air Quality Conformity. As indicated above, the words "budget" refers to the emissions "threshold" or "not to exceed value" for “budget years" in order demonstrate continued progress toward attainment of the state air quality standard. The words" base year" in the tables below also reflects a "threshold" or "not to exceed" value against which future emissions from the 2014 RTP are measured.

TABLE 3-23
Conformity Results for RTP Projects - 2014 Conformity Results Summary

Pollutant	Scenario	Emissions Total		DID YOU PASS?	
		CO (tons/day)		CO	
Carbon Monoxide	2010 Budget	240			
	2017	65		YES	
	2018 Budget	240			
	2018	62		YES	
	2025	44		YES	
	2035	40		YES	
	2040	42		YES	
Ozone		ROG (tons/day)	NOx (tons/day)	ROG	NOx
	2014 Budget	10.7	30.0		
	2014	8.4	27.4	YES	YES
	2017 Budget	9.3	22.6		
	2017	6.7	20.3	YES	YES
	2020 Budget	8.3	17.7		
	2020	5.8	16.1	YES	YES
	2023 Budget	8.0	13.5		
	2023	5.3	12.0	YES	YES
	2032	4.8	11.2	YES	YES
	2040	4.9	11.7	YES	YES
PM-10		PM-10 (tons/day)	NOx (tons/day)	PM-10	NOx
	2020 Budget	16.1	23.2		
	2020	7.0	14.6	YES	YES
	2020 Budget	16.1	23.2		
	2025	7.4	9.9	YES	YES
	2020 Budget	16.1	23.2		
	2035	7.9	9.2	YES	YES
	2020 Budget	16.1	23.2		
	2040	8.0	9.8	YES	YES
1997 PM2.5 24-Hour & Annual Standards and 2006 24-Hour Standard		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
	2014 Budget	1.1	31.4		
	2014	1.0	29.2	YES	YES
	2014 Budget	1.1	31.4		
	2017	0.8	21.5	YES	YES
	2014 Budget	1.1	31.4		
	2025	0.9	12.3	YES	YES
	2014 Budget	1.1	31.4		
	2035	1.0	11.6	YES	YES
	2014 Budget	1.1	31.4		
	2040	1.0	12.2	YES	YES

✓ **Results of the Conformity Analysis**

A regional emissions analysis was conducted for the years 2014, 2017, 2018, 2020, 2023, 2025, 2032, 2035, and 2040 for each applicable pollutant. All analyses were conducted using the latest planning assumptions and emissions models. The major conclusions of the Fresno COG Conformity Analysis are:

- For carbon monoxide, the total regional on-road vehicle-related emissions associated with implementation of the 2014 FTIP and the 2014 RTP for the analysis years are projected to be less than the approved motor vehicle emissions budget established in the 2004 Revision to the California State Implementation Plan for carbon monoxide. The applicable conformity test for carbon monoxide is therefore satisfied.
- For ozone, the total regional on-road vehicle-related emissions (ROG and NO_X) associated with implementation of the 2014 FTIP and the 2014 RTP for all years tested are projected to be less than the adequate emissions budgets specified in the 2007 Ozone Plan. The conformity tests for ozone are therefore satisfied.
- For PM_{10}, the total regional vehicle-related emissions (PM_{10} and NO_X) associated with implementation of the 2014 FTIP and the 2014 RTP for all years tested are either (1) projected to be less than the approved emissions budgets, or (2) less than the emission budgets using the approved PM_{10} and NO_X trading mechanism for transportation conformity purposes from the 2007 PM_{10} Maintenance Plan. The conformity tests for PM_{10} are therefore satisfied.
- For $PM_{2.5}$, the total regional on-road vehicle-related emissions associated with implementation of the 2014 FTIP and the 2014 RTP for the analysis years are projected to be less than the adequate emission budgets specified in the 2008 $PM_{2.5}$ Plan. The conformity tests for $PM_{2.5}$ for both the 1997 and 2006 standards are therefore satisfied.

Based on the conformity analysis, the 2014 FTIP and the 2014 RTP conform to the applicable State Implementation Plan (SIP) and all applicable sections of the EPA's Transportation Conformity Rule.

✓ **State Air Quality Standards**

The San Joaquin Valley Air Pollution Control District is one of 35 air quality management districts that have prepared air quality management plans to accomplish a five percent annual reduction in emissions documenting progress toward achievement of the state ambient air quality standards.

The SJVAPCD air quality management plans document required emissions reductions from all emissions sources, mobile and stationary. For this analysis, only on-road mobile source emissions are considered, as the 2014 RTP does not impact the implementation of any SJVAPCD regulations or incentives on other emissions source categories. As such, this analysis will not show the entire five percent reductions required by each of the SJVAPCD plans (for each applicable pollutant), but, will

show the on-road mobile source share of the five percent per year reductions resulting from each of the SJVAPCD Plans. Required reductions from all other emissions sources can be found in the applicable SJVAPCD Plan.

The 2014 RTP demonstrates compliance with the list of comprehensive regulatory and incentive based measures contained in each plan by demonstrating that motor vehicle emissions resulting from the 2014 RTP are less than specified motor vehicle emissions "budgets" contained in the applicable SJVAPCD plan (2007 Ozone Plan, 2008 $PM_{2.5}$ Plan, and 2007 PM10 Maintenance Plan, which relies on the 2003 PM10 Plan for emissions reductions measures). To document compliance with the state air quality standards, each of these SJVAPCD plans identifies specific years in which progress toward attainment of the standard must be measured as shown in Table 3-22. These years are described as "budget" years because each of these SJVAPCD plans identifies motor vehicle emission "budgets" in which 2014 RTP motor vehicle emissions cannot exceed in order to ensure continued progress toward attainment of the state standard. For on-road mobile sources, the SJVAPCD plans identify the same emissions reduction strategies for both state and federal standards.

The SJVAPCD 2007 PM_{10} Maintenance Plan which relies on the 2003 PM_{10} Plan for emissions reductions measures allows trading from the motor vehicle emissions "budget" for the PM_{10} precursor NOx to the motor vehicle emissions budget for primary PM_{10} using a 1.5 to 1 ratio. The trading mechanism allows the agencies responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the 2005 budget for PM_{10} with a portion of the 2005 budget for NOx, and use these adjusted motor vehicle emissions budgets for PM_{10} and NOx to demonstrate transportation conformity with the PM_{10} Maintenance Plan for analysis years after 2005. The approved PM_{10} trading mechanism recognizes NOx precursor emissions result in the formation of PM_{10} emissions at a rate of 1 ton of PM_{10} for every 1.5 tons of NOx.

The trading mechanism is approved for analysis years after 2005. To ensure that the trading mechanism does not impact the ability to meet the NOx "budget" contained in the PM10 Maintenance Plan, the NOx emission reductions available to supplement the PM10 motor vehicle emissions "budget" shall only be those remaining after the NOx motor vehicle emissions "budget" has been met. For example in 2040, PM10 emissions equal 8.0 tons per day and NOx emissions equal 9.8 tons per day. Because 2040 NOx emissions are less than the 2020 NOx emissions "budget" (23.2 tons per day) from the SJVAPCD 2007 PM10 Maintenance Plan, emissions trading, as approved in the PM10 plan is allowable. Trading between the PM10 emissions budget and the NOx emissions budget occurs utilizing the difference between the applicable NOx budget, which in this case is the 2020 "budget", and the actual NOx emissions resulting from the 2014 RTP. In 2040, the difference between the 2020 NOx budget and the 2040 NOx emissions is 13.4 tons per day. The 2020 NOx budget is a "not to exceed" number from the SIP, while the 2040 value is an actual modeled estimate. Emission trading as approved in the PM10 Plan utilizes a 1.5 ton of NOx for every 1 ton of PM10 emissions remaining between the applicable NOx budget and the actual NOx emissions. Because the analysis

demonstrates that PM10 precursor NOx emissions are significantly less than the emissions budgets, it is likely, PM10 emissions resulting from the presence of the PM 10 precursor NOx will not form in 2040. This results in the ability to "trade" approximately 6.0 tons of NOx (which again is reflective of the difference between the 2020 "budget" and the 2040 PM10 emissions resulting from the 2014 RTP) for 13.4 tons of PM10 in 2040 because the formation of PM10 emissions resulting from precursor NOx emissions has been decreased.

Documentation of this can be found in the 2014 Conformity Analysis for the 2014 RTP and the 2014 FTIP, which was released for public comment concurrent to the 2014 RTP and 2014 RTP EIR.

Similar to the analysis documenting compliance with federal standards, the term "budget" after scenario year represents a not to exceed value. The term base year after a scenario year in the tables below also reflects a not to exceed value against which future emissions from the 2014 RTP are measured.

For this analysis, only on-road mobile sources are considered as the 2014 RTP does not impact the implementation of any SJVAPCD regulations or incentives on other emissions source categories.

- **Results of the Analysis**

  As shown in Tables 3-24 through 3-26, the total emissions in each scenario year for each pollutant is less than the emissions "budget" as established in the applicable SJVAPCD Plan. As previously noted, the emissions "budget" for each criteria pollutant is a "threshold" or "not to exceed" value for emissions. These tables demonstrate that the 2014 RTP contributes to positive progress toward the attainment of state ambient air quality standards. These tables also demonstrate that the 2014 RTP is consistent with the SJVAPCD plans, including their regulations and incentives relative to motor vehicle emissions budgets.

  Table 3-25 (PM_{10}) and Table 3-26 ($PM_{2.5}$) document that PM_{10} and $PM_{2.5}$ emissions grow in 2025, 2035 and 2040, and that PM_{10} and $PM_{2.5}$ precursor NOx emissions increased in 2040. It should be noted that PM_{10} emissions in 2040 as well as $PM_{2.5}$ emissions in 2040 still remain below the motor vehicle emissions thresholds (i.e. "budget year" and "base year"); therefore the emissions comply with the SJVAPCD plan to reduce PM_{10} and $PM_{2.5}$ emissions. This demonstrates compliance with the state ambient air quality standards for PM_{10} and $PM_{2.5}$.

TABLE 3-24
Ozone, ROG, and NOX Emissions Test (Summer Tons per Day)

	Emissions (Tons/Day)		% Below Budget		% Reduction/Year	
	ROG	NOX	ROG	NOX	ROG	NOX
2014 Budget	**10.90**	**30.00**	**N/A**	**N/A**	**N/A**	**N/A**
2014	8.40	27.40	22.9%	8.7%	N/A	N/A
2017 Budget	**9.30**	**22.60**	**N/A**	**N/A**	**N/A**	**N/A**
2017	6.70	20.30	28.0%	10.2%	6.7%	8.6%
2020 Budget	**8.30**	**17.70**	**N/A**	**N/A**	**N/A**	**N/A**
2020	5.80	16.10	30.1%	9.0%	4.5%	6.9%
2023 Budget	**8.00**	**13.50**	**N/A**	**N/A**	**N/A**	**N/A**
2023	5.30	12.00	33.8%	11.1%	2.9%	8.5%
2035	4.80	11.20	40.0%	17.0%	0.8%	0.6%
2040	4.90	11.70	38.8%	13.3%	-0.4%	-0.9%

Source: Fresno COG, 2014

TABLE 3-25
PM10 Emissions (Annual Tons per Day)

	Emissions (Tons/Day)		% Below Budget		% Reduction/Year	
	PM10	NOX	PM10	NOX	PM10	NOX
2020 Budget	**16.10**	**23.20**	**N/A**	**N/A**	**N/A**	**N/A**
2020	7.00	14.60	56.5%	37.1%	N/A	N/A
2025	7.40	9.90	54.0%	57.3%	-1.1%	6.4%
2035	7.90	9.20	50.9%	60.3%	-0.7%	1.0%
2040	8.00	9.80	50.3%	57.8%	-0.3%	-1.3%

Source: Fresno COG, 2014

TABLE 3-26
PM2.5 Emissions - 1997 PM2.5
24-Hour & Annual Standards and 2006 24-Hour Standard

	Emissions (Tons/Day)		% Below Budget		% Reduction/Year	
	PM2.5	NOX	PM2.5	NOX	PM2.5	NOX
2014 Budget	**1.10**	**31.40**	**N/A**	**N/A**	**N/A**	**N/A**
2014	1.00	29.20	9.1%	7.0%	N/A	N/A
2017	0.80	21.50	27.3%	31.5%	6.7%	8.8%
2025	0.90	12.30	18.2%	60.8%	-1.6%	5.3%
2035	1.00	11.60	9.1%	63.1%	-1.1%	0.6%
2040	1.00	12.20	9.1%	61.1%	0.0%	-1.0%

Source: Fresno COG, 2014

Emissions for criteria pollutants as a result of mobile sources from implementation of the 2014 RTP and SCS were quantified for the Year 2012 and the Year 2040 with the Project. The emissions shown in Table 3-27 account for all mobile sources within Fresno County. Results of the analysis show that emissions for criteria pollutants for the Year 2040 with the Project scenario will be less than the Year 2012 scenario despite recording higher VMT. Emissions for ROG, CO, and NOX exhibit a substantial reduction of more than 50%. Emissions reductions for PM2.5 are 22% when compared to the Year 2012 Scenario. PM10 emission reductions were determined to be minimal. The 2008 Base Year Model was not compared to the Year 2040 Build scenario since the Year 2008 is not a conformity year. EMFAC results for the year 2008 do not include the new diesel emissions.

The project will result in beneficial effects of system-wide improvement in traffic flows and reduced congestion, which would reduce the potential for increased air emissions. The SJVAPCD 2007 Ozone Plan, 2007 PM_{10} Maintenance Plan, and the 2008 $PM_{2.5}$ Plan all document the SJVAPCD's plans to achieve the state ambient air quality standards, and as such, compliance with the regulations and incentives contained in the SJVAPCD plans results in compliance with the state ambient air quality standards. Based on the air quality analysis, the 2014 RTP conforms to the applicable SJVAPCD plans (2007 Ozone Plan, 2007 PM_{10} Maintenance Plan, and the 2008 $PM_{2.5}$ Plan) and demonstrates progress toward attainment with the state ambient air quality standards for PM_{10}, $PM_{2.5}$ and Ozone. As a result, implementation of the 2014 RTP would result in a *less than significant* impact to PM10, PM2.5, and Ozone. While the 2014 RTP does contribute to an ongoing violation, it does not impede the above referenced plans and regulations.

TABLE 3-27
PM10 Emissions (Annual Tons per Day)

	2012	2040 No Build	2040 Build (2014 RTP/SCS Scenario B)
VMT	23,674,300	33,693,511	32,892,123
ROG (tons/day)	10.45	5.10	5.00
CO (tons/day)	98.64	41.10	40.19
NOX (tons/day)	34.95	12.85	12.55
PM10 (tons/day)	2.26	2.30	2.25
PM2.5 (tons/day)	1.36	1.09	1.06

Source: Fresno COG, EMFAC 2011.

Mitigation Measures

✓ **None required**

Significance After Mitigation

Not applicable.

Impact 3.4.2 – Violate any air quality standard or contribute substantially to an existing or projected air quality violation

✓ **Project Construction Impacts on Air Quality**

Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture. Health risks associated with dust inhalation include lung cancer, silicosis, chronic obstructive pulmonary disease, and asthma. Long-term exposure to dust is the main source to the health risks previously listed. The mitigation measures identified below are intended to minimize exposure to fugitive dust.

As individual transportation improvements are constructed, the activity at individual construction sites will involve grading and other earth-moving operations and the use of diesel and gasoline-powered construction equipment. These could generate exhaust emissions of carbon monoxide and nitrogen dioxide at the individual construction sites. Where asphalt is used, volatile organic compounds (VOC) could be released from asphalt when it is applied to the roadways' surfaces. If an individual construction site is located near existing homes or other sensitive receptors, such emissions could have the potential to result in significant short-term impacts at that particular location.

The SJVAPCD has developed thresholds of significance for individual construction projects as shown in Table 3-28. Project-level analysis conducted for CEQA purposes should estimate construction emissions for each individual improvement project based on the equipment used, vehicle miles traveled, and time allowed to complete the individual improvement project. Mitigation measures to reduce air quality impacts should be established in project-specific environmental documents. Some of the larger projects could have the potential to exceed the significance thresholds established by the District, creating significant short-term impacts. These impacts could occur in localized areas

depending on the construction site locations, and could impact land uses, facilities and activities that may be occurring on these properties within vicinity of the projects requiring mitigation

TABLE 3-28
SJVAPCD Air Quality Thresholds of Significance

Project Type	Ozone Precursor Emissions (tons/year)					
	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Short-term Effects (Construction)	100	10	10	27	15	15

Source: SJVAPCD 2014

Since the Project proposes more highway and arterial projects than the No Project Alternative, short-term construction emissions could be greater. However, construction-related impacts are expected to be temporary in nature and can generally be reduced to a less than significant level through the use of mitigation measures and through compliance with applicable existing city, county, state, and District regulations for reducing construction-related emissions. The SJVAPCD's Regulation VIII is applied to all construction sites and will constitute sufficient measures to reduce air quality impacts to a level considered less-than significant. Individual projects shall be required to implement mitigation measures to reduce construction emissions as determined by the applicable analysis of such air quality project construction impacts.

Mitigation Measures

The specific impacts on air quality will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Project implementation agencies will ensure implementation of mitigation measures to reduce PM and NOx emissions from construction sites, including:

  - Maintain on-site truck loading zones.
  - Configure on-site construction parking to minimize traffic interference and to ensure emergency vehicle access.
  - Provide temporary traffic control during all phases of construction activities to improve traffic flow.
  - Use best efforts to minimize truck idling to not more than two minutes during construction.
  - Apply non-toxic soil stabilizers (according to manufacturers' specifications) to all inactive construction areas.

- During construction, replace ground cover in disturbed areas as quickly as possible.
- During construction, enclose, cover, water twice daily or apply non-toxic soil binders (according to manufacturers' specifications) to exposed piles with 5 percent or greater silt content and to all unpaved parking or staging areas or unpaved road surfaces.
- During the period of construction, install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- During the period of construction, assure that traffic speeds on all unpaved roads be reduced to 15 mph or less.
- Pave all construction access roads at least 100 feet on to the site from permanent roadways.
- Cover all haul trucks.

✓ Project implementation agencies will require that construction sites employ a balanced cut/fill ratio to the extent possible, thus reducing haul-truck trip emissions.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce construction impacts on air quality, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.4.3 - Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Fresno County is nonattainment for Ozone (1 hour and 8 hour) and PM10 and PM2.5. The project will result in beneficial effects of system-wide improvement in traffic flows and reduced congestion, which would reduce the potential for increased air emissions. The SJVAPCD 2007 Ozone Plan, 2007 PM10 Maintenance Plan, and the 2008 PM2.5 Plan all document the SJVAPCD's plans to achieve the state ambient air quality standards, and as such, compliance with the regulations and incentives contained in the SJVAPCD plans results in compliance with the state ambient air quality standards. Based on the air quality analysis, the 2014 RTP conforms to the applicable SJVAPCD plans (2007 Ozone Plan, 2007 PM10 Maintenance Plan, and the 2008 PM2.5 Plan) and demonstrates progress toward attainment with the state ambient air quality standards for PM10, PM2.5 and Ozone. As a result, implementation of the 2014

RTP would result in a less than significant impact to PM10, PM2.5, and Ozone. While the 2014 RTP does contribute to an ongoing violation, it does not impede the above referenced plans and regulations.

Mitigation Measures

None required.

Significance After Mitigation

Not applicable.

Impact 3.4.4 - Expose sensitive receptors to substantial pollutant concentrations.

✓ **Mobile Source Air Toxics (MSAT) Background**

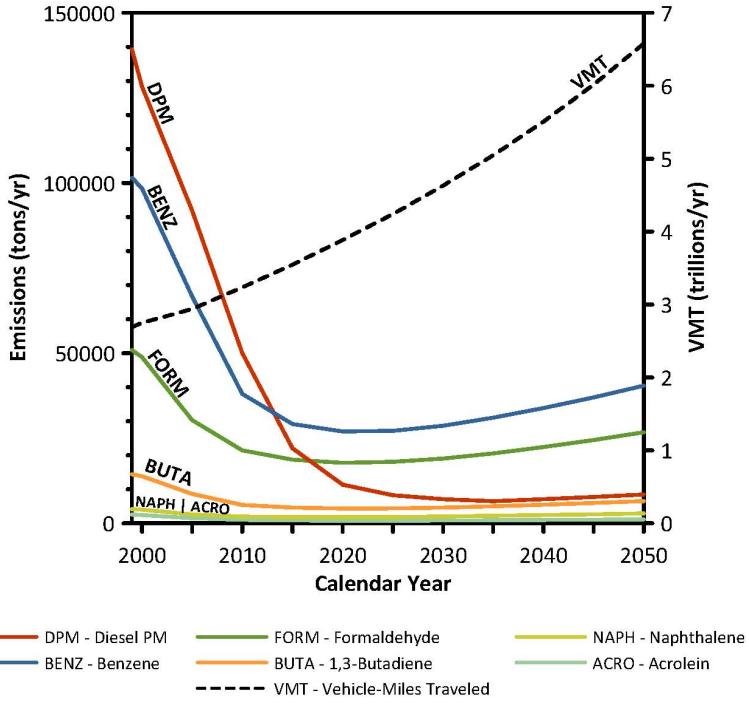
Controlling air toxic emissions became a national priority with the passage of the Federal Clean Air Act Amendments (FCAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources. In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment. These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter.

➢ **National MSAT Trends**

The 2007 EPA rule requires controls that will dramatically decrease Mobile Source Air Toxics (MSAT) emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050, as shown in Figure 3-7 on the following page.

FIGURE 3-7

**NATIONAL MSAT EMISSION TRENDS 1999 – 2050
FOR VEHICLES OPERATING ON ROADWAYS
USING EPA's MOBILE6.2 MODEL**



Note: (1) Annual emissions of polycyclic organic matter are projected to be 561 tons/yr for 1999, decreasing to 373 tons/yr for 2050.
(2) Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors

- **Local MSAT Trends (Monitoring in Fresno County)**

Estimation of Risk: CARB monitors toxics throughout California, including one site in Fresno County: First Street. Data obtained from this monitoring site between 1989 and 2012 is shown in Tables 3-29 through 3-38. The estimated risks shown in CARB's annual toxics summaries in the tables below are estimated chronic cancer risk (acute risks and non-cancer risks are not shown) resulting from the inhalation pathway. These risks are expressed in terms of expected cancer cases per million population based on exposure to the annual mean concentration over 70 years. They are calculated using unit risk factors provided to the CARB by the California Office of Environmental Health Hazard Assessment. The data provided in the tables below show typical cancer risk levels for sensitive receptors not located near major freeways or expressways.

Based on monitoring results in Tables 3-29 through 3-38, toxic emissions are declining except for formaldehyde. To address this issue, a mitigation measure has been added to address project level impacts.

TABLE 3-29
City of Fresno – First Street Monitoring Site
(1, 3, Butadiene Measurements)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit	Estimated Risk
2012[a]	0.02	0.02	0.047	0.14	0.18	0.049	29	0.04	18
2011	0.02	0.02	0.072	0.20	0.25	0.075	30	0.04	27
2010	0.02	0.02	0.059	0.16	0.21	0.060	30	0.04	22
2009	0.02	0.02	0.084	0.26	0.34	0.097	32	0.04	32
2008	0.02	0.04	0.071	0.16	0.27	0.069	31	0.04	27
2007	0.02	0.02	0.086	0.26	0.35	0.105	29	0.04	32
2006	0.02	0.05	0.082	0.21	0.30	0.085	31	0.04	31
2005	0.02	0.07	0.101	0.29	0.47	0.117	34	0.04	38
2004	0.02	0.02	0.098	0.26	0.39	0.106	30	0.04	37
2003	0.02	0.06	0.127	0.30	0.58	0.151	31	0.04	48
2002	0.02	0.07	0.194	0.47	1.00	0.225	31	0.04	73
2001	0.02	0.10	0.182	0.42	0.90	0.226	30	0.04	68
2000	0.02	0.09	0.195	0.62	1.00	0.285	30	0.04	73
1999	0.02	0.15	0.214	0.46	0.84	0.225	31	0.04	80
1998	0.02	0.15	0.265	0.78	1.00	0.295	31	0.04	100
1997	0.02	0.14	0.233	0.71	1.00	0.268	31	0.04	87
1996	0.02	0.13	0.234	0.49	1.00	0.230	31	0.04	88
1995	0.02	0.17	0.300	0.78	1.40	0.340	30	0.04	113
1994	0.02	0.22	0.356	0.79	1.80	0.380	31	0.04	134
1993	0.02	0.20	0.342	0.84	1.40	0.347	30	0.04	129
1992	0.02	0.16	0.262	0.61	0.93	0.268	30	0.04	99
1991	0.02	0.19	0.459	1.21	1.70	0.509	30	0.04	173
1990	0.02	0.14	*	1.04	1.60	0.466	24	0.04	*
1989	*	*	*	*	*	*	0	*	*

Source: California Air Resources Board, 2014

[a] Fresno's Garland Monitoring Station

* Means there was insufficient or no data available to determine the value

TABLE 3-30
City of Fresno – First Street Monitoring Site
(Benzene Measurements)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit	Estimated Risk
2012[a]	0.08	0.20	0.260	0.53	0.8	0.184	29	0.05	24
2011	0.06	0.21	0.314	0.76	1.2	0.299	30	0.05	29
2010	0.05	0.23	0.260	0.58	0.7	0.195	30	0.05	24
2009	0.05	0.21	0.344	0.81	1.2	0.325	32	0.05	32
2008	0.09	0.24	0.356	0.72	1.0	0.265	31	0.05	33
2007	0.06	0.24	0.374	1.02	1.2	0.367	29	0.05	35
2006	0.05	0.27	0.387	1.00	1.4	0.342	31	0.05	36
2005	0.07	0.32	0.408	1.03	1.5	0.375	34	0.05	38
2004	0.07	0.22	0.403	0.78	1.4	0.350	30	0.05	37
2003	0.10	0.31	0.546	1.20	1.8	0.498	31	0.05	51
2002	0.08	0.27	0.631	1.50	2.2	0.574	31	0.05	58
2001	0.08	0.40	0.610	1.26	3.1	0.672	30	0.05	56
2000	0.10	0.50	0.730	1.90	3.1	0.860	30	0.20	68
1999	0.10	0.50	0.800	1.70	2.9	0.730	31	0.20	74
1998	0.10	0.50	0.830	2.30	2.8	0.830	31	0.20	76
1997	0.10	0.50	1.000	2.40	5.8	1.190	31	0.20	92
1996	0.25	0.25	0.790	1.50	3.1	0.700	33	0.50	73
1995	0.25	1.00	1.240	2.40	4.5	1.110	30	0.50	115
1994	0.25	1.00	1.440	3.10	7.6	1.550	31	0.50	133
1993	0.25	1.20	1.350	3.60	4.4	1.260	30	0.50	125
1992	0.25	1.00	1.340	2.80	3.8	1.050	30	0.50	124
1991	0.25	1.60	2.420	5.40	7.3	2.040	30	0.50	224
1990	0.25	1.30	*	5.20	5.4	1.780	24	0.50	*
1989	*	*	*	*	*	*	0	*	*

Source: California Air Resources Board, 2014

[a] Fresno's Garland Monitoring Station

* Means there was insufficient or no data available to determine the value

TABLE 3-31
City of Fresno – First Street Monitoring Site
(Formaldehyde Measurements)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit	Estimated Risk
2012[a]	0.70	2.9	3.34	6.4	9.2	2.30	30	0.1	25
2011	0.60	2.7	3.34	5.8	11.0	2.26	31	0.1	25
2010	0.30	2.5	3.01	5.7	9.7	2.23	29	0.1	22
2009	0.05	1.8	2.56	5.2	7.5	1.89	31	0.1	19
2008	0.70	2.9	3.13	5.1	6.8	1.65	30	0.1	23
2007	0.60	2.8	2.88	4.8	7.9	1.53	30	0.1	21
2006	0.60	3.2	3.41	5.5	8.8	1.90	31	0.1	25
2005	0.70	2.5	3.00	6.0	6.9	1.88	33	0.1	22
2004	1.00	2.2	2.57	3.9	5.0	1.15	31	0.1	19
2003	0.70	3.9	3.72	6.0	8.0	1.94	33	0.1	27
2002	1.10	3.5	4.16	5.6	18.0	3.20	32	0.1	31
2001	1.20	3.3	4.32	5.4	26.0	4.43	30	0.1	32
2000	0.90	2.6	3.56	6.4	7.9	1.92	28	0.1	26
1999	0.05	3.6	*	7.2	8.8	2.26	24	0.1	*
1998	0.05	3.4	3.42	5.9	7.2	1.91	27	0.1	25
1997	0.90	3.6	*	5.6	6.4	1.47	18	0.1	*
1996	0.50	3.4	*	7.8	8.4	2.26	22	0.1	*
1995	0.40	2.3	2.41	4.1	8.3	1.79	31	0.1	18
1994	0.20	1.8	2.01	4.0	7.4	1.61	31	0.1	15
1993	0.60	1.3	1.64	3.4	4.5	1.16	26	0.1	12
1992	0.50	1.5	*	4.3	5.3	1.57	21	0.1	*
1991	0.40	1.9	2.32	4.9	7.7	1.88	27	0.1	17
1990	0.05	1.3	*	5.4	9.0	2.32	23	0.1	*
1989	*	*	*	*	*	*	0	*	*

Source: California Air Resources Board, 2014

[a] Fresno's Garland Monitoring Station

* Means there was insufficient or no data available to determine the value

TABLE 3-32
City of Fresno – First Street Monitoring Site
(Acrolein Measurements)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit
2012[a]	0.30	0.6	0.77	1.1	2.7	0.54	28	0.3
2011	0.30	0.7	1.13	3.2	4.6	1.19	30	0.3
2010	0.15	0.6	0.64	0.8	3.5	0.57	30	0.3
2009	0.15	0.7	0.74	0.9	1.9	0.35	32	0.3
2008	0.40	0.5	0.57	0.8	1.1	0.18	31	0.3
2007	0.15	0.4	0.51	0.8	2.2	0.38	29	0.3
2006	0.15	0.5	0.49	0.8	1.1	0.23	31	0.3
2005	0.15	0.4	0.41	0.6	0.9	0.21	34	0.3
2004	0.15	0.5	0.54	0.8	1.6	0.29	29	0.3
2003	0.15	0.7	*	1.1	1.4	0.33	15	0.3

Source: California Air Resources Board, 2014

[a] Fresno's Garland Monitoring Station

* Means there was insufficient or no data available to determine the value

TABLE 3-33
City of Fresno – First Street Monitoring Site
(Benzo(a)pyrene-10 Measurements)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit	Estimated Risk
2005	0.130	*	*	*	0.63	0.198	5	0.05	*
2004	0.025	0.025	0.210	0.63	2.00	0.415	30	0.05	0.20
2003	0.025	0.025	0.414	1.20	2.90	0.795	31	0.05	0.50
2002	0.025	0.025	0.466	1.52	2.70	0.729	30	0.05	0.50
2001	0.025	0.110	0.501	1.00	4.30	1.100	31	0.05	0.60
2000	0.025	0.025	0.491	1.15	4.60	1.080	30	0.05	0.50
1999	0.025	0.025	0.533	2.02	4.10	1.100	30	0.05	0.60
1998	0.025	0.060	0.618	2.40	4.30	1.180	31	0.05	0.70
1997	0.025	0.060	0.562	1.59	4.60	1.040	30	0.05	0.60
1996	0.025	0.025	0.515	2.60	3.00	1.020	24	0.05	0.60
1995	0.025	0.100	0.533	1.21	3.60	0.964	24	0.05	0.60
1994	0.025	0.510	*	2.61	5.50	1.500	14	0.05	*
1993	0.025	0.100	1.240	4.17	6.20	1.930	24	0.05	1.00
1992	0.025	0.080	0.624	2.19	4.70	1.180	24	0.05	0.70
1991	0.025	0.180	0.885	3.81	4.80	1.530	24	0.05	1.00
1990	0.025	0.070	*	1.52	23.00	5.380	18	0.05	*
1989	*	*	*	*	*	*	0	*	*

Source: California Air Resources Board, 2014
* Means there was insufficient or no data available to determine the value

TABLE 3-34
City of Fresno – First Street Monitoring Site
(Benzo(b)fluoranthene-10)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit	Estimated Risk
2005	0.220	*	*	*	0.63	0.159	5	0.05	*
2004	0.025	0.025	0.258	0.81	2.30	0.469	30	0.05	0.03
2003	0.025	0.070	0.436	1.10	3.00	0.732	31	0.05	0.05
2002	0.025	0.025	0.508	1.31	3.00	0.774	30	0.05	0.06
2001	0.025	0.140	0.579	1.30	5.20	1.180	31	0.05	0.06
2000	0.025	0.080	0.551	1.27	4.50	1.150	30	0.05	0.06
1999	0.025	0.090	0.584	2.23	4.20	1.120	30	0.05	0.06
1998	0.025	0.120	0.621	2.40	3.80	1.010	31	0.05	0.07
1997	0.025	0.100	0.722	1.69	7.10	1.430	30	0.05	0.08
1996	0.025	0.090	0.489	2.06	2.80	0.877	24	0.05	0.05
1995	0.025	0.150	0.538	1.07	3.00	0.825	24	0.05	0.06
1994	0.100	0.770	*	3.10	5.50	1.510	14	0.05	*
1993	0.025	0.160	1.290	4.12	5.10	1.730	24	0.05	0.10
1992	0.025	0.140	0.718	2.41	5.20	1.260	24	0.05	0.08
1991	0.060	0.260	0.999	3.54	5.10	1.510	24	0.05	0.10
1990	0.050	0.150	*	1.77	22.00	5.120	18	0.05	*
1989	*	*	*	*	*	*	0	*	*

Source: California Air Resources Board, 2014
* Means there was insufficient or no data available to determine the value

TABLE 3-35
City of Fresno – First Street Monitoring Site
(Benzo(g, h, i)perylene-10)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit
2005	0.330	*	*	*	0.91	0.239	5	0.05
2004	0.025	0.11	0.442	1.11	3.90	0.812	30	0.05
2003	0.025	0.10	0.618	1.60	3.90	1.030	31	0.05
2002	0.025	0.11	0.629	1.92	2.80	0.815	30	0.05
2001	0.025	0.23	0.720	1.70	5.80	1.250	31	0.05
2000	0.025	0.16	0.738	1.77	5.30	1.340	30	0.05
1999	0.025	0.15	0.783	2.68	4.80	1.320	30	0.05
1998	0.025	0.26	0.718	2.20	4.10	1.110	31	0.05
1997	0.025	0.24	1.100	2.34	9.20	1.920	30	0.05
1996	0.025	0.21	0.657	2.28	3.70	1.020	24	0.05
1995	0.025	0.33	0.911	2.42	3.80	1.100	24	0.05
1994	0.270	1.40	*	4.52	6.00	1.780	14	0.05
1993	0.100	0.33	1.820	5.35	6.60	2.240	24	0.05
1992	0.025	0.23	0.904	2.75	5.20	1.360	24	0.05
1991	0.070	0.48	1.490	5.42	6.90	2.130	24	0.05
1990	0.110	*	*	*	15.00	4.960	8	0.05
1989	*	*	*	*	*	*	0	*

Source: California Air Resources Board, 2014
* Means there was insufficient or no data available to determine the value

TABLE 3-36
City of Fresno – First Street Monitoring Site
(Benzo(k)fluoranthene-10 Measurements)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit	Estimated Risk
2005	0.100	*	*	*	0.26	0.065	5	0.05	*
2004	0.025	0.025	0.117	0.34	1.00	0.202	30	0.05	0.01
2003	0.025	0.025	0.209	0.50	1.50	0.354	31	0.05	0.02
2002	0.025	0.025	0.227	0.64	1.30	0.333	30	0.05	0.02
2001	0.025	0.060	0.249	0.49	2.10	0.495	31	0.05	0.03
2000	0.025	0.025	0.234	0.54	1.90	0.485	30	0.05	0.03
1999	0.025	0.025	0.250	0.95	1.80	0.481	30	0.05	0.03
1998	0.025	0.025	0.266	1.10	1.60	0.452	31	0.05	0.03
1997	0.025	0.025	0.270	0.69	2.20	0.482	30	0.05	0.03
1996	0.025	0.025	0.210	0.88	1.20	0.380	24	0.05	0.02
1995	0.025	0.060	0.251	0.52	1.50	0.402	24	0.05	0.03
1994	0.025	0.310	*	1.28	2.20	0.614	14	0.05	*
1993	0.025	0.070	0.563	1.74	2.40	0.789	24	0.05	0.06
1992	0.025	0.050	0.313	1.10	2.30	0.570	24	0.05	0.03
1991	0.025	0.100	0.395	1.42	2.30	0.658	24	0.05	0.04
1990	0.025	0.025	*	0.83	9.60	2.240	18	0.05	*
1989	*	*	*	*	*	*	0	*	*

Source: California Air Resources Board, 2014
* Means there was insufficient or no data available to determine the value

TABLE 3-37
City of Fresno – First Street Monitoring Site
(Dibenz(a, h)anthracene-10)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit	Estimated Risk
2005	0.025	*	*	*	0.11	0.035	5	0.05	*
2004	0.025	0.025	0.049	0.10	0.34	0.062	30	0.05	0.02
2003	0.025	0.025	0.075	0.23	0.41	0.104	31	0.05	0.03
2002	0.025	0.025	0.086	0.25	0.34	0.097	30	0.05	0.03
2001	0.025	0.025	0.080	0.23	0.58	0.136	31	0.05	0.03
2000	0.025	0.025	0.073	0.15	0.62	0.129	30	0.05	0.03
1999	0.025	0.025	0.078	0.25	0.73	0.145	30	0.05	0.03
1998	0.025	0.025	0.059	0.15	0.39	0.076	31	0.05	0.02
1997	0.025	0.025	0.066	0.13	0.52	0.101	30	0.05	0.03
1996	0.025	0.025	0.046	0.12	0.21	0.049	24	0.05	0.02
1995	0.025	0.025	0.045	0.07	0.21	0.051	24	0.05	0.02
1994	0.025	0.050	*	0.19	0.35	0.094	14	0.05	*
1993	0.025	0.025	0.119	0.34	0.43	0.135	24	0.05	0.05
1992	0.025	0.025	0.067	0.17	0.33	0.082	24	0.05	0.03
1991	0.025	0.025	0.133	0.36	0.72	0.179	24	0.05	0.05
1990	0.060	*	*	*	6.60	2.270	8	0.05	*
1989	*	*	*	*	*	*	0	*	*

Source: California Air Resources Board, 2014
* Means there was insufficient or no data available to determine the value

TABLE 3-38
City of Fresno – First Street Monitoring Site
(Indeno(1,2,3-cd)pyrene-10)

Year	Minimum	Median	Mean	90th Percentile	Max.	Stan Dev.	Number of Observations	Detection Limit	Estimated Risk
2005	0.250	*	*	*	0.75	0.196	5	0.05	*
2004	0.025	0.025	0.270	0.87	2.00	0.442	30	0.05	0.03
2003	0.025	0.060	0.430	1.20	2.60	0.665	31	0.05	0.05
2002	0.025	0.025	0.515	1.31	2.80	0.766	30	0.05	0.06
2001	0.025	0.210	0.625	1.50	4.90	1.180	31	0.05	0.07
2000	0.025	0.090	0.585	1.56	4.30	1.120	30	0.05	0.06
1999	0.025	0.110	0.619	2.50	4.10	1.120	30	0.05	0.07
1998	0.025	0.160	0.698	2.70	4.00	1.090	31	0.05	0.08
1997	0.025	0.110	0.697	1.78	6.20	1.270	30	0.05	0.08
1996	0.025	0.100	0.509	2.14	2.90	0.871	24	0.05	0.06
1995	0.025	0.180	0.618	1.47	3.10	0.857	24	0.05	0.07
1994	0.130	0.790	*	2.58	4.70	1.260	14	0.05	*
1993	0.060	0.170	1.240	3.77	4.90	1.640	24	0.05	0.10
1992	0.025	0.160	0.809	2.78	5.60	1.370	24	0.05	0.09
1991	0.050	0.400	1.100	3.53	4.80	1.500	24	0.05	0.10
1990	0.025	*	*	*	26.00	8.830	8	0.05	*
1989	*	*	*	*	*	*	0	*	*

Source: California Air Resources Board, 2014
* Means there was insufficient or no data available to determine the value

✓ **Diesel Particulate Emissions**

Vehicle DPM emissions were estimated using emission factors for particulate matter less than 10µm in diameter (PM10) generated with the 2011 version of the Emission Factor model (EMFAC) developed by the ARB. EMFAC 2011 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the ARB to project changes in future emissions from on-road mobile sources. The most recent version of this model, EMFAC 2011, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

The most important improvement in EMFAC 2011 is the integration of the new data and methods to estimate emissions from diesel trucks and buses. EMFAC 2011 uses the same diesel truck and bus vehicle populations, miles traveled and other emissions-related factors developed for the Truck and Bus Rule approved by the Air Resources Board in 2010. The model includes the emissions benefits of

the truck and bus rule and the previously adopted rules for other on-road diesel equipment. Finally, the impacts of the recession on emissions that were quantified as part of the truck and bus rulemaking are included.

Several distinct emission processes are included in EMFAC 2011. Emission factors calculated using EMFAC 2011 are expressed in units of grams per vehicle miles traveled (g/VMT) or grams per idle-hour (g/idle-hr), depending on the emission process. The emission processes and corresponding emission factor units associated with diesel particulate exhaust for this Project are presented below.

For this Project, annual average PM10 emission factors were generated by running EMFAC 2011 in EMFAC Mode for vehicles in Fresno County. The EMFAC Model generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed. The model was run for speeds traveled along SR 99, SR 41, and SR 180, within the City of Fresno. The vehicle travel speeds for each segment was estimated to be 55 miles per hour.

PM10 emissions were calculated at 50,000, 100,000, and 150,000 ADT for all three segments discussed above. The highest truck percentage along each respective route was applied to the ADT volumes and provides a conservative estimate for PM10 emissions along any point along the route. The truck percentages were determined from Caltrans' count book. Te highest truck percentages for SR 99, SR 41, and SR 180 are 23%, 4%, and 9.37%, respectively.

Tables 3-39 through 3-47 show the estimated emissions for the diesel operated vehicles that travel along SR 99, SR 41, and SR180. For purposes of this analysis, a half-mile segment of each freeway was evaluated for health risk impacts to sensitive receptors located 500 feet from the freeway segment. CARB recommends that new sensitive receptors should not be sited within 500 feet of a freeway. Results of the analysis show that PM10 emissions for the Project (2014 RTP and SCS - Scenario B) are anticipated to be less than the PM10 emissions for the 2008 Base Year despite the increase in average daily truck trips. Though average daily truck trips increase, diesel exhaust emissions are expected to decrease as new technologies become available.

TABLE 3-39
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 99 – 50,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	11,500	4,197,500	0.5	0.043	9.473E-05	795.3	0.545	0.0850
						Total PM_{10} Emissions		**795.3**	**0.5447**	**0.0850**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

TABLE 3-40
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 99 – 100,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	23,000	8,395,000	0.5	0.043	9.473E-05	1,590.6	1.089	0.1700
						Total PM_{10} Emissions		**1,590.6**	**1.0894**	**0.1700**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

TABLE 3-41
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 99 – 150,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	34,500	12,592,500	0.5	0.043	9.473E-05	2,385.9	1.634	0.2549
						Total PM_{10} Emissions		**2,385.9**	**1.6342**	**0.2549**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

TABLE 3-42
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 41 – 50,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	2,000	730,000	0.5	0.043	9.473E-05	138.3	0.095	0.0148
							Total PM_{10} Emissions	**138.3**	**0.0947**	**0.0148**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

TABLE 3-43
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 41 – 100,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	4,000	1,460,000	0.5	0.043	9.473E-05	276.6	0.189	0.0296
							Total PM_{10} Emissions	**276.6**	**0.1895**	**0.0296**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

TABLE 3-44
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 41 – 150,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	6,000	2,190,000	0.5	0.043	9.473E-05	414.9	0.284	0.0443
							Total PM_{10} Emissions	**414.9**	**0.2842**	**0.0443**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

TABLE 3-45
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 180 – 50,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	4,685	1,710,025	0.5	0.043	9.473E-05	324.0	0.222	0.0346
							Total PM_{10} Emissions	**324.0**	**0.2219**	**0.0346**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

TABLE 3-46
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 180 – 100,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	9,370	3,420,050	0.5	0.043	9.473E-05	648.0	0.444	0.0692
							Total PM_{10} Emissions	**648.0**	**0.4438**	**0.0692**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

TABLE 3-47
2040 Build (2014 RTP/SCS) Mobile Source Emissions
SR 180 – 150,000 ADT

Pollutant	Vehicle Type	EMFAC Vehicle Class	Average Daily Trips (trips/day)	Total Annual Trips (trips/yr)	Trip Distance (miles)	Emission Factors [1] (gms/mile)	Emission Factors (lbs/VMT)	Annual Emissions (lbs/mile/yr)	Maximum Daily Emission Estimate (lbs/day)	Annual Average Emission Estimate (tons/yr)
PM_{10} Exhaust	State Highway Trucks	T7	14,055	5,130,075	0.5	0.043	9.473E-05	972.0	0.666	0.1039
							Total PM_{10} Emissions	**972.0**	**0.6657**	**0.1039**

References:
(1) Emission Factors source: EMFAC2011 for Fresno County Year 2036, for speed distribution of 55 mph
Assumptions:

The modeling of emissions for this Project follows District draft guidance from the SJVAPCD. The AERMOD air dispersion model was used to estimate the dispersion of the TAC emissions from the project. Health risks for cancer risk were calculated for a variety of receptor locations. Receptors of primary interest for this analysis are those that generated the highest risk as it relates to diesel truck traffic along SR 99, SR 41 and SR 180.

The meteorological data that was used in the analysis comes from the Fresno station and is published by the District. The data from the Fresno station, which is located near the Fresno Yosemite International Airport, includes four years of data from 2005 through 2009. The data from the Fresno station provides the best available data for the area.

The assessment of mobile source DPM health risks followed an alternative procedure that uses AERMOD directly and bypasses HARP. The following procedure was used to assess risk for DPM:

- DPM emissions were modeled using AERMOD to determine annual average ground-level concentrations.
- Annual average DPM ground-level concentrations were then multiplied by the following factor:

$$\boldsymbol{SlopeFactor}\ \mathbf{X}\ \frac{\mathbf{C_{air}\ x\ DBR\ x\ A\ x\ EF\ x\ ED\ x\ 10^{-6}}}{\mathbf{AT}}$$

Where:
Slope Factor = 1.1
DBR = 393
A = 1
EF = 350 d/y
ED = 70 yr
10^{-6} = micrograms to milligrams conversion
AT = 25,550 days

- The resultant will be the cancer risk for each source and receptor combination modeled.

The maximum predicted lifetime excess cancer risk for the modeled sensitive receptor that produced the highest risk is shown in Table 3-48. As shown, the cancer risk values are above the significance threshold of 10 in one million for each segment with 50,000 ADT or more assuming that the highest truck percentage applies to the entire corridor. For SR 41 and SR 180, the cancer risk is just over the 50,000 ADT threshold. So for corridors with segments greater than 25,000 ADT, the cancer risk may be present. For SR 99, which has the highest truck volumes and ADT in the County, the cancer risk may be present for corridor segments with even less than 50,000 ADT dependent upon the truck percentage along a particular corridor segment. Sensitive receptors located within 500 feet of freeway

segments that have a greater than 25,000 ADT are potentially at risk, as well as those segments with high truck volumes that may have less than a 25,000 ADT.

TABLE 3-48
Maximum Human Health Risk Assessment Results

Scenario	Maximum Cancer Risk (in one million)		
	SR 99	SR 41	SR 180
50,000 ADT	**25.3**	**11.6**	**10.4**
100,000 ADT	**49.5**	**20.3**	**46.5**
150,000 ADT	**74.8**	**31.9**	**67.1**

Bold denotes exceedance of significance threshold
Source: VRPA Technologies, Inc., 2014

Diesel Particulate emissions were quantified for the Fresno County portions of SR-99 and I-5 to determine the impacts of diesel particulate matter (PM10 and PM2.5) on the residents of Fresno County. Future projected emissions were compared to existing baseline emissions to determine if diesel particulate emissions increase over time as a result of the 2014 RTP.

The highest average daily trip (ADT) volumes from Caltrans' 2008 counts and the highest ADT projections from the Fresno COG model for the year 2040 (2014 RTP and SCS) for each of the corridors was used to determine the daily VMT for the SR-99 and I-5 corridors within Fresno County for the year 2008 and 2040. To develop a "worst case" emissions estimate, the highest percentage of truck traffic along SR-99 and I-5, which was determined from Caltrans' 2012 counts, was then multiplied by the ADT volumes for the year 2008 and 2040. This yielded the average daily truck trips for the SR-99 and I-5 corridor. The average daily truck trips for the year 2008 and 2040 were then multiplied by the total length of each corridor within Fresno County (32 miles for SR-99 and 66 miles for I-5). The resultant was the estimated daily VMT for trucks along the SR-99 and I-5 corridors. This approach is deemed conservative, as all other SR-99 and I-5 segments have truck volumes less than or equal to the highest segment respectively. This approach assumes the highest truck volumes occur across all segments of SR-99 and I-5 in Fresno County.

As all trucks are not diesel and do not emit diesel particulate. EMFAC2011 was utilized to determine the percentage of trucks that were diesel. EMFAC2011 emissions rates were then utilized to quantify diesel particulate running exhaust emissions on the SR-99 and I-5 corridor for the 2008 base year and the 2040 project. Table 3-49 shows the results of the analysis.

TABLE 3-49
Running Emissions Summary

SR-99 Diesel Emissions (tons/day)		
	2008	2040
Diesel PM10	0.4434	0.0942
Diesel PM2.5	0.4080	0.0867
VMT per day	802,240	1,011,552
I-5 Diesel Emissions (tons/day)		
	2008	2040
Diesel PM10	0.3666	0.0968
Diesel PM2.5	0.3373	0.0891
VMT per day	663,300	1,039,302

Source: VRPA, 2014

Mitigation Measure

The specific impacts on air quality will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ As air toxics research continues, implementing agencies should utilize the tools and techniques that are developed for assessing health outcomes as a result of lifetime MSAT exposure. The potential health risks posed by MSAT exposure should continue to be factored into project-level decision-making in the context of environmental review. Specifically, at the project level, implementing agencies shall require or perform air toxic risk assessments to determine mobile source air toxic impacts.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements

rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce health risk impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategy intended to avoid or reduce the significant impacts identified.

Impact 3.4.5 - Create objectionable odors affecting a substantial number of people

Implementation of the RTP would not directly create or generate objectionable odors. Persons residing in the immediate vicinity of proposed transportation improvements and future land use developments may be subject to odors typically associated with roadway construction activities (diesel exhaust, hot asphalt, etc.), and odor-generating land uses. Any odors generated by construction activities would be minor and would be short and temporary in duration. However, objectionable odors generated by future land uses; especially land uses such as landfills, wastewater treatment plants, or industrial processing facilities, may occur. This potential impact is considered ***significant*** and unavoidable.

Mitigation Measure

Implementing agencies should require assessment of new and existing odor sources for transportation improvement projects and future land use development projects to determine whether sensitive receptors would be exposed to objectionable odors and apply recommended applicable mitigation measures as defined by the applicable local air district and best practices.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce objectionable odor impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategy intended to avoid or reduce the significant impacts identified.

3.5 BIOTIC RESOURCES

Fresno County contains a wealth of biotic resources due to the county's varied topography and climatic conditions. Numerous government agencies are tasked with identifying and protecting those resources, which are described later. Because transportation facilities may have an impact on special-status animals, plants and habitats, this section addresses the current status of those biological resources and assesses the potential impacts from region-wide construction of transportation facilities.

Regulatory Setting

Federal Regulations

- ✓ **Clean Water Act (CWA) -** The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States. It gives the U.S. Environmental Protection Agency the authority to implement pollution control programs such as setting wastewater standards for industry. The CWA also contains requirements to set water quality standards for all contaminants in surface waters. The Act makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit is obtained under its provisions.

- ✓ **Federal Endangered Species Act (ESA) -**The Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The U.S. Fish and Wildlife Service (USFWS) maintains the list of endangered and threatened species.

- ✓ **National Environmental Policy Act (NEPA) -** The National Environmental Policy Act (NEPA) provides general information on effects of federally-funded projects. The Act was implemented by regulations included in the Code of Federal Regulations (40CFR6). The code requires careful consideration concerning environmental impacts of federal actions or plans, including projects that receive federal funds. The regulations address impacts on land uses and conflicts with State, regional, or local plans and policies, among others. They also require that projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions, and also to restore and enhance environmental quality as much as possible.

- ✓ **Migratory Bird Treaty Act (16 USC Section 703-711) -** The Migratory Bird Treaty Act (MBTA) of 1918, implemented by the USFWS, is an international treaty that makes it unlawful to take, possess, buy, sell, purchase, or barter, any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 CFR 21). The MBTA requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (February 1st to August 31st, annually).

- ✓ **Bald and Golden Eagle Protection Act (16 USC Section 668) -** The Bald and Golden Eagle Protection Act provides for the protection of the bald eagle (the national emblem) and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. If compatible with the preservation of bald and golden eagles, the Secretary may permit the taking, possession and transportation of bald and golden eagles and nests for scientific or religious purposes, or for the protection of wildlife, agricultural or other interests. The Secretary of the Interior may authorize the take of golden eagle nests, which interfere with resource development or recovery operations. Bald eagles may not be taken for any purpose unless the Secretary issues a permit prior to the taking.

- ✓ **Executive Order 11990, Protection of Wetlands (May 24, 1977) -** This Executive Order establishes a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. On projects with federal actions or approvals, impacts on wetlands must be identified in the environmental document. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm to those wetlands must be included. This must be documented in a specific Wetlands Only Practicable Alternative Finding in the final environmental document for a proposed individual improvement project.

- ✓ **Section 10 of the Rivers and Harbors Act (33 USC 401 et seq.) -** Section 10 of the Rivers and Harbors Act is administered by the ACOE. This Section requires permits in navigable waters of the United States for all structures such as riprap and activities such as dredging. Navigable waters are defined as those subject to the ebb and flow of the tide and susceptible to use in their natural condition or by reasonable improvements as means of interstate transport or foreign commerce. The ACOE grants or denies permits based on the effects on navigation. Most activities covered under this act are also covered under Section 404 of the CWA.

- ✓ **Fish and Wildlife Coordination Act (16 USC 661-666) -** The Fish and Wildlife Coordination Act (FWCA) applies to federal projects where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with the USFWS and the California Department of Fish and Wildlife (CDFW). These agencies prepare reports and recommendations that document project effects on wildlife and identify measures that may be adopted to prevent loss or damage to plant and animal resources. Provisions of the FWCA are implemented through the NEPA and Section 404 permit processes.

Federal Agencies

- ✓ **U.S. Bureau of Land Management (BLM) -** The U.S. Bureau of Land Management (BLM) manages large rural land areas, including land that is environmentally sensitive. The BLM governs uses that are allowed on land that it manages, striving to balance environmental protection and conservation goals with other uses such as recreation and grazing.

- ✓ **U.S. Forest Service (USFS) -** The U.S. Forest Service (USFS) is responsible for the management and conservation of large areas of National Forest land. National forests are primarily managed for outdoor recreation uses (such as camping, hiking, fishing, hunting, skiing, and nature interpretation, among others) and for resource preservation by the USFS.

- ✓ **U.S. Fish and Wildlife Service (USFWS) -** The U.S. Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (FESA), which designates critical habitat for endangered species. This enables USFWS to carry out its mission to conserve, protect, and enhance the nation's fish and wildlife and their habitats for the continuing benefit of people. Critical habitat areas cannot be disturbed without permission from the USFWS and other federal agencies, depending on land ownership. The USFWS also manages a system of land and waters for the conservation of wildlife and associated ecosystems. These National Wildlife Refuges are primarily managed for the preservation and protection of unique or important resources and ecosystems.

- ✓ **U.S. Army Corps of Engineers (ACOE) -** The U.S. Army Corps of Engineers (ACOE) is responsible for administration of Section 404 of the Clean Water Act (CWA), which governs specified activities in waters of the United States, including wetlands. In this role, the ACOE requires that permits be obtained for projects whose plans would place structures, including dredged or filled materials, within navigable waters or wetlands, or result in alteration of such areas.

- ✓ **Council on Environmental Quality (CEQ) and U.S. Environmental Protection Agency (US EPA) -** NEPA mandates that the federal government shall give appropriate consideration to potential adverse environmental impacts of their major actions, including impacts to biological resources. The Council on Environmental Quality oversees NEPA, and the EPA carries out administrative aspects of the NEPA process.

State Regulations

- ✓ **California Endangered Species Act (CESA) -** The California Endangered Species Act prohibits "take" of any species that the CDFW Commission determines to be an endangered species or a threatened species. Take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species populations and their essential habitats.

- ✓ **California Environmental Quality Act (CEQA) -** CEQA defines a significant impact on the environment as a substantial, or potentially substantial, adverse change in the physical conditions within the area affected by the project.

- ✓ **Native Plant Protection Act (NPPA) -** The Native Plant Protection Act (NPPA) directs the CDFW to preserve protect and enhance rare and endangered plants in California. The NPPA gives the CDFW Commission the power to designate native plants as "endangered" or "rare" and protects endangered and rare plants from take.

- ✓ **Natural Community Preservation Act (NCPA) -** The Natural Community Preservation Act aims at protecting many species using a regional approach to habitat preservation.

State Agencies

- ✓ **California Department of Forestry and Fire Protection (CDF) -** The California Department of Forestry and Fire Protection (CDF) reviews and approves plans for timber harvesting on private lands. In addition, the CDF plays a role in planning development in forested areas as a part of its responsibility for fighting wild land fires.

- ✓ **California Department of Parks and Recreation (CDPR) -** The principal mission of the California Department of Parks and Recreation (CDPR) is to provide sites for a variety of recreational and outdoor activities to California residents and tourists. Natural resource management and protection is also a part of the mission of CDPR. Different park designations dictate the extent to which natural resources are a management priority; natural preserves, State parks, State reserves and State wilderness designations are terms which indicate that an area has outstanding natural features. The CDPR is a trustee agency that owns and operates all State parks and participates in land use planning affecting State park land.

- ✓ **California Department of Fish and Wildlife (CDFW) -** The California Department of Fish and Wildlife Service (CDFW) is mandated to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. In particular, CDFW is required under the California Endangered Species Act, the California Native Plant Protection Act, the California Environmental Quality Act, and the Natural Community Conservation Planning Act to conserve species through listing, habitat acquisition and protection, review of local land use planning, multi-species conservation planning, stewardship, recovery, research, and education. The CDFW protects rare, threatened and endangered species by managing habitats in legally designated ecological preserves or wildlife areas of the jurisdiction.

- ✓ **Regional Water Quality Control Board (RWQCB)** - The RWQCB is the primary agency responsible for protecting water quality in California under Section 401 of the Federal CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB defines “waters of the state” as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB’s jurisdiction includes waters of the U.S., which are considered a subset of waters of the state.

Environmental Setting

The CDFW maintains several databases on biotics, including the California Natural Diversity Database (CNDDB) and the Wildlife Habitat Relationships (WHR) information systems. These databases will be discussed further in the section in which they are referenced. Both the CNDDB and WHR are available for review in the Fresno Office of CDFW and are hereby incorporated by reference.

Habitat

✓ Habitat Areas

A habitat is the physical environment in which a particular species lives and grows. The CDFW defines all habitats in California in its Wildlife Habitat Relationships (WHR) information system. Based on that system, Fresno County is composed of four biotic regions that support over 30 different habitats.

Figure 3-8 identifies the biotic regions and their approximate locations in Fresno County based upon the CNDDB. Three of the four biotic regions, the Central Coast Range, the San Joaquin Valley Floor and the Sierra Nevada Foothills, share similar habitats, which are identified below in Table 3-50.

The fourth biotic region, the Sierra Nevada Region, has habitats that are not included in the three other biotic regions in Fresno County, which are: Aspen, Montane Chaparal, Montane Hardwood-Conifer, Montane Riparian, Montane Hardwood, Sierran Mixed Conifer, Ponderosa Pine, Jeffrey Pine, White Fir, Red Fir, Lodgepole Pine, Subalpine Conifer, Alpine Dwarf Scrub, Wet Meadow, Bitterbrush, Juniper and Pinyon-Juniper.

✓ Special Habitat Areas

The number and area of freshwater marshes, riparian habitat, grassland and scrub habitats have diminished in recent years due to the combination of water diversion practices and development. Several sensitive habitats, as identified by the CNDDB, are located within Fresno County, including:

- Big Tree Forest
- Coastal and Valley Freshwater Marsh
- Great Valley Mesquite Scrub
- Great Valley Mixed Riparian Forest
- Monvero Residual Dunes
- Northern Basalt Flow Vernal Pool
- Northern Claypan Vernal Pool
- Northern Hardpan Vernal Pool

FIGURE 3-8
Biotic Regions

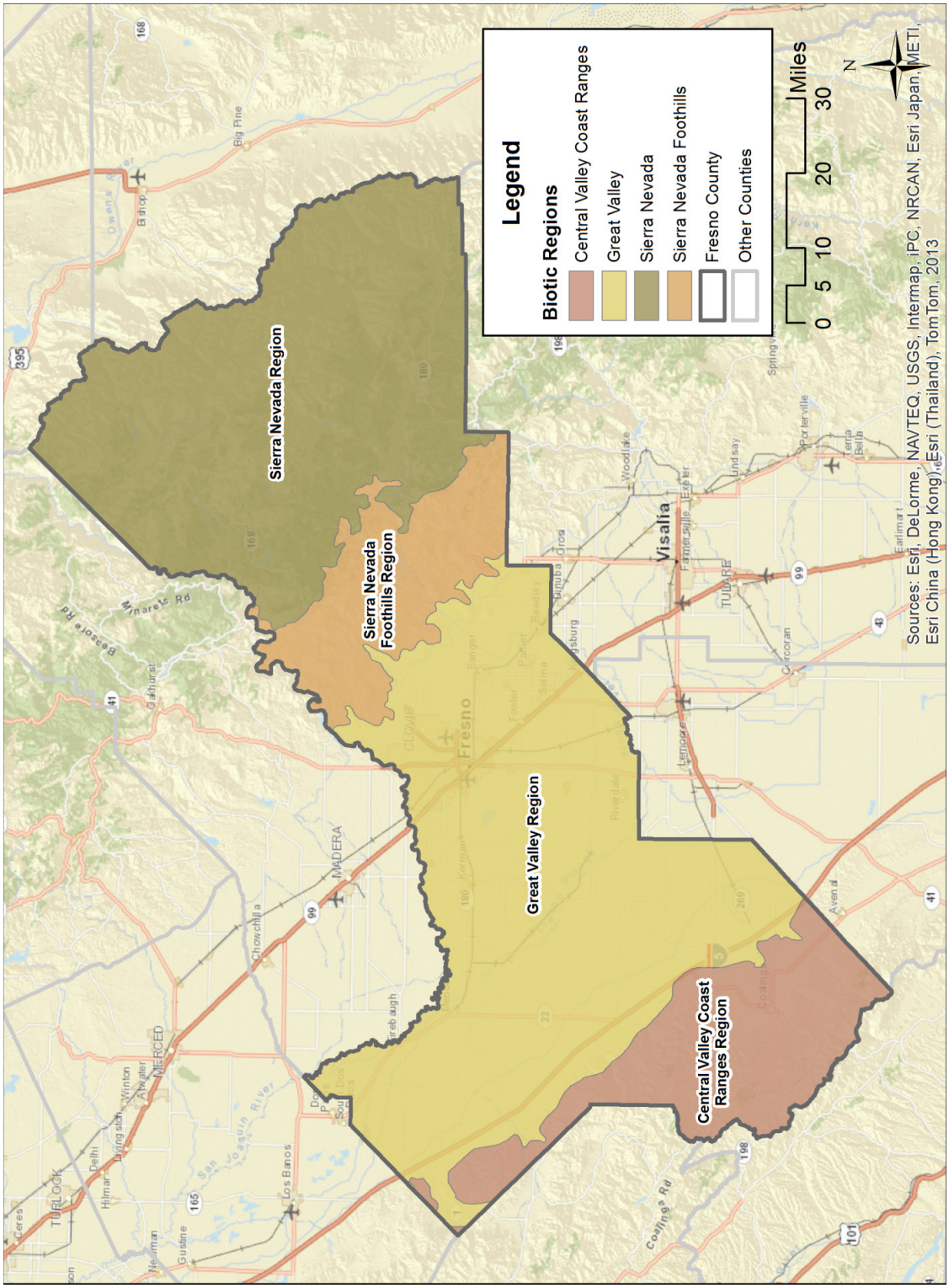


TABLE 3-50
Habitats in the Valley and Foothill Regions of Fresno County

Habitat	Central Coast Range	San Joaquin Valley Floor	Central/Southern Sierra Nevada Foothills
Alkali Desert Scrub		X	
Annual/Ruderal Grassland	X	X	X
Barren	X	X	X
Blue Oak Woodland	X		X
Blue Oak-Foothill Pine Woodland	X		X
Chamise-Redshank Chaparral	X		X
Cropland	X	X	X
Eucalyptus	X	X	X
Fresh Emergent Wetland	X	X	X
Lacustrine	X	X	X
Mixed Chaparral	X		X
Orchard-Vineyard	X	X	X
Pasture	X	X	X
Riverine	X	X	X
Urban	X	X	X
Valley Oak Woodland	X		
Valley-Foothill Riparian	X	X	X
Vernal Pool		X	

- Northern Vernal Pool
- Sycamore Alluvial Woodland
- Valley Needlegrass Grassland
- Valley Sink Scrub

Migratory Deer Herd. California mule deer herds in Fresno County winter within the foothills area and move to higher elevations during the summer.

Significant Natural Areas. Eight significant natural areas have been identified by the CDFW under the Significant Natural Areas program. These areas include northern hardpan vernal pool and alkaline desert scrub, as well as habitat for sensitive species such as the orange lupine, Mariposa pussypaws, and the Paiute cutthroat trout.

Waterways of Importance. The county's waterways represent the major remaining natural habitat of value for wildlife and plant species. Waterways can occur in the form of lakes, rivers, canals, and

reservoirs. Fresno County has approximately 430 "lakes" or inland water bodies, which are in the form of lagoons, ponds, and larger water bodies. Fresno County also has approximately 410 streams that are in the form of creeks, distributaries, rivers, and sloughs.

Fresno County's major waterways include:

Big Creek	Courtwright Dam	Florence Lake
Friant Dam	Huntington Lake	Kings River
Lake Thomas Edison	Little Panoche Reservoir	Mammoth Pool Reservoir
Millerton Lake	Pine Flat Lake	San Joaquin River
Shaver Lake	Wishon Reservoir	

Plants

✓ Plant Communities

Fresno County is an area of varied topography and diverse ecosystems. The highly varied climatic conditions and topography result in a great diversity of flora throughout Fresno County. Agricultural use, timber harvesting, grazing, and conversion to urban uses have altered a significant amount of the natural vegetation contained in the county.

Within floristic regions of the county, vegetation can be grouped into several different plant communities. These plant associations are often difficult to physically define, due to subtle transitions. Conversely, plant communities may change abruptly, affected by differences in exposure, soil, or relative humidity.

✓ Special-status and Special Concern Plants

Special-status plants are listed as, or candidates for, threatened, rare, or endangered by the USFWS, the CDFW and the California Native Plant Society (CNPS). The CNPS maintains an Inventory of Rare and Endangered Plants. Based on a search of the CNDDB and CNPS's Inventory of Rare and Endangered Plants, there are over 70 plants with special-status or special concern listing, which are believed to exist within Fresno County. Generally, plants with special-status have been found to occur in the foothills and mountainous portions of the Sierra Nevada. These special plant species are summarized in Table 3-51.

TABLE 3-51
Special-status Plants Known or Suspected to Occur in Fresno County
Current Listing Status - March 2006, April 2009

Plant Elements		CNPS Status	State Ranking	Global Ranking	General Location
Common Name	Scientific Name				
Abrams' Onion	Allium abramsii	1B.2	S2S3	G2 G3	Eastern foothills and mountains
Alpine Jewelflower	Streptanthus gracilis	1B.3	S3	G3	Eastern Mountains
Aromatic Canyon Gooseberry	Ribes menziesii var. ixoderme	1B.2	S2.2	G4 T2	Eastern Mountains
Barstow Woolly Sunflower	Eriophyllum mohavense	1B.2	S2	G2	Valley floor
Bodie Hills Rockcress	Boechera bodiensis	1B.3	S2	G2	Eastern border
Boggs Lake Hedge-Hyssop	Gratiola heterosepala	1B.2	Endangered S2	G2	Valley floor/ eastern foothills
Bolander's Clover	Trifolium bolanderi	1B.2	S2S3	G2 G3	Eastern Mountains
Bolander's Woodreed	Cinna bolanderi	1B.2	S2	G2	Eastern Mountains
Brittlescale	Atriplex depressa	1B.2	S2	G2	Valley Floor/West Foothills
California Jewelflower	Caulanthus californicus	1B.1	Endangered S1	G1	Western foothills/valley floor
Caper-Fruited Tropidocarpum	Tropidocarpum capparideum	1B.1	S1	G1	Valley floor/foothills
Congdon's Lewisia	Lewisia congdonii	1B.3	Rare S2	G2	Eastern foothills/mountains
Dwarf Calycadenia	Calycadenia villosa	1B.1	S2	G2	Western border

Plant Elements		CNPS Status	State Ranking	Global Ranking	General Location
Common Name	Scientific Name				
Eastwood's Buckwheat	Eriogonum eastwoodianum	1B.3	S1S2.3	G1 G2	Western foothills
Field Ivesia	Ivesia campestris	1B.2	S3	G3	Eastern Mountains
Forked Hare-Leaf	Lagophylla dichotoma	1B.1	S1	G1	Eastern and western foothills
Greene's Tuctoria	Tuctoria greenei	1B.1	Rare S1	G1	Valley floor/eastern foothills
Grey-Leaved Violet	Viola pinetorum var. grisea	1B.3	S3?	G4 G5 T3?	Eastern Mountains
Hairy Orcutt Grass	Orcuttia pilosa	1B.1	Endangered S1	G1	Valley floor
Hall's Daisy	Erigeron aequifolius	1B.3	S2.3	G2	Eastern Mountains
Hall's Tarplant	Deinandra halliana	1B.1	S2	G2	Western border
Hartweg's Golden Sunburst	Pseudobahia bahiifolia	1B.1	Endangered S2	G2	Eastern foothills
Heartscale	Atriplex cordulata var. cordulata	1B.2	S2	G3 T2	Valley Floor
Hernandez Spineflower	Chorizanthe biloba var. immemora	1B.2	S1?	G3 T1?	Western border
Hispid Bird's-Beak	Chloropyron molle ssp. hispidum	1B.1	S2.1	G2 T2	Valley floor
Indian Valley Bush-Mallow	Malacothamnus aboriginum	1B.2	S2	G2	Western border and foothills
Kaweah Monkeyflower	Mimulus norrisii	1B.3	S2.3	G2	Eastern Mountains

Plant Elements		CNPS Status	State Ranking	Global Ranking	General Location
Common Name	Scientific Name				
Keck's Checkerbloom	Sidalcea keckii	1B.1	S1	G1	Eastern foothills/mountains
Keil's Daisy	Erigeron inornatus var. keilii	1B.3	S1	G5 T1	Eastern Mountains
Kern River Daisy	Erigeron multiceps	1B.2	S2.2	G2	Eastern Mountains
Kings River Buckwheat	Eriogonum nudum var. regirivum	1B.2	S2	G5 T2	Eastern foothills/mountains
Lemmon's Jewelflower	Caulanthus lemmonii	1B.2	S3	G3	Western foothills
Lesser Saltscale	Atriplex minuscula	4.2	S3.2	G5	Valley Floor
Lost Hills Crownscale	Atriplex coronata var. vallicola	1B.2	S2	G4 T2	Western foothills/valley floor
Madera Leptosiphon	Leptosiphon serrulatus	1B.2	S1?	G1?	Eastern Mountains
Marble Rockmat	Petrophytum caespitosum ssp. acuminatum	1B.3	S2	G5 T2	Eastern Mountains
Mariposa Pussypaws	Calyptridium pulchellum	1B.1	S1	G1	Eastern mountains
Monarch Buckwheat	Eriogonum ovalifolium var. monarchense	1B.3	S1	G5 T1	Eastern Mountains
Monarch Gilia	Gilia yorkii	1B.2	S1	G1	Eastern Mountains
Monarch Golden-Aster	Heterotheca monarchensis	1B.3	S2	G1	Eastern Mountains
Mono Hot Springs Evening-Primrose	Camissonia sierrae ssp. alticola	1B.2	S2	G3 T2	Eastern mountains
Muir's Tarplant	Carlquistia muirii	1B.3	S2	G2	Eastern mountains

Plant Elements		CNPS Status	State Ranking	Global Ranking	General Location
Common Name	Scientific Name				
Munz's Tidy-Tips	Layia munzii	1B.2	S1	G1	Western foothills/valley floor
Orange Lupine	Lupinus citrinus var. citrinus	1B.2	S2.2	G2 T2	Eastern Mountains
Pale-Yellow Layia	Layia heterotricha	1B.1	S2	G2	Western foothills
Palmate-Bracted Salty Bird's-Beak	Chloropyron palmatum	1B.1	Endangered S1	G1	Valley floor
Panoche Pepper-Grass	Lepidium jaredii ssp. album	1B.2	S2	G2 T2	Western foothills/valley floor
Prostrate Vernal Pool Navarretia	Navarretia prostrata	1B.1	S2	G2	Western foothills/valley floor
Pygmy Pussypaws	Calyptridium pygmaeum	1B.2	S2	G2	Eastern mountains
Raven's Milk-Vetch	Astragalus ravenii	1B.3	S2	G2 Q	Eastern Border
Rayless Layia	Layia discoidea	1B.1	S2.2	G2	Western border
Recurved Larkspur	Delphinium recurvatum	1B.2	S3	G3	Valley floor/western foothills
Round-Leaved Filaree	California macrophylla	1B.1	S2	G2	Western border
San Benito Evening-Primrose	Camissonia benitensis	1B.1	S2	G2	Western border
San Benito Fritillary	Fritillaria viridea	1B.2	S2	G2	Western foothills
San Joaquin Adobe Sunburst	Pseudobahia peirsonii	1B.1	Endangered S1	G1	Eastern foothills
San Joaquin Spearscale	Atriplex joaquinana	1B.2	S2	G2	Western border

Plant Elements		CNPS Status	State Ranking	Global Ranking	General Location
Common Name	Scientific Name				
San Joaquin Valley Orcutt Grass	Orcuttia inaequalis	1B.1	Endangered S1	G1	Eastern foothills
San Joaquin Woollythreads	Monolopia congdonii	1B.2	S2	G2	Western foothills/valley floor
Sanford's Arrowhead	Sagittaria sanfordii	1B.2	S3	G3	Valley floor/eastern foothills
Shevock's Copper Moss	Schizymenium shevockii	1B.2	S1	G1	Eastern foothills/mountains
Shining Navarretia	Navarretia nigelliformis ssp. radians	1B.2	S2	G4 T2	Western border
Short-Leaved Hulsea	Hulsea brevifolia	1B.2	S3	G3	Eastern Mountains
Showy Golden Madia	Madia radiata	1B.1	S2	G2	Western border and foothills
Sierra Draba	Draba sierrae	1B.3	S3	G3	Eastern border
Slender Moonwort	Botrychium lineare	1B.3	S1	G2 G3	Eastern mountains
Slender-Stalked Monkeyflower	Mimulus gracilipes	1B.2	S2S3	G2 G3	Eastern Mountains
Spiny-Sepaled Button-Celery	Eryngium spinosepalum	1B.2	S2.2	G2	Eastern foothills
Subtle Orache	Atriplex subtilis	1B.2	S1	G1	Valley Floor
Succulent Owl's-Clover	Castilleja campestris var. succulenta	1B.2	Endangered S2	G4? T2	Eastern foothills
Sweetwater Mountains Draba	Draba incrassata	1B.3	S3	G3	Eastern mountains
Tehipite Valley Jewelflower	Streptanthus fenestratus	1B.3	S2	G2	Eastern Mountains

Plant Elements		CNPS Status	State Ranking	Global Ranking	General Location
Common Name	Scientific Name				
Temblor Buckwheat	Eriogonum temblorense	1B.2	S2.2	G2	Western border
Tree-Anemone	Carpenteria californica	1B.2	Threatened S1?	G1?	Eastern foothills/mountains
Tulare Rockcress	Boechera tularensis	1B.3	S2	G2	Eastern mountains
Yosemite Bog Orchid	Platanthera yosemitensis	1B.2	S2.2	G2	Eastern mountains
Yosemite Lewisia	Lewisia disepala	1B.2	S2.2	G2	Eastern Mountains

Key:

?	Indicates some uncertainty in ranking
Global Ranking	
Candidate	Species is a candidate to be listed under the Federal Endangered Species Act.
Endangered	Listed as "endangered" under Federal Endangered Species Act. Species faces possible extinction throughout all, or a significant portion of, its range.
Threatened	Although species is not presently at risk of extinction, it is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.
G1 =	Less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres.
G2 =	6-20 EOs OR 3,000-10,000 individuals OR 2,000-10,000 acres
G3 =	21-100 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres
G4 =	Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.
G5 =	Population or stand demonstrably secure to ineradicable due to being commonly found in the world.
State Ranking	
Rare	State listed as “rare”
Endangered	State listed as “endangered”
Threatened	State listed as “threatened”
S1 =	Less than 6 EOs OR less than 1,000 individuals OR less than 2,000 acres
S2 =	6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres
S3 =	21-100 EOs or 3,000-10,000 individuals OR 10,000-50,000 acres

#.1= Very threatened
#.2= Threatened
#.3= no current threats known

California Native Plant Society

1A = Plants presumed extinct in California
1B = Rare everywhere
2 = Rare in California
#.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
#.2 = Fairly endangered in California (20-80% occurrences threatened)
#.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

Notes:

Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take a **bird's eye or aerial view** when ranking sensitive elements rather than simply counting element occurrences.

Uncertainty about the rank of an element is expressed in two major ways:

- By expressing the ranks as a **range** of values: e.g., S2S3 means the rank is somewhere between S2 and S3.
- By adding a ? to the rank: e.g., S2? This represents more certainty than S2S3, but less certainty than S2.
- Other symbols:
    - GH - All sites are **historical**; the element has not been seen for at least 20 years, but suitable habitat still exists (SH = All California sites are historical).
    - GX - All sites are **extirpated**; this element is extinct in the wild (SX = All California sites are extirpated).
    - GXC - Extinct in the wild; exists in cultivation.
    - G1Q - The element is very rare, but there are **taxonomic questions** associated with it.
    - T - Rank applies to a subspecies or variety.

Sources:

California Department of Fish and Wildlife. 2014. California Natural Diversity Data Base
California Native Plant Society (CNPS). 2014. Inventory of Rare and Endangered Plants, Rare Plant Scientific Advisory Committee.
United States Fish and Wildlife Service (USFWS). 2014. Federal Endangered and Threatened Species List, Sacramento Fish and Wildlife Office.

Wildlife

Fresno County's wildlife is equally varied and unique due to the region's diversified habitats and topography. Although many native species and habitats have diminished in numbers and range in recent years, the county does contain varying amounts of deer range, black bear, waterfowl habitat, and special-status species habitat.

✓ Important Wildlife Areas

Fresno County has two designated wildlife areas within its boundaries, Mendota Wildlife Area and Little Panoche Reservoir Wildlife Area. Mendota Wildlife Areas is three miles south of Mendota on 11,802 acres of flatlands and floodplain. There are more than 165 bird species and sub-species known to occur or reside in the area. Mammals commonly found in the area include coyotes, muskrats, beavers, minks, raccoons, weasels, black-tailed hares, cottontail rabbits, spotted and striped skunks, and ground squirrels. Fish can include crappie, catfish, bluegill, carp, and black and striped bass.

Little Panoche Reservoir Wildlife Area is on 828 acres, 5 miles west of Interstate Highway 5 and 30 miles west of Firebaugh in the arid foothills on the western side of the San Joaquin Valley. This wildlife area supports four wildlife habitats (annual grassland, alkali scrub, lacustrine, and valley foothill riparian) and eight different vegetation community types. Kit fox, mule deer, wild pig, kangaroo rats, and over 100 species of birds, including golden eagles, and California quail can be found here. Over 24 species of plants can be found as well. Fish can include bluegill, common carp, crappie, largemouth bass, western mosquito fish, and white catfish.

Fresno County also supports non-designated wildlife areas as well. The following provides a brief description.

- *Deer Ranges* - Key areas for summer and winter ranges provide California mule deer herds with forage areas and protective cover generally located in the foothills and the median elevations of the Sierra Nevada. The nutritional level and overall quality of the deer range has been degraded in recent years by urban encroachment and fire suppression techniques that do not allow old growth to be replaced by younger, more nutritious food.

- *Black Bear Habitat* - Black bear occur in the higher elevations of the county, generally in the mountain timber and brush areas.

- *Waterfowl Habitat* - The low-lying marshy areas near the Mendota Wildlife Area, the riparian and marsh areas along the San Joaquin and Kings Rivers, and numerous lakes and reservoirs located in Fresno County provide excellent habitat for many waterfowl species.

- *Birds of Prey Habitat* - Fresno County contains nest sites for the golden eagle, burrowing owl, prairie falcon, and Swainson's hawk. The nest sites have not been mapped in detail on a countywide basis; however, they are expected to occur in the foothills of the Sierra Nevada along the northeast county boundary.

- *Seasonal Wetlands* **-** Vernal pools of varying size are located within Fresno County. Vernal pools have been found to provide habitat for several species of fresh water shrimp, including the Vernal Pool Tadpole Shrimp, all of which have been recently listed by the USFWS as Endangered.

Fresno County also has six ecological reserves as well. They include the San Joaquin River, Kerman, Alkali Sink, Panoche Hills, and Pleasant Valley Ecological Reserves. Figure 3-9 illustrates the locations of these wildlife areas and ecological reserves.

Special-status and Special Concern Animals

Fresno County contains a number of animals with special-status or special concern. Although the location of these species or habitat areas has not been mapped in detail, generally, the Sierra Nevada is considered of special importance. Historical occurrences of several animals with special-status listing have been recorded or are known to occur within Fresno County according to the CNDDB. Special-status animals include:

- Those species, which are officially candidates for, or are officially designated as, rare, threatened, or endangered classification by the CDFW and USFWS.

- Those species which are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for State or federal status, such as those identified as animal species of special concern by CDFW.

"Species of Special Concern" (SSC) status applies to animals not listed under the federal Endangered Species Act or the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist.

Table 3-52 summarizes the numerous animals of special-status believed to exist within Fresno County with special-status listings. Among those listed are fourteen amphibians/reptiles, four fish, twenty-one birds, twenty-two mammals, and twenty insects.

FIGURE 3-9
Wildlife Areas and Ecological Reserves

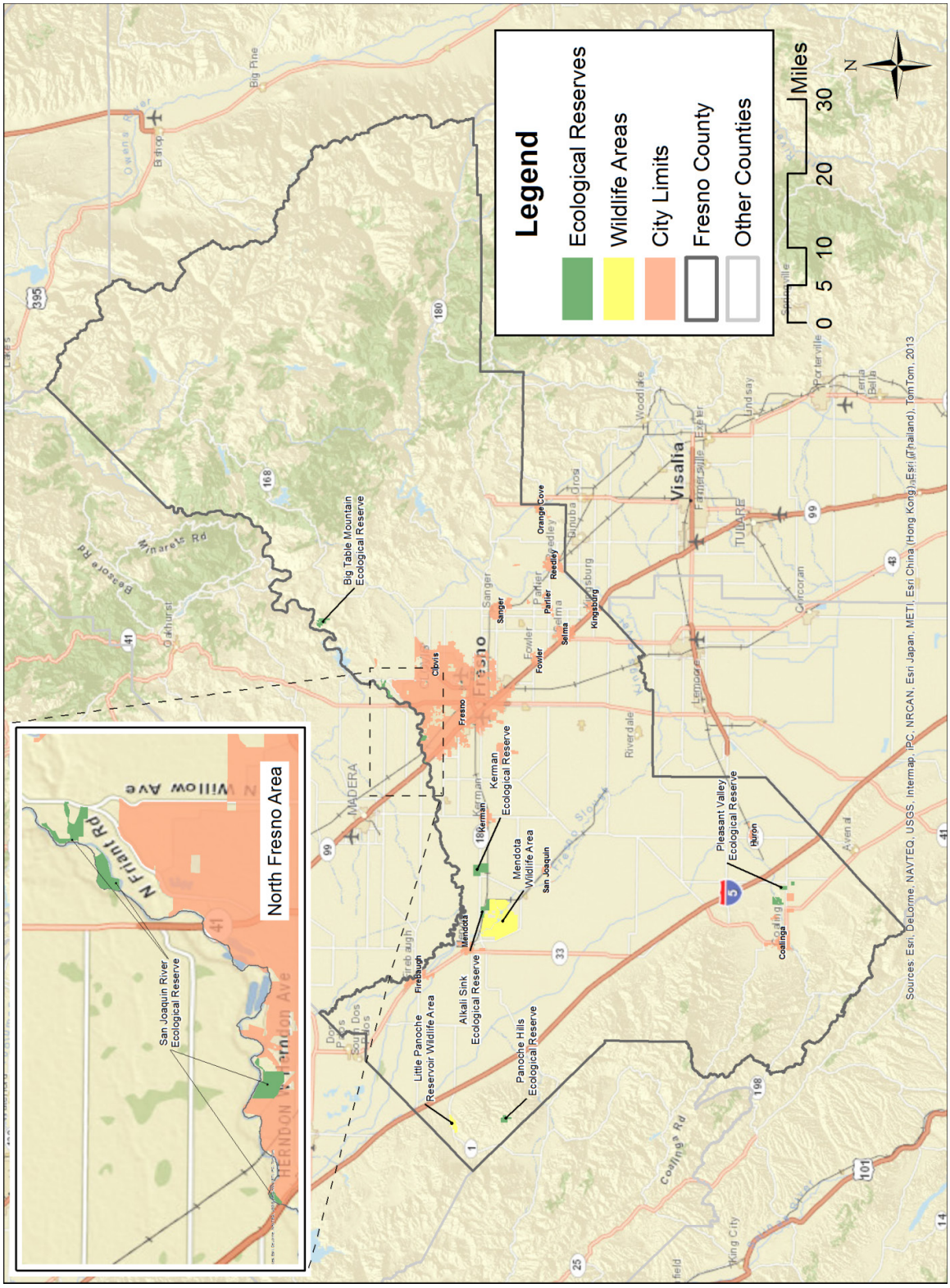


TABLE 3-52
Special-status Animals Known or Suspected to Occur in Fresno County and Current Listing Status – January 2014

Common Name	Scientific Name	Global Ranking	State Ranking	CDFW	Other
Amphibians/Reptiles					
Blunt Nosed Leopard Lizard	*Gambelia Sila*	Endangered, G1	Endangered, S1	Fully Protected	-
California Red-Legged Frog	*Rana Draytonii*	Threatened, G4T2T3	S2S3	SSC	-
California Tiger Salamander	*Ambystoma Californiense*	Threatened, G2G3	S2S3	SSC	-
Coast Horned Lizard	*Phrynosoma Blainvillii*	G4G5	S3S4	SSC	Sensitive (BLM) Sensitive (FS)
Foothill Yellow-Legged Frog	*Rana Boylii*	G3	S2S3	SSC	Sensitive (BLM) Sensitive (FS)
Giant Garter Snake	*Thamnophis Gigas*	Threatened G2G3	Threatened, S2S3	-	-
Mount Lyell Salamander	*Hydromantes Platycephalus*	G3	S3	SSC	-
Mountain Yellow-Legged Frog	*Rana Muscosa*	Endangered, G1	Candidate Endangered S1	SSC	Sensitive (FS)
San Joaquin Whipsnake	*Masticophis Flagellum Ruddocki*	G5T2T3	S2?	SSC	-
Sierra Nevada Yellow-Legged Frog	*Rana Sierrae*	Candidate G1	Candidate Endangered S1	SSC	Sensitive (FS)

Common Name	Scientific Name	Global Ranking	State Ranking	CDFW	Other
Silvery Legless Lizard	*Anniella Pulchra*	G3G4	S3	SSC	Sensitive (BLM) Sensitive (FS)
Two-Striped Garter Snake	*Thamnophis Hammondii*	G3	S2	SSC	Sensitive (BLM) Sensitive (FS)
Western Pond Turtle	*Emys Marmorata*	G3	S3	SC	-
Western Spadefoot	*Spea Hammondii*	G3	S3	SSC	Sensitive (BLM)
Yosemite Toad	*Anaxyrus canorus*	Proposed Threatened, G2	S2	SSC	Sensitive (FS)
Fish					
Central Valley Steelhead	*Oncorhynchus Mykiss*	Threatened G5T1	S1	SSC	Sensitive (FS)
Delta Smelt	*Hypomesus Transpacificus*	Threatened G1	Endangered S1	-	-
Hardhead	*Mylopharodon Conocephalus*	G3	S3	SSC	Sensitive (FS)
Lahontan Cutthroat Trout	*Oncorhynchus Clarkii Henshawi*	Threatened G4T3	S2	-	-
Paiute Cutthroat Trout	Oncorhynchus Clarkii Seleniris	Threatened G4T1T2	S1S2	-	-
Birds					
Bald Eagle	*Haliaeetus Leucocephalus*	Delisted G5	Endangered S2	Fully Protected	Sensitive (CDF)
Bank Swallow	*Riparia*	G5	Threatened S2S3	-	-
Burrowing Owl	*Athene Cunicularia*	G4	S2	SSC	Sensitive (BLM)

Common Name	Scientific Name	Global Ranking	State Ranking	CDFW	Other
					BCC (USFWS)
California Condor	*Gymnogyps Californianus*	Threatened G1	Threatened S1		Sensitive (CDF)
California Horned Lark	*Eremophila Alpestris Actia*	G5T3Q	S3	SSC	-
Cooper's Hawk	*Accipiter Cooperii*	Threatened G5	Threatened S3	None	-
Golden Eagle	*Aquila Chrysaetos*	G5	S3	Fully Protected SSC	Sensitive (BLM) Sensitive (CDF) BCC (USFWS)
Great Grey Owl	*Strix Nebulosa*	G5	Endangered S1	-	Sensitive (CDF) Sensitive (FS)
Le Conte's Thrasher	*Toxostoma Lecontei*	G3	S3	SSC	BCC (USFWS)
Loggerhead Shrike	*Lanius Ludovicianus*	G4	S4	SSC	BCC (USFWS)
Long-Eared Owl	*Asio otus*	G5	S3	SSC	-
Merlin	*Falco Columbarius*	G5	S3	-	-
Mountain Plover	*Charadrius Montanus*	Proposed G2	S2?	SSC	Sensitive (BLM) BCC (USFWS)
Northern Goshawk	*Accipiter Gentilis*	G5	S3	SSC	Sensitive (CDF) Sensitive (FS)
Northern Harrier	*Circus Cyaneus*	G5	S3	SSC	-
Osprey	*Pandion Haliaetus*	G5	S3	-	Sensitive (CDF)

Common Name	Scientific Name	Global Ranking	State Ranking	CDFW	Other
Prairie Falcon	*Falco Mexicanus*	G5	S3	-	BCC (USFWS)
Short-Eared Owl	*Asio Flammeus*	G5	S3	SSC	-
Swainsons Hawk	*Buteo Swainsoni*	G5	Threatened S2	-	Sensitive (FS) BCC (FS)
Tricolored Blackbird	*Agelaius Tricolor*	G2	S2	SSC	Sensitive (BLM) BCC (USFWS)
Western Yellow Billed Cuckoo	*Coccyzus Americanus Occidentalis*	Candidate G5T3Q	Endangered S1	-	Sensitive (FS) BCC (USFWS)
White-Faced Ibis	*Plegadis Chihi*	G5	S1	-	-
Willow Flycatcher	*Empidonax Traillii*	G5	Endangered S1	-	Sensitive (FS)
Yellow Warbler	*Dendroica Petechia Brewsteri*	G5T3?	S2	SSC	BCC (USFWS)
Yellow-Headed Blackbird	*Xanthocephalus*	G5	S3S4	SSC	-
Mammals					
American Badger	*Taxidea Taxus*	G5	S4	SSC	
California Wolverine	*Gulo*	Candidate G4	Threatened S1	Fully Protected	Sensitive (FS)
Fresno Kangaroo Rat	*Dipodomys Nitratoides Exilis*	Endangered G3T1	Endangered S1	-	-
Giant Kangaroo Rat	*Dipodomys Ingens*	Endangered G2	Endangered S2	-	-
Gray-Headed Pika	*Ochotona Princeps Schisticeps*	G5T2T4	S2S4	-	-

Common Name	Scientific Name	Global Ranking	State Ranking	CDFW	Other
Nelson's Antelope Squirrel	*Ammospermophilus Nelsoni*	G2	Threatened S2	-	-
Pacific Fisher	*Martes Pennanti Pacifica*	Candidate G5	S2S3	SSC	Sensitive (BLM) Sensitive (FS)
Pallid Bat	*Antrozous Pallidus*	G5	S3	SSC	Sensitive (BLM) Sensitive (FS)
San Joaquin Kit Fox	*Vulpes Macrotis Mutica*	Endangered G4T2T3	Threatened S2S3	-	-
Short-Nosed Kangaroo Rat	*Dipodomys Nitratoides Brevinasus*	G3T1T2	S1S2	SSC	Sensitive (BLM)
Sierra Nevada Bighorn Sheep	*Ovis Canadensis Sierrae*	Endangered G4T1	Endangered S1	Fully Protected	-
Sierra Nevada Red Fox	*Vulpes Necator*	G5T3	Threatened S1	-	Sensitive (FS)
Spotted Bat	*Euderma Maculatum*	G4	S2S3	SSC	Sensitive (BLM)
Tipton Kangaroo Rat	*Dipodomys Nitratoides*	Endangered G3T1	Endangered S1	-	-
Townsends's Big-Eared Bat	*Corynorhinus Townsendii*	G4	S2S3	SSC	Sensitive (BLM) Sensitive (FS)
Tulare Grasshopper Mouse	*Onychomys Torridus Tularensis*	G5T1T2	S1S2	SSC	Sensitive (BLM)
Western Mastiff Bat	*Eumops Perotis Californicus*	G5T4	S3?	SSC	Sensitive (BLM)

Common Name	Scientific Name	Global Ranking	State Ranking	CDFW	Other
Western Red Bat	*Lasiurus Blossevillii*	G5	S3?	SSC	Sensitive (FS)
Insects/Invertebrates					
California Linderiella	*Linderiella Occidentalis*	G3	S2S3	-	-
Conservancy Fairy Shrimp	*Branchinecta Conservation*	Endangered G1	S1		-
Longhorn Fairy Shrimp	*Branchinecta Longiantenna*	Endangered G1	S1	-	-
Midvalley Fairy Shrimp	*Branchinecta Mesovallensis*	G2	S2	-	-
San Joaquin Dune Beetle	*Coelus Gracilis*	G1	S1	-	Sensitive (BLM)
Vernal Pool Fairy Shrimp	*Branchinecta Lynchi*	Threatened G3	S2S3	-	-
Vernal Pool Tadpole Shrimp	*Lepidurus Packardi*	Endangered G3	S2S3	-	-
Valley Elderberry Longhorn Beetle	*Desmocerus Californicus Dimorphus*	Threatened G3T2	S2	-	-
Wooly Hydroporus Diving Beetle	*Hydroporus Hirsutus*	G1	S1	-	-

Key:

?	USFWS or CDFW does not have enough data to determine status.
BCC	Birds of Conservation Concern by the Fish and Wildlife Service
BLM	Bureau of Land Management
CDF	California Department of Forestry and Fire Protection
FS	USDA Forest Service
FWS	Fish and Wildlife Service
SSC	Species of Special Concern

Global Ranking	
Endangered	Listed as "endangered" under Federal Endangered Species Act. Species faces possible extinction throughout all, or a significant portion of, its range.
Threatened	Although species is not presently at risk of extinction, it is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.
Proposed	Species has been proposed for listing under the State and/or Federal Endangered Species Act
Candidate	Species are a candidate for possible State or Federal listing.
G1 =	Less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres.
G2 =	6-20 EOs OR 3,000-10,000 individuals OR 2,000-10,000 acres
G3 =	21-100 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres
G4 =	Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.
G5 =	Population or stand demonstrably secure to ineradicable due to being commonly found in the world.
State Ranking	
S1 =	Less than 6 EOs OR less than 1,000 individuals OR less than 2,000 acres
S2 =	6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres
S3 =	21-100 EOs or 3,000-10,000 individuals OR 10,000-50,000 acres

Source:
California Department of Fish and Wildlife. 2014. California Natural Diversity Data Base
United States Fish and Wildlife Service (USFWS). 2014. Federal Endangered and Threatened Species

Methodology

The impact assessment for biotics focuses on potential effects that the project might have on special-status plants, animals and habitats. The assessment is not site or project-specific, but is a regional analysis.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Because biotic resources often redistribute themselves based on available habitat, water and food sources, development pressures, population growth, and other factors, a project-level evaluation of Project impacts to biological resources is not feasible as it would require site-specific studies across all of Fresno County. However, some general impacts can be identified, based on the nature of the individual transportation improvements. Projects located in special habitat, or habitat of special animals or plants, adjacent to impaired water bodies, or in flood hazard areas are most likely to affect water resources.

Construction of the proposed projects and future land use developments could cause water quality impacts, because a project would increase the area of paved surface. Water quality could be affected by storm water runoff that passes over paved surfaces before it reaches a major creek, river, or water body.

Floodplains are areas that are periodically inundated during high flows of nearby streams or high water levels in ponds or lakes. Natural floodplains offer wildlife and plant habitat, open space, and groundwater recharge benefits. Project construction could affect these uses if not mitigated.

Criteria for Significance

The CEQA Guidelines establish that a significant impact would be expected to occur if the project would:

- ✓ Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- ✓ Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?
- ✓ Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- ✓ Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- ✓ Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact 3.5.1 – Removal or Degradation of Riparian Habitat or Sensitive Natural Communities

Direct impacts to biological resources involve the temporary or permanent physical loss of vegetation communities, wildlife habitat, and special interest plant and wildlife species resulting from site preparation activities such as clearing, grubbing, and grading.

Indirect impacts on vegetation communities include the potential for increased susceptibility of adjacent, native habitats to invasion by non-native plant species. The establishment of non-native vegetation leads to increased competition between native and non-native vegetation for available resources and results in decreased native species diversity in adjacent, native habitats. Fugitive dust created during project-related construction activities may settle on plants adjacent to the construction zone. This dust can at least temporarily result in reductions in plant photosynthesis, growth, and reproduction.

The RTP and SCS include projects that may result in direct removal or degradation of riparian habitat or other sensitive natural communities during construction activities such as grading and grubbing.

Mitigation Measures

The specific impacts on sensitive habitats, including jurisdictional waters and wetlands will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ When applicable to federally-funded projects, responsible and implementing agencies should commit to improved interagency coordination and integration of the National Environmental Policy Act (NEPA) and the Clean Water Act Section 404 procedures during three stages: transportation planning, project programming, and project implementation. Affected State and local agencies should commit to ensuring the earliest possible consideration of environmental concerns pertaining to U.S. water bodies, including wetlands, at each of the three stages identified above. In addition, the agencies should place a high priority on the avoidance of adverse impacts to waters of the U.S. and associated sensitive species, including threatened and endangered species. Implementation of NEPA-404 requirements will expedite construction of necessary transportation projects, with benefits to mobility and the economy at large. The process will also enable more street and highway projects to proceed on budget and on schedule. Finally, the process will improve cooperation and efficiency of governmental operations at all levels, thereby better serving the public.

- ✓ Construction and operational Best Management Practices (BMPs) will be identified, installed and maintained by implementing agencies in order to prevent silt and other pollutants from entering jurisdictional waters and wetlands thereby degrading or destroying wildlife and/or natural habitat. BMPs may include straw bales and/or mats, temporary sedimentation basins, silt fence, sand bag check dams, dry season construction, etc.

- ✓ Native soils in construction areas will be removed, stockpiled separately, and replaced by implementing agencies in those areas where onsite revegetation of the native habitat is planned.

- ✓ Any disturbed natural areas will be replanted by implementing agencies with appropriate native vegetation following the completion of construction activities.

- ✓ During the individual improvement or future land use development project design phase, impacts to jurisdictional waters and wetlands will be minimized by implementing agencies to the greatest extent feasible.

- ✓ Implementing agencies will obtain and comply with appropriate regulatory requirements prior to construction.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts to sensitive habitats, including jurisdictional waters and wetlands, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.5.2 – Direct Impacts on Rare, Threatened, or Endangered Plant & Wildlife Species

The RTP and SCS include projects that may result in direct impacts to plant and wildlife species that are identified in Table 3-44 above, including rare, threatened and/or endangered species during construction and operation of the proposed transportation facilities and future land use developments through the removal or direct mortality as a result of construction equipment, operational traffic, etc. of native habitat.

Mitigation Measures

The specific impacts on plant and wildlife species will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Each proposed individual transportation improvement project and future land use development will consider the displacement of sensitive habitat, sensitive species, and non-native habitat.

- ✓ When avoidance of native vegetation removal is not possible, each transportation improvement project and future land use development shall replant disturbed areas with commensurate native vegetation of high habitat value adjacent to the project (i.e., as opposed to ornamental vegetation with relatively less habitat value).

- ✓ Focused sensitive plant and wildlife species and non-native habitat surveys will be conducted within suitable habitat to determine the distribution of sensitive species within the biological impact area of each transportation improvement project and future land use development. Sensitive plant and non-native habitat surveys will be conducted during the appropriate flowering season for sensitive plant species with the potential to occur within the individual transportation improvement project or future land use development area. In all cases, impacts on special-status species and/or their habitat shall be avoided during construction to the extent feasible.

- ✓ If sensitive plant or wildlife species and non-native habitat are identified within the biological impact area, a Biological Resource Management Plan (BRMP) will be developed to address appropriate avoidance and minimization measures. These measures may include seed collection and salvage measures for sensitive plant species and non-native habitat, silt fencing, exclusion fencing and/or appropriate compensation where impacts cannot be fully avoided.

- ✓ Individual transportation improvement projects and future land use developments shall include offsite habitat enhancement or restoration to compensate for unavoidable habitat losses from the project site.

- ✓ Locations of sensitive species, sensitive habitat, and non-native habitat will be mapped and shown on construction drawings and identified as Environmentally Sensitive Areas (ESAs). Prior to construction, these areas will be flagged and/or fenced to prevent unnecessary impacts from machinery and foot traffic.

- ✓ Temporary access roads and staging areas will not be located within areas containing sensitive plant, sensitive wildlife species or non-native habitat wherever feasible, so as to avoid or minimize impacts to these species.

- ✓ Construction activities will be scheduled, as appropriate and feasible, to avoid sensitive times that have a greater likelihood to affect significant resources such as spawning periods for fish, nesting season for birds and/or the rainy season for riparian habitat and sediment/erosion control.

- ✓ All vegetation (including tall grasses) will be removed between August 16th and February 14th, if possible, to avoid potential conflicts with nesting birds. If it is not possible to remove vegetation during that time frame, a nest clearance survey will be completed prior to vegetation clearing. Any detected nests will be mapped and provided with an appropriate buffer as recommended by a

qualified biologist. Construction activities within the buffer area will not be allowed until after September 15 or until fledglings have abandoned the nest.

- ✓ A Worker Awareness Program (environmental education) shall be developed and implemented to inform project workers of their responsibilities in regards to avoiding and minimizing impacts on sensitive biological resources.

- ✓ An Environmental Inspector shall be appointed to serve as a contact for issues that may arise concerning implementation of mitigation measures, and to document and report on adherence to these measures.

- ✓ A qualified wetland scientist shall review construction drawings as part of each project-specific environmental analysis to determine whether wetlands will be impacted, and if necessary perform a formal wetland delineation. Appropriate State and federal permits shall be obtained, but each project EIR will contain language clearly stating the provisions of such permits, including avoidance measures, restoration procedures, and in the case of permanent impacts compensatory creation or enhancement measures to ensure a no net loss of wetland extent or function and values.

- ✓ Sensitive habitats (native vegetative communities identified as rare and/or sensitive by the CDFW) and special-status plant species (including vernal pools) impacted by projects shall be restored and augmented, if impacts are temporary, at a 1.1:1 ratio (compensation acres to impacted acres). Permanent impacts shall be compensated for by creating or restoring habitats at a 3:1 ratio as close as possible to the site of the impact.

- ✓ When work is conducted in identified sensitive habitat areas and/or areas of intact native vegetation, construction protocols shall require the salvage of perennial plants and the salvage and stockpile of topsoil (the surface material from 6 to 12 inches deep) and shall be used in restoring native vegetation to all areas of temporary disturbance within the project area.
- ✓ If specific project area trees are designated as “Landmark Trees” or “Heritage Trees”, then approval for removals shall be obtained through the appropriate entity, and appropriate mitigation measures shall be developed at that time, to ensure that the trees are replaced. Due to the close proximity of these areas to sensitive wildlife habitats, all mitigation trees will use only locally-collected native species.

Significance After Mitigation

This impact would likely be significant if the proposed individual improvement project occurs within or near known populations of sensitive plant and wildlife species, or within designated critical habitat for federal-or State-listed species. These mitigation measures would require implementing agencies to avoid or mitigate impacts to sensitive plant and wildlife species. The responsibility to approve land use

development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts to sensitive plant and wildlife species, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.5.3 – Impacts on Rare, Threatened, or Endangered Species from Project Noise, Lighting and Deterrents

The Project may result in indirect impacts to plant and wildlife species including rare, threatened and/or endangered species, during the construction and operation through edge effects such as noise, lighting and visual deterrents. Short-term and long-term indirect impacts on special-status species from the construction and operation of transportation facilities and other future land use facilities include edge effects such as noise and lighting. These impacts may be less-than-significant for improvement projects on already-existing transportation facilities or in already developed areas because the types of operational impacts although potentially increased, would remain the same. Noise impacts will be most adverse during construction. However, these impacts are temporary (1 to 5 years) in nature and are generally considered not significant.

Mitigation Measures

The specific impacts on plant and wildlife species will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ The height, spacing, number and type of light fixtures will be selected and installed to minimize intrusive light escaping from the physical boundaries of the site.

- ✓ Road noise minimization methods, such as native brush and tree planting adjacent to heavy noise-producing transportation facilities, will be incorporated where feasible.

Significance After Mitigation

This impact would likely be significant if the proposed individual transportation improvement projects and future land use developments occur within or near known populations of sensitive plant and wildlife species, or within designated critical habitat for federal- or State-listed species. These mitigation measures would require individual improvement project proponents to avoid or mitigate impacts to sensitive plant and wildlife species. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts to sensitive plant and wildlife species, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.5.4 - Temporary and Permanent Impacts to Terrestrial and Aquatic Wildlife Movement

The RTP and SCS would result in temporary and permanent impacts to terrestrial and aquatic wildlife movement. The nature of transportation projects and future land use developments increases the potential extent and significance of impacts to wildlife movement. Transportation facilities pose barriers to wildlife crossings that may result in injury of death of wildlife attempting to traverse the facility. These barriers also result in fragmentation of natural habitat and increased impacts associated with edge effects from lighting, noise, human disturbance, exotic plant infestations, urban runoff, etc. Smaller fragments of habitat result in greater intensity of the edge effects. It is also important to maintain connections between populations of wildlife so that interbreeding, and/or that young have no ability to disperse to suitable habitats, does not occur. Impacts to wildlife movement would be greater along entirely new transportation facilities or future land use developments than with improvements to existing facilities, because the existing facility has already formed a barrier.

Mitigation Measures

The specific impacts on temporary and permanent impacts to terrestrial and aquatic wildlife movement will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ During final design, implementing agencies will design, construct, and maintain terrestrial wildlife crossings in order to minimize barrier effects and habitat fragmentation created by individual transportation projects and future land use developments.

- ✓ During final design, implementing agencies will design, construct, and maintain any structure/culvert placed within a stream where endangered or threatened fish occur/may occur. The structure/culvert will not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.

Significance After Mitigation

These mitigation measures would require implementing agencies responsible for review, design and implementation of transportation projects and future land use developments to avoid or mitigate impacts to wildlife movement. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts to temporary and permanent impacts to terrestrial and aquatic wildlife movement, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.5.5 – Siltation Impacts

The 2014 RTP and SCS would potentially increase siltation of streams and other water resources from exposures of erodible soils during construction activities. Excessive siltation can significantly degrade habitat for fish and other aquatic organisms. Heavy sediment deposition can bury slow-moving or sessile bottom-dwelling organisms, fish eggs and larval forms of many aquatic organisms. These losses are not only of direct concern, but also represent a loss of food sources for larger fishes and other organisms, such as birds and mammals, that are not directly affected by sediments.

Increased sediment can also decrease light penetration for aquatic plant production and increase water temperature from greater insulation. Higher water temperatures can affect aquatic organisms through direct stress of temperature-sensitive organisms (e.g., steelhead require cold water streams), and by increasing nitrate productivity which can exacerbate eutrophication if the sediments contain or are

accompanied by excessive nutrients (i.e., algal blooms). The degree of this impact would depend on several factors including the following:

- ✓ *Length of occurrence.* The longer the period of sedimentation, the greater the potential for significance.
- ✓ *Timing of occurrence*. The effect would be of greater significance during particularly sensitive times of year, such as during fish spawning seasons when the eggs and larvae which are particularly sensitive to siltation would be present; and,
- ✓ *Significance of Resource.* The effect would be of greater significance where a special-status species might be affected, such as near a steelhead spawning stream.

This impact would be significant.

Mitigation Measures

The specific impacts on siltation will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ For Individual transportation and future land use development projects near water resources should implement Best Management Practices (BMPs) at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport.

- ✓ Individual transportation and future land use development projects, implementing agencies should schedule construction activities to avoid sensitive times for biological resources (e.g., steelhead spawning periods during the winter and spring) and to avoid the rainy season when erosion and sediment transport is increased.

Significance After Mitigation

The responsibility to mitigate siltation impacts rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the siltation impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require

a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.5.6 - Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The County and cities have local ordinances and policies in place that protect native trees as well as non-native trees in urban landscapes. These ordinances and policies have different definitions of protected trees (e.g., certain species, minimum diameter at breast height (dbh), trees that form riparian corridors). The 2014 RTP and SCS transportation improvements and future land use developments could result in removal of trees that are protected by local policies or ordinances. In addition, implementation of the proposed Project may also conflict with other local policies or ordinances that protect locally significant biological resources. Therefore, transportation and future land use impacts related to conflicts with local policies or ordinances protecting biological resources are considered potentially significant.

Mitigation Measures

The specific impacts related to conflicts with local ordinances and policies will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Implementing agencies should require project applicants to prepare biological resources assessments for specific projects proposed in areas containing, or likely to contain, protected trees or other locally protected biological resources. The assessment should be conducted by appropriately trained professionals pursuant to adopted protocols, and standards in the industry. Mitigation should be implemented when significance thresholds are exceeded. Mitigation should be consistent with the requirements of CEQA and/or follow applicable plans promulgated to protect species/habitat.

- ✓ Implementing agencies should design projects such that they avoid and minimize direct and indirect impacts to protected trees and other locally protected resources where feasible, defined in section 15364 of the CEQA Guidelines.

- ✓ As part of project-level environmental review, implementing agencies will ensure that projects comply with the most recent general plans, policies, and ordinances, and conservation plans. Review of these documents and compliance with their requirements will be demonstrated in project-level

environmental documentation. Review of these documents and compliance with their requirements should be demonstrated in project-level environmental documentation.

Significance After Mitigation

The responsibility to mitigate siltation impacts rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce conflicts with any local policies or ordinances protecting biological resources, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.6 CLIMATE CHANGE

This section includes a discussion of global climate change, its causes and the contribution of human activities, as well as a summary of existing greenhouse gas emissions. This section also describes the criteria for determining the significance of climate change impacts, and estimates the likely greenhouse gas emissions that would result from vehicular traffic and other emission sources related to the project. Where appropriate, mitigation measures are recommended to reduce Project-related (RTP and SCS) impacts.

Regulatory Setting

Federal

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to assess the impacts of global warming and to develop strategies that nations could apply to curb global climate change. In 1992, the United States joined other countries around the world in signing the United Nations Framework Convention on Climate Change treaty with the goal of controlling greenhouse gas emissions.

As a result, the Climate Change Action Plan was developed to address reduction of greenhouse gases in the United States. The plan is comprised of more than 50 voluntary programs. Additionally, the Montreal Protocol was first signed in 1987 and considerably amended in 1990 and 1992. The Montreal Protocol instructs that the production and consumption of compounds that deplete ozone in the stratosphere--chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform--were to be phased out by 2000 (2005 for methyl chloroform).

In *Massachusetts v. EPA* (April 2, 2007), the U.S. Supreme Court held that GHGs fall within the Clean Air Act's definition of an "air pollutant" and directed the U. S. Environmental Protection Agency (EPA) to deem whether GHGs are affecting climate change. The EPA must regulate GHG emissions from automobiles under the Federal Clean Air Act (FCAA) if it is determined GHGs do affect climate change. In addition, Congress has enlarged the corporate average fuel economy (CAFE) of the U.S. automotive fleet. In August of 2012, President Barack Obama finalized groundbreaking standards that increased fuel economy to the equivalent of 54.5 mpg for cars and light-duty trucks by Model Year 2025. This rise in CAFE standards will result in a significant reduction in GHG emissions from automobiles, the largest single emitting GHG group in California.

The U.S. EPA annually publishes the *Inventory of U.S. Greenhouse Gas Emissions and Sinks* for estimating sources of GHGs that is generally consistent with the IPCC methodology developed in its *Guidelines for National Greenhouse Gas Inventories*.

- ✓ **Energy Policy and Conservation Act -** The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration (NHTSA), as a part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

  Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. In September of 2011, EPA and NHTSA finalized rules to reduce greenhouse gas emissions and fuel consumption for on-road heavy-duty vehicles, which were created in response to President Obama's directive to take steps to produce a new generation of clean vehicles. NHTSA's final fuel consumption standards and EPA's final carbon dioxide (CO2) emissions standards are designed for each of three regulatory categories of heavy-duty vehicles. For combination tractors the engine and vehicle standards begin in Model Year 2014 and achieve from 7 to 20% reduction in CO2 emissions and fuel consumption by Model Year 2017 over the 2010 baselines. For heavy-duty pickup trucks and vans, the standards begin in Model Year 2014 and achieve up to a 10% reduction in CO2 emissions and fuel consumption for gasoline vehicles and 15% reduction for diesel vehicles by Model Year 2018. For vocational vehicles, the engine and vehicle standards begin in Model Year 2014 and achieve up to a 10% reduction in fuel consumption and CO2 emissions by Model Year 2017.

- ✓ **Energy Policy Act of 1992 (EPAct) -** The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

- ✓ **Energy Policy Act of 2005 -** The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

- ✓ **Federal Climate Change Policy -** According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions;

strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The federal government's goal is to reduce the GHG intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, the EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs. In addition, there are other adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the FCAA:

- **Endangerment Finding:** The EPA Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO2), methane (CH4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)--in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The EPA Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite to finalizing the EPA's proposed greenhouse gas emission standards for light-duty vehicles. On May 7, 2010, the EPA and the Secretary of Transportation promulgated a joint final rule representing the first substantive federal action to limit emissions of greenhouse gases ("GHGs"). 75 Fed. Reg. 25324 (May 7, 2010). The rule ("GHG Mobile Source Rule") establishes emissions standards for passenger cars and light trucks under section 202 of the Clean Air Act, 42 U.S.C. § 7521, and corporate average fuel efficiency ("CAFE") standards under the Energy Policy and Conservation Act. The standards apply to 2012 and later model year vehicles and will require that fuel efficiency increase and GHG emissions decrease through 2016, by which time the projected combined car and truck fleet will need to achieve the equivalent of 35.5 miles per gallon.

State

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to, and consequences of, global climate change are not yet fully understood, global climate change is occurring. Every nation emits GHGs; therefore, global cooperation will be required to reduce the rate of GHG emissions, Currently no state regulations have

been adopted in California that establish ambient air quality standards for GHGs; however, California has passed legislation directing CARB to develop actions to reduce GHG emissions.

- ✓ **California Strategy to Reduce Petroleum Dependence (AB 2076) -** The strategy, *Reducing California's Petroleum Dependence*, was adopted by the CEC and CARB in 2003. The strategy recommends that California reduce on-road gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future; the Governor and Legislature work to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks, and sport utility vehicles (SUVs); and increase the use of non- petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

- ✓ **Assembly Bill 1493 (Pavley) -** California Assembly Bill 1493 (Pavley) enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB would apply to 2009 and later model year vehicles. CARB estimated that the regulation would reduce climate change emissions from light duty passenger vehicles by an estimated 18 percent in 2020 and by 27 percent in 2030 (AEP 2007). In 2005, the CARB requested a waiver from EPA to enforce the regulation, as required under the Clean Air Act. Despite the fact that no waiver had ever been denied over a 40-year period, the then Administrator of the EPA sent Governor Schwarzenegger a letter in December 2007, indicating he had denied the waiver. On March 6, 2008, the waiver denial was formally issued in the *Federal Register*. Governor Schwarzenegger and several other states immediately filed suit against the federal government to reverse that decision. On January 21, 2009, CARB requested that EPA reconsider denial of the waiver. EPA scheduled a re-hearing on March 5, 2009. On June 30, 2009, EPA granted a waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year.

- ✓ **Executive Order S-3-05 -** Governor Schwarzenegger established Executive Order S-3-05 in 2005. This Executive Order set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

  - By 2010, reduce GHG emissions to 2000 levels;
  - By 2020, reduce GHG emissions to 1990 levels; and
  - By 2050, reduce GHG emissions to 80 percent below 1990 levels.

  The executive order directed the Secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the Governor and Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources,

and mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Cal/EPA Secretary created the Climate Action Team (CAT), made up of members from various State agencies and commissions. The team released its first report in March 2006, which proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

- ✓ **Assembly Bill 32 (California Global Warming Solutions Act of 2006) -** California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599), which established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and established a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

  AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions sufficient to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 emission cap by 2020.

- ✓ **Assembly Bill 1007 -** Assembly Bill 1007, (Pavley, Chapter 371, Statutes of 2005) directed the CEC to prepare a plan to increase the use of alternative fuels in California. As a result, the CEC prepared the State Alternative Fuels Plan in consultation with the state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce

greenhouse gas emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

- ✓ **Bioenergy Action Plan – Executive Order #S-06-06 -** Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the state to meet a target for use of biomass electricity.

- ✓ **Executive Order S-1-07 -** Executive Order S-1-07, which was signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure to meet the mandates in AB 32. On April 23, 2009, CARB approved the proposed regulation to implement the LCFS. The LCFS will reduce GHG emissions from the transportation sector in California by about 16 MMT in 2020, and is designed to reduce California's dependence on petroleum, create a lasting market for clean transportation technology, as well as stimulate the production and use of alternative, low-carbon fuels. The LCFS is designed to provide a durable framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. This framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. One standard is established for gasoline and the alternative fuels that can replace it. A second similar standard is set for diesel fuel and its replacements.

  The standards are "back-loaded" meaning that more reductions are required in the last five years than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the LCFS will be based on a combination of strategies involving lower carbon fuels and more efficient, advanced-technology vehicles.

- ✓ **Climate Action Program at Caltrans -** The California Department of Transportation, Business, Transportation, and Housing Agency, prepared a Climate Action Program in response to new regulatory directives. The goal of the Climate Action Program is to promote clean and energy efficient transportation, and provide guidance for mainstreaming energy and climate change issues into business operations. The overall approach to lower fuel consumption and CO_2 from transportation is

twofold: (1) reduce congestion and improve efficiency of transportation systems through smart land use, operational improvements, and Intelligent Transportation Systems; and (2) institutionalize energy efficiency and GHG emission reduction measures and technology into planning, project development, operations, and maintenance of transportation facilities, fleets, buildings, and equipment.

The reasoning underlying the Climate Action Program is the conclusion that "the most effective approach to addressing GHG reduction, in the short-to-medium term, is strong technology policy and market mechanisms to encourage innovations. Rapid development and availability of alternative fuels and vehicles, increased efficiency in new cars and trucks (light and heavy duty), and super clean fuels are the most direct approach to reducing GHG emissions from motor vehicles (emission performance standards and fuel or carbon performance standards)."

- ✓ **Senate Bill 97 -** SB 97, signed August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010. SB 97 also removed, both retroactively and prospectively, the legitimacy of litigation alleging inadequate CEQA analysis of effects of GHG emissions in the environmental review of projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006 or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E). This provision was repealed by operation of law on January 1, 2010; at that time, any such projects that remain unapproved would no longer be protected against litigation claims of failure to adequately address climate change issues. In the future, this bill will only protect a handful of public agencies from CEQA challenges on certain types of projects, and only for a few years' time.

  As set forth more fully below, in June 2008, OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible (Governor's Office of Planning and Research, 2008*)*. OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance, as described in Section 15064.7 of *CEQA Guidelines* that will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

Senate Bill 97 (Chapter 185, 2007) required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. OPR prepared its recommended amendments to the State CEQA Guidelines to provide guidance to public agencies regarding the analysis and mitigation of greenhouse gas emissions and the effects of greenhouse gas emissions in draft CEQA documents. The Amendments became effective on March 18, 2010.

- ✓ **Senate Bill 375 -** SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's Regional Transportation Plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding.

  This law also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the Regional Transportation Plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

- ✓ **California Climate Action Registry General Reporting Protocol -** The California Climate Action Registry (CCAR) was established in 2001 by SB 1771 and SB 527 (Chapter 1018, Statutes of 2000, and Chapter 769, Statutes of 2001, respectively) as a nonprofit voluntary registry for GHG emissions. The purpose of the CCAR is to help companies and organizations with operations in the State to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CCAR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry.

  This protocol provides the principles, approach, methodology, and procedures required for participation in CCAR. It is designed to support the complete, transparent, and accurate reporting of an organization's GHG emissions inventory in a fashion that minimizes the reporting burden and maximizes the benefits associated with understanding the connection between fossil fuel

consumption, electricity use, and GHG emissions in a quantifiable manner. The most updated version of this protocol was prepared in April 2008. All cabinet-level state agencies and departments have joined the CCAR. Membership in the CCAR means that all members of the Governor's Cabinet will be reporting their GHG emissions on a yearly basis.

- ✓ **California Code of Regulations Title 24 -** Although not originally intended to reduce greenhouse gas emissions, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The GHG emission inventory was based on Title 24 standards as of October 2005; however, Title 24 has been updated as of 2008. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in greenhouse gas emissions. Therefore, increased energy efficiency results in decreased greenhouse gas emissions.

- ✓ **CAPCOA January 2008 CEQA and Climate Change -** In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating GHG emissions under CEQA. The CAPCOA white paper strategies are not guidelines and have not been adopted by any regulatory agency; rather, the paper is offered as a resource to assist lead agencies in considering climate change in environmental documents.

  The CAPCOA white paper addresses what constitutes new emissions, how baseline emissions should be established, what should be considered cumulatively considerable under CEQA, what a business as usual (BAU) scenario means, and whether an analysis should include life-cycle emissions. The CAPCOA white paper also contains a Climate Change Significance Criteria Flow Chart that proposes a tiered approach to determining significance under CEQA. The flow chart would consider a proposed plan's impact to be less than significant if a General Plan for the project area exists that is in compliance with AB 32 (showing that GHG emissions for 2020 would be less than 1990 emissions for the plan area). The flow chart would consider a proposed project's impact to be significant unless one of the following can be demonstrated:

- The project is exempt under SB 97;
- The project is on the "Green List" (or a list of projects that are deemed a positive contribution to California efforts to reduce GHG emissions); A General Plan for the project area exists that is in compliance with AB 32; and/or
- GHG emissions are analyzed and mitigated to less-than-significant.

The CAPCOA white paper considers GHG impacts to be exclusively cumulative impacts.

✓ **CARB Climate Change Proposed Scoping Plan -** On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB has estimated that the 1990 GHG emissions level was 427 MMT net CO_2e (CARB 2007b). CARB estimates that a reduction of 173 MMT net CO_2e emissions below BAU would be required by 2020 to meet the 1990 levels (CARB, 2007b). This amounts to a 15 percent reduction from today's levels, and a 30 percent reduction from projected BAU levels in 2020 (CARB, 2008a).

CARB's Scoping Plan calculates 2020 BAU emissions as those expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors, i.e. transportation, electrical power, commercial and residential, industrial etc. CARB used three-year average emissions, by sector, for 2002-2004 to forecast emissions to 2020. At the time CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32. CARB's Scoping Plan also breaks down the amount of GHG emissions reductions CARB recommends for each emissions sector of the state's GHG inventory. CARB's Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 $MMTCO_2E$);
- The LCFS (15.0 MMT CO_2E);
- Energy efficiency measures in buildings and appliances, and the widespread development of combined heat and power systems (26.3 MMT CO_2E); and
- A renewable portfolio standard for electricity production (21.3 MMT CO_2E).

CARB has identified a GHG reduction target of 5 MMT (of the 174 MMT total) for local land use changes (Table 2 of CARB's Scoping Plan), by Implementation of Reduction Strategy T-3 regarding Regional Transportation-Related GHG Targets. Additional land use reductions may be achieved as SB 375 is implemented. CARB's Scoping Plan states that successful implementation of the plan relies on

local governments' land use, planning, and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. CARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. CARB's Scoping Plan does not include any direct discussion about GHG emissions generated by construction activity. The Plan expands the list of nine Discrete Early Action Measures to a list of 39 Recommended Actions contained in Appendices C and E of CARB's Scoping Plan.

Regional

✓ **San Joaquin Valley Air Pollution Control District**

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas emissions (GHG) on global climate change, the San Joaquin Valley Air Pollution Control District (SJVAPCD) has adopted the guidance: *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* and the policy: *District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change.

Environmental Setting

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Global Climate Change (GCC) means a shift in the climate of the earth as a whole that occurs naturally as in the case of the ice age. According to the California Air Resources Board (CARB), the climate change that is occurring today differs from previous climate changes in both time and scale.

Gases that catch heat in the atmosphere are regularly called greenhouse gases (GHGs). The Earth's surface temperature would be about 61 degrees Fahrenheit colder than it is currently if it were not for the innate heat trapping effect of GHGs. The buildup of these gases in the earth's atmosphere is considered the source of the observed increase in the earth's temperature (global warming). Some greenhouse gases such as carbon dioxide occur naturally in nature and are emitted to the atmosphere through natural processes and as well as through some anthropocentric activities. Other GHGs (e.g., fluorinated gases) are created and emitted solely through human activities.
Since the Industrial Revolution (circa 1750), global concentrations of carbon dioxide (CO_2) have risen about 36%, chiefly due to the burning of fossil fuels. Questions remain about the amount of warming that will occur, how rapidly it will occur, and how the warming will affect the rest of the climate system, including weather events.

The United Nations Intergovernmental Panel on Climate Change constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The Panel concluded that a stabilization of GHGs at 400 to 450 parts per million (ppm) CO_2 equivalent concentration is required to keep global mean warming below 3.6º Fahrenheit (2º Celsius). This is presumed necessary to avoid dangerous climate change (Association of Environmental Professionals, 2007).

State law defines greenhouse gases as any of the following compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6) (California Health and Safety Code Section 38505(g).) CO_2, followed by CH_4 and N_2O, are the most common GHGs that result from human activity. The characteristics of state defined GHGs are described below:

- ✓ **Carbon dioxide** – CO_2 results from fossil fuel combustion in stationary and mobile sources. It contributes to the greenhouse effect, but not to stratospheric ozone depletion. In 2011, CO_2 accounted for approximately 88 percent of total GHG emissions in the State (CARB, 2014);

- ✓ **Methane** – CH_4 can also be divided into anthropogenic (i.e., resulting from human activities and/or processes) and natural sources. Anthropogenic sources include rice agriculture, livestock, landfills, and waste treatment, some biomass burning, and fossil fuel combustion. Natural sources are wetlands, oceans, forests, fire, termites and geological sources. Anthropogenic sources currently account for more than 60 percent of the total global emissions; and

- ✓ **Other regulated GHGs include Nitrous Oxide (N_20), Sulfur Hexafluoride (SF_6), Hydrofluorocarbons (HFC), and Perfluorocarbons (PFC)** - These gases all possess heat-trapping characteristics that are greater than CO_2. Emission sources of nitrous oxide gases include, but are not limited to, waste combustion, waste water treatment, fossil fuel combustion, and fertilizer production. Because the

volume of emissions is small, the net effect of nitrous oxide emissions relative to CO_2 or CH4 is relatively small. SF_6, HFC, and PFC emissions occur at even lower rates.

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain other gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change over the long-term. Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of about 0.2°C (0.36° Fahrenheit) per decade is projected, and there are identifiable signs that global warming is taking place, including substantial ice loss in the Arctic.

It has become evident that human activities are continuing to impact the earth's energy budget. Observations of atmosphere, land, oceans, and cryosphere have provided evidence of climate change which is largely the result of human activities. The average global surface air temperatures over land and oceans have increased over the last 100 years as discussed in detail in numerous publications by the International Panel on Climate Change (IPCC), namely "Climate Change 2013, The Physical Science Basis". Climate change modeling shows that further warming could occur, which would induce additional changes in the global climate system during the current century. GHGs have the potential to affect the environment because such emissions are believed to contribute cumulatively to global climate change. Although GHG emissions from one single project will not by themselves cause global climate change, it is thought that GHG emissions from multiple projects, past, present and future throughout the world may collectively result in a cumulative impact with respect to global climate change. It is speculated that global climate change could contribute to rising sea levels, which can inundate low-lying areas; impact rainfall and snowfall, which could change water supply; affect habitat, which could affect biological resources, along with other unknown effects.

The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with construction activities and the operation of passenger, public transit, and commercial vehicles results in

GHG emissions that cause global climate change. In addition, alternative fuels like natural gas including CNG and liquefied natural gas (LNG), ethanol, and electricity (unless derived from solar, wind, nuclear, or another energy source that does not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Changes in California's climate and ecosystems are occurring at a time when the State's population is expected to increase from 37 to 48 million by 2040, according to the California State Department of Finance. As such, the number of people potentially affected by climate change, as well as the amount of anthropogenic GHG emissions expected under a "business as usual" scenario, is expected to increase. Climate models indicate that temperatures in California may rise by 4.7°F to 10.5°F by the end of the century if GHG emissions continue to proceed at a medium or high rate (CEC, 2006). Lower emission rates would reduce the projected warming to 3.0°F to 5.6° Fahrenheit. Almost all climate scenarios include a continuing trend of warming through the end of the century given the amounts of GHGs already released, and the difficulties associated with reducing emissions to a level that would stabilize the climate. Total GHG emissions in California have been approximated by CARB, which found that 461 MMT of CO_2E GHG emissions were produced in California in 2011. CARB also found transportation to be the source of 38 percent of the State's GHG emissions, followed by industrial sources at 21 percent and electricity generation at 19 percent.

The IPCC was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information to further understand climate change, its potential impacts, and options for adaptation and mitigation. The IPCC predicts substantial increases in temperatures globally of between 1.1 to 6.4 degrees Celsius, depending on the scenario studied. This may impact California's natural environment in the following ways:

- ✓ Rising sea levels along the California coastline, particularly in the San Francisco Bay Area and within the San Joaquin Delta because of ocean expansion;
- ✓ Extreme-heat conditions, such as heat waves and very high temperatures, which could last longer and become more frequent;
- ✓ An increase in heat-related human deaths, infectious diseases, and a higher risk of respiratory problems caused by deteriorating air quality;
- ✓ Reduced snow pack and stream flow in the Sierra Nevada mountains, affecting winter recreation and water supplies;
- ✓ Potential increases in the severity of winter storms, affecting peak stream flows and flooding;

- ✓ Changes in growing season conditions that could affect California agriculture, causing variations in crop quality and yield;

- ✓ Changes in the distribution of plant and wildlife species because of changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects;

- ✓ Increases in the number of days conducive to ozone formation by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas of Los Angeles and the San Joaquin Valley by the end of the 21st century; and

- ✓ High potential for erosion of California's coastlines and seawater intrusion into the Delta and levee systems due to the rise in sea level.

The State of California GHG Inventory performed by CARB compiled statewide human sources of GHG emissions. It includes estimates for carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. The current inventory covers the years 2000 to 2011, and is summarized in Table 3-53. When accounting for GHGs, all types of GHG emissions are expressed in terms of CO_2 equivalents (CO_2E) and are typically quantified in metric tons (MT) or millions of metric tons (MMT). Data sources used to calculate this GHG inventory include California state and federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the IPCC. The 2000 emissions level is the sum total of sources from all sectors and categories in the inventory. The inventory is divided into seven (7) broad sectors and categories. These sectors include: agriculture; commercial and residential; electricity power; High GWP; industrial; recycling and waste; and transportation. Emissions of carbon dioxide and nitrous oxide are byproducts of fossil fuel combustion, among other sources. Methane, a highly potent GHG, results from off-gassing associated with agricultural practices and landfills, among other sources. Sinks of carbon dioxide include uptake by vegetation and dissolution into the ocean.

TABLE 3-53
State of California GHG Inventory (2000-2011)

Economic Sector	Greenhouse Gas Emissions ($MMTCO_2e$)												% of Total in 2000	% of Total in 2011	% Change in Emission	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011			2000-2011	2010-2011
Agriculture	29.04	29.23	32.39	32.84	32.57	32.81	33.95	32.94	33.88	31.69	31.68	32.24	6.3%	7.2%	11.0%	1.8%
Commercial and Residential	43.64	43.25	43.06	42.47	43.60	42.52	43.10	43.83	44.59	44.19	45.13	45.47	9.4%	10.1%	4.2%	0.8%
Electricity Power	104.86	122.01	108.65	112.62	115.20	107.86	104.54	113.94	120.14	103.56	90.09	86.57	22.7%	19.3%	-17.4%	-3.9%
High GWP	7.11	7.12	7.25	7.87	8.53	9.25	9.86	10.50	11.48	12.45	14.15	15.17	1.54%	3.39%	113.4%	7.2%
Industrial	95.81	93.85	94.42	93.42	95.73	94.23	91.88	88.79	89.27	84.43	91.00	93.24	20.7%	20.8%	-2.7%	2.5%
Recycling and Waste	6.14	6.26	6.20	6.32	6.33	6.47	6.51	6.57	6.69	6.81	6.94	7.00	1.3%	1.6%	14.0%	0.9%
Transportation	176.29	176.65	183.86	183.55	187.21	188.94	189.34	188.97	177.16	171.57	170.61	168.42	38.1%	37.6%	-4.5%	-1.3%
Total Emissions	462.9	478.4	475.8	479.1	489.2	482.1	479.2	485.5	483.2	454.7	449.6	448.1	--	--	-3.2%	-0.3%

Source: ARB California Greenhouse Gas Inventory for 2000-2011

1. Includes equipment used in construction, mining, oil drilling, industrial and airport ground operations
2. Reflects emissions from combustion of natural gas, diesel, and lease fuel plus fugitive emissions
3. These categories are listed in the Industrial sector of ARB's GHG Emission Inventory sectors
4. This category is listed in the Electric Power sector of ARB's GHG Emission Inventory sectors

Environmental Impacts, Mitigation Measures and Significance After Mitigation

Criteria for Significance

As with any environmental impact, lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a "significant impact", individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice. The potential effects of a project may be individually limited but cumulatively significant. Lead agencies should not dismiss a proposed project's direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence. Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project, encourages reliance on other Environmental Impact Reports that discuss greenhouse gases, and tiering from them.

As described previously, the State Legislature and the global scientific community have found that global climate change poses significant adverse effects to the environment of California and the entire world. To mitigate these adverse effects the State Legislature enacted AB 32, which requires statewide GHG reductions to 1990 levels by 2020.

AB 32 and S-3-05 target the reduction of statewide emissions. It should be made clear that AB 32 and S-3-05 do not specify that the emissions reductions should be achieved through uniform reduction by geographic location or by emission source characteristics. Consistency with AB 32 and SB 375 will be used to assess significance with respect to greenhouse gas (GHG) emissions.

SB 375 requires that Fresno COG and other MPOs throughout California develop RTPs that include a preferred SCS scenario that achieves GHG emission targets set forth by CARB. The emission targets set for Fresno County by CARB are to achieve a 5% reduction in GHG emissions between 2005 and 2020 and a 10% reduction in GHG emissions between 2005 and 2035. The CARB SB 375 Implementation in the San Joaquin Valley document fan be obtained from the following link:

http://www.arb.ca.gov/cc/sb375/finalstaffreport_011513.pdf

The following significance criteria were used to determine the level of significance of impacts of transportation improvement projects or land uses proposed by the Project. Significance criteria were developed based on Appendix G of the State CEQA Guidelines. In general, an individual improvement project and new development project contained within the RTP and SCS would result in a significant noise impact if it:

- ✓ Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- ✓ Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Methodology

Climate change is a significant global cumulative impact that could also have a substantial effect on the natural environment of California and Fresno County. The potential contribution of the 2014 RTP to this cumulative impact is discussed below.

State action on climate change is mandated by AB 32. Fresno COG, along with other regional planning agencies throughout the State, will be monitoring the progress of State agencies in developing approaches to address GHG emissions. As agreed-upon approaches for project-level CEQA analysis and for transportation planning are established, Fresno COG expects that climate change will be a key environmental consideration in future regional transportation planning. Both Fresno COG and responsible agencies implementing projects and future land use objectives outlined in the 2014 RTP and SCS will be required to adhere to any future applicable mandatory regulations regarding global warming resulting from the passage of AB 32.

Although the MPOs do not have land use authority to implement more compact and energy efficient land use, or limit growth, the eight San Joaquin Valley Councils of Governments or County Transportation Commissions prepared the San Joaquin Valley Blueprint and have each prepared or are preparing a preferred SCS scenario for inclusion in their 2014 RTP. The Blueprint process led to a preferred land use scenario separate from the local government general plan process. The agencies also prepared a Blueprint Implementation Plan including a ToolKit that is available to local agencies throughout the Valley to use as they review development projects and prepare land use plans and policies.

The SJVAPCD provides a methodology for addressing Greenhouse Gas Emission for Stationary Sources and for Development projects in *Addressing Greenhouse Gas Emissions under the California Environmental Quality Act*. The methodology relies on the use of performance based standards that would be applicable to projects that result in increased GHG emissions. The SJVAPCD notes that the use of performance based standards is not a method of mitigating emissions, rather it is a method of determining significance of project specific GHG emission impacts using established specifications or project design elements: Best Performance Standards (BPS).

In the SJVAPCD's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* it states that projects implementing Best Performance Standards in accordance with the guidance would be determined to have a less than significant individual and cumulative impact on global climate change and would not require project specific quantification of GHG emissions. Projects exempt from the requirements of CEQA, and projects complying with an approved GHG emission reduction plan or mitigation program would also be determined to have a less than significant individual or cumulative impact. Projects not implementing BPS would require quantification of project specific GHG emissions. To be determined to have a less than significant individual and cumulative impact on global climate changes, such projects must be determined to have reduced or mitigated GHG emissions by 29%, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Furthermore, quantification of GHG emissions would be expected for all projects for which the lead agency has determined that an Environmental Impact Report (EIR) is required, regardless of whether the project incorporates Best Performance Standards.

While this methodology is deemed appropriate for project-level analysis and could apply to the project-level analysis for individual RTP projects, it is not a methodology for program-level analysis. Instead, the analysis used for the 2014 RTP quantifies GHG emissions associated with the 2014 RTP and SCS. The 2014 PEIR GHG analysis does not look at GHG emission sources that are non-transportation related (i.e. industrial, commercial, etc.). Neither CEQA nor the CEQA Guidelines mention or provide any methodology for analysis of "greenhouse gases," including CO_2, nor do they provide any numeric significance thresholds. However, the air quality model used to predict emissions rates of the criteria pollutants (EMFAC) is capable of modeling the emissions of CO_2. Fresno COG analyzed CO_2 emissions and fuel-

consumption impacts from on-road travel resulting from the proposed 2014 RTP and SCS. The county-wide levels of GHGs associated with on-road vehicle travel are estimated based on the population estimates adopted by Fresno COG in 2013. These population estimates were developed considering the economic downturn, which is a conservative approach and provides a worst-case projection of CEQA impacts.

The impact assessment for GHG emissions focuses on potential effects the Project (2014 RTP and SCS) might have on GHG emissions within the Fresno Region. The assessment is not site or individual improvement project-specific but is a "regional analysis".

Impact 3.6.1 - Increased Transportation GHG Emissions May Contribute to Climate Change

The ultimate sources of increased transportation emissions in Fresno County are population and employment growth, which will increase with or without projects referenced in the 2014 RTP and land use allocation represented in the SCS. Fresno COG does not implement land use policy in Fresno County; rather, this is under the jurisdiction of the County and the various cities. Decisions about the place, pace, and scale of growth and development are reflected in the general plans and project approvals adopted by the local agencies. The 2014 RTP and SCS is designed to complement, rather than change, the plans adopted by the local agencies. Thus, the ultimate effect of the 2014 RTP and SCS on transportation emissions is not to increase the amount of travel per se, but rather to influence where and how travel occurs within and through the County.

Fresno COG's ability to address and mitigate climate change impacts is limited primarily to policy and funding decisions related to planned roadway and alternative transportation improvements. As described above, the combustion of fossil fuels during vehicle operations is one of the primary sources of GHG emissions in California. GHG emissions also result from the carbon dioxide, methane, and nitrous oxide that are released during the combustion of gasoline and diesel fuel in construction equipment, vehicles, buses, trucks, and trains; and the use of natural gas to power transit buses and other vehicles. As discussed previously, historical and current global GHG emissions are known by the State and the global scientific community to be causing global climate change, and future increases in GHG emissions associated with the proposed RTP and SCS could exacerbate climate change and contribute to the significant adverse environmental effects described previously. Furthermore, increased GHG emissions associated with the proposed RTP and SCS could impact implementation of the State's mandatory requirement under AB 32 to reduce statewide GHG emissions to 1990 levels by 2020.

CO2 Emissions

Emissions associated with the 2014 RTP and SCS can be divided into two categories: passenger transportation associated with light duty trucks and automobiles (LDTA), and goods movement by truck. Consistency with AB 32 will be evaluated by reviewing the Scoping Plan[1] and evaluating whether the actions in the 2014 RTP and SCS will in any way impede implementation of the Scoping Plan. This will be done individually for the LDTA category and the Goods Movement category. The Goods Movement category within the 2014 RTP and SCS comprises emissions associated with goods movement in trucks. The Goods Movement category in the Scoping Plan also includes transportation of goods by vessels, but those categories are not impacted by the 2014 RTP and SCS.

✓ **Light Duty Trucks and Autos:** For LDTA, there are three measures listed in the Scoping Plan. They are:

1. Low Carbon Fuel Standard (LCFS)
2. Pavley Greenhouse Gas Vehicle Standards
3. Regional Transportation-Related GHG Targets

The 2014 RTP and SCS will not impact the implementation of the LCFS and the Pavley fuel efficiency standards. The Regional Transportation-Related GHG targets are implemented by SB 375, which establishes mechanisms for the development of regional targets for reducing LDTA greenhouse gas emissions. Through the SB 375 process, regions will work to integrate development patterns and the transportation network to achieve the reduction of greenhouse gas emissions while meeting housing needs and other regional planning objectives.

SB 375 required CARB to develop, in consultation with MPOs, passenger vehicle greenhouse gas emissions reduction targets for 2020 and 2035. This is the first RTP Update that will be subject to SB 375. Fresno COG did evaluate the 2014 RTP and SCS for consistency with SB 375 draft targets for the purposes of evaluating significance for GHG emissions.

Consistent with SB 375 targets published by CARB, and CEQA practice, the baseline is intended to be representative of today's conditions. Due to the recession that is currently impacting the economy, and, as a result, traffic volumes, the Regional Targets Advisory Committee (RTAC) recommended that the baseline year be set to a year that was representative of conditions before the recession. Accordingly, 2005 was chosen as a baseline year that is representative of conditions today in absence of the economic downturn. That year is used as the baseline in the SB 375 draft targets, and is used in this document.

[1] http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf

SB 375 targets for each region were published by the CARB on June 30th, 2010. The Draft GHG target for MPOs within the San Joaquin Valley were set at 5% of the GHG emissions relative to 2005 and 10% for 2020 exclusive of emission reductions expected from Pavley GHG Vehicle Standards and the LCFS. CO_2 emissions were projected for 2005, 2020, and 2035 using EMFAC 2011 Version model.

As shown in Table 3-54, the GHG emissions for 2020 and 2035 with the Project are between 8.5% (2020) and 10.5% (2035) lower than the GHG emissions level of 2005, exclusive of the savings expected from the Pavley GHG Vehicle Standards and the LCFS. As a result, the RTP would meet ARB per capita emission targets set pursuant to SB 375. Table 3-54 also shows that VMT decreases on a per capita basis by 8.9% in 2020 and 11.0% in 2035.

TABLE 3-54
Future VMT and GHG Emissions

	Pounds per Capita GHG Emissions[1]	% Change from 2005	VMT Per Capita	% Change from 2005
2005	15.8	--	20.6	--
2020	14.4	-8.5%	18.8	-8.9%
2035	14.1	-10.5%	18.3	-11.2%

1: Total CO2 Emissions
Source: Fresno COG, EMFAC 2011.

✓ **Goods Movement:** The Goods Movement category includes the following measures in the Scoping Plan:

1. Ship Electrification at Ports (not applicable in Fresno County)
2. System-Wide Efficiency Improvements
3. Heavy-Duty Vehicle Greenhouse Gas Emission Reduction (Aerodynamic Efficiency)
4. Medium- and Heavy-Duty Vehicle Hybridization

Medium Duty and Heavy Duty on road goods movement emissions were quantified using the Fresno COG travel demand model and EMFAC 2011. GHG emissions results for medium and heavy duty trucks can be found in Table 3-55.

TABLE 3-55
GHG Emissions[1] (Goods Movement)
(Tons/Day)

	Medium Duty Trucks	Heavy Duty Trucks	Total Emissions
2005	468	3,021	3,489
2012	457	3,099	3,556
2020	614	4,099	4,713
2035	736	4,867	5,603
2040	774	5,113	5,887

1: Total CO2 Emissions
Source: Fresno COG, EMFAC 2011.

Although GHG emissions appear to increase from medium duty and heavy duty trucks, these emissions calculations do not reflect emissions reductions attributable to the Goods Movement Emissions Reduction Plan or non-regulatory reductions achieved from the implementation of the Goods Movement portion of Proposition 1B (2006). While non-regulatory measures and measures not approved at the time of the release of EMFAC 2011 cannot be accurately reflected in the emissions model, implementation of the Goods Movement Emissions Reduction Plan and the 2007 State Implementation Plan will lead to emissions reductions consistent with the AB32 scoping plan for the goods movement sector. The 2014 RTP does not hinder the implementation of these plans, and therefore, emissions reductions are anticipated to be consistent with the goals of AB 32.

It is also important to note that emissions estimates contained within CARB's Goods Movement Emissions Reductions Plan from the goods movement sectors continue to grow in the future. As indicated in the Goods Movement Reductions Plan, regulatory actions are, and will remain the framework for emissions reductions. The 2014 RTP and SCS does not interfere with the implementation of CARB regulatory actions.

The Goods Movement Emissions Reduction Plan (required by Proposition 1B) and the 2007 State Implementation Plan contain numerous measures designed to reduce the public health impact of

goods movement in California. Currently the SJVAPCD has been awarded Prop 1B funding for diesel engine retrofits. Emissions reductions resulting from these projects are outside the scope of the RTP and SCS because the availability and extent of engine retrofits is a site- and project-specific issue and therefore Fresno COG has not assumed any reduction in potential RTP impacts as a result of potential project-level retrofits. Significant reductions as a result of this measure however, are not expected even at the project-level.

✓ **Population Growth**

Between 2008 and 2014, Fresno County and its incorporated cities have experienced a wide range of development and population growth. Over the next 26 years, the Fresno region will continue to grow rapidly. Between the Year 2008 and 2040, Fresno COG projects a total employment growth of 103,295 for Fresno County. This will accompany an increase in population in the County of 449,439 persons between 2010 and 2040, an increase of 50 percent over the 30-year period. In 2040, the estimated total population for Fresno County is 1,343,709 persons. Table 3-56 presents the population estimates and projections from 2008 through 2040.

TABLE 3-56
Population of Fresno County (2008 – 2040)
Preferred Project

Year	Household Population	Housing Units	Employment
2008	894,270	310,579	345,816
2020	1,059,233	363,142	363,581
2035	1,272,410	434,519	427,727
2040	1,343,709	458,330	449,111

Source: Fresno COG, 2014

GHG emissions associated with implementation of the proposed RTP and SCS are primarily related to a projected increase in Countywide VMT as a result of projected growth in the unincorporated areas of Fresno County and the incorporated cities. As described previously, Fresno COG does not have land use authority within the County or the incorporated Cities. Therefore, Fresno COG's ability to mitigate for climate change impacts in this EIR and the 2014 RTP update is largely limited to Smart Growth Incentives, a focus on the SCS for the 2014 RTP Update, and improvements in alternative modes of transportation that may result in decreases in VMT per capita throughout the County.

✓ **Greenhouse Gas Reduction**

Fresno COG has used the best available information to determine whether the proposed RTP and SCS is consistent with the State's achievement of the AB 32 GHG emission reductions. In light of the uncertainty in the regulatory and technological environment, the 2014 RTP and SCS incorporates all feasible mitigation measures, which are identified below, to reduce the impacts of the proposed project on global climate change. This EIR also includes a requirement that RTP projects incorporate the SJVAPCD's Best Performance Standards for reducing GHG. The RTP has also incorporated numerous policies, action items and funding priorities to develop and improve alternative modes of transportation throughout the County and the incorporated cities in Fresno County.

The measures included in the RTP are consistent with the GHG mitigation approaches outlined by the California Attorney General's Office in the May 21, 2008 report titled: *The California Environmental Quality Act, Addressing Global Warming Impacts at the Local Agency Level: Global Warming Measures.* The RTP incorporates measures such as smart growth, jobs/housing balance, and transit-oriented development, which are consistent with the Attorney General's recommendations. The mitigation measures outlined below, and the policies and action items included in the 2014 RTP update, such as the SCS and the analysis of GHG emissions from the Project, are also consistent with the 2010 Regional Transportation Guidelines prepared by the California Transportation Commission, which address *SB 375 mandates.*

✓ **Fresno County Regional Blueprint Process**

Fresno COG and the other seven counties in the San Joaquin Valley have developed individual Blueprints for their counties and have also completed a coordinated effort to develop the San Joaquin Valley Blueprint. All eight counties are located in the same Air Basin (San Joaquin Valley Air Basin) and received the grant for Blueprint development from the State of California. The Blueprint programs in California are designed to address the three "E"s of Regional Blueprint Planning; that is, Energy Efficiency, the Environment, and Economic Development. The Fresno County Regional Blueprint identifies a preferred land use scenario and transportation system for Fresno County considering the application of alternative growth strategies. The Plan also identifies a vision, values, goals, objectives, and implementing strategies that can be planned by Fresno COG and implemented by local agencies within the County to reduce vehicle trips, vehicle miles traveled (VMT), and support increased walkability, passenger rail, public transit systems, and bicycling.

The primary purpose of Fresno County Regional Blueprint is to establish a coordinated long-range (year 2050) regional vision between transportation, land use, and the environment from an overall quality of life perspective.

As a vision, the Blueprint recognizes that economic, environmental, and social issues are interdependent and only integrated approaches will effect needed changes. The location of jobs, housing, and commerce affects the transportation system, the nature of the transportation system affects air quality, and air quality affects health outcomes.

Below are the three key products developed during the Blueprint process:

- **Guiding Principles:** The San Joaquin Valley Blueprint Smart Growth Principles were developed based, primarily, on citizen-identified visions, values, and aspirations for Fresno County and other counties throughout the Valley from the Phase I workshops. In turn, the Blueprint Smart Growth Principles provided the foundation upon which the Phase II Blueprint Vision choices were built.

- **The adopted 12 Smart Growth Principles are:**

  1. Create a range of housing opportunities and choices
  2. Create walkable neighborhoods
  3. Encourage community and stakeholder collaboration
  4. Foster distinctive, attractive communities with a strong sense of place
  5. Make development decisions predictable, fair, and cost-effective
  6. Mix land uses
  7. Preserve open space, farmland, natural beauty, and critical environmental areas
  8. Provide a variety of transportation choices
  9. Strengthen and direct development towards existing communities
  10. Take advantage of compact building design
  11. Enhance the economic vitality of the region
  12. Support actions that encourage environmental resource management

- **Preferred 2050 Regional Blueprint Scenario**

  The Fresno Regional Blueprint vision, values and guiding principles include the following: In the future, Fresno County and its cities will be composed of unique cities and communities supported by a competitive economy, a well-educated work force, and a protected environment. The County communities will focus on cultural and community stewardship, where the community takes ownership of its problems and solutions. The values and guiding principles support the main ideas in the vision statement. Fresno County communities value environmental health and sustainability, a vibrant economy, public safety, world class education, transportation options, housing choices, the worth of all people, aesthetic quality,

cultural richness, and positive image of the communities. Fresno County has guiding principles that encourage community and stakeholder collaboration, foster communities with a strong sense of place, make development decisions predictable, provide transportation and housing options, take advantage of compact building design, create walkable neighborhoods, mix land uses, preserve open space and farmland, and direct development towards existing communities.

The Fresno COG preferred growth scenario is referred to as the "Hybrid" concept because it is based on elements of several alternative growth scenarios originally developed by the Fresno COG Blueprint Roundtable. The Hybrid concept includes a high-capacity, multi-modal transportation network that provides connectivity throughout the region. It involves a mix of infill development, greenfield development, and redevelopment. One of the principal objectives of the preferred growth scenario is to provide for employment centers to serve the west side of Fresno County, either along the I-5 corridor or in other appropriate locations. The preferred growth scenario also discourages growth on strategic farmland and resource conservation/open space land. By linking east-west transportation corridors to I-5 and balancing jobs and housing, the preferred growth scenario predicts lower VMT than the status quo scenario. The Fresno COG preferred growth scenario estimates that by 2050, countywide average residential densities for new residential growth will be 8.0 dwelling units per acre. The density of new growth in the Fresno-Clovis Metropolitan Areas (FCMA) will be slightly higher, while the average density of new growth in the non-FCMA areas will be lower.

The next step was for the eight counties to coordinate development of a Blueprint Implementation Plan. The purpose of the Plan is to create a detailed document that will act as a guide to direct Blueprint implementation in the Valley. The Implementation Plan details current Valleywide goals and objectives, provides implementation actions to address the twelve Smart Growth Principles, and provides recommendations for the future. The intent of the Implementation Plan is to facilitate better tools for decision making by assisting local governments, tracking progress, and providing information to update local general plans.

✓ **Existing Transit Systems in Fresno County**

Fresno COG, working closely with local and regional bus and rail transit operators, continues to improve public transportation across Fresno County. Funding for transit operations come primarily from Federal Transit Administration (FTA) grant programs, State Transportation Development Act (TDA), State Transit Assistance, and Measure "C".
Transit operations in Fresno County include:

- Fresno Area Express
- Fresno Handy Ride
- Clovis Round-Up
- Fresno County Rural Transit Agency
- Amtrak
- Greyhound
- Orange Belt Stagelines
- Transportes Intercalifornias

Measure "C" has provided local jurisdictions with additional local funds to be used for local transportation purposes. However, in the past those funds were not dedicated to transit. This is evidenced by the fact that FAX did not receive any Measure "C" funding in its operating budgets for fiscal years 1998, 2000, and 2001. With the passage of the Measure "C" Extension in November 2006, over 24% of the funds generated by the ½ cent sales tax are dedicated for transit purposes. This funding is currently estimated to be $347.3 million for Public Transit, which includes the FAX, Clovis Transit, Fresno County Rural Transit, Public Transportation Infrastructure and Transit Consolidation Study (completed), ADA/Senior/Paratransit Services, Farmworker/Car Vanpools, and New Technology Reserve.

Fresno County has made significant progress in addressing many public transit needs throughout the Region. Fresno COG's "Unmet Transit Needs" process has determined that transit services within the Fresno County are meeting the reasonable transit needs of the public. These transit systems provide vital transportation services and enhancing the overall quality of life for residents throughout the County. Planned transit improvements over the 26 year timeframe of the RTP will be funded with approximately $1.99 billion in projected revenues dedicated to future public transit improvements and services.

✓ **SJVAPCD Best Performance Standards (BPS)**

The SJVAPCD published *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* in December 2009. This guidance document defines Best Performance Standards (BPS) as the most effective achieved in-practice means of reducing or limiting GHG emissions from a GHG emissions source. The document includes BPSs for both traditional stationary source projects, and development projects. For stationary sources, BPSs includes equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class and category. For development projects, BPS focuses on measures that improve energy efficiency and those that reduce vehicle miles traveled.

Mitigation Measures

The specific impacts on climate change will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below. In addition, a number of mitigation measures are included in Section 3.4 of the Draft PEIR to address criteria emissions.

- ✓ **Through Implementation of the Regional Blueprint and the RTP SCS, and in coordination with implementation agencies, the following mitigation measures will result in reduced GHG emissions:**

  - Develop land use patterns, consistent with the 2024 RTP SCS, which encourage people to walk, bicycle, or use public transit for a significant number of their daily trips.
    - Use comprehensive community plans and specific plans to ensure development is consistent and well connected by alternative transportation modes.
    - Adopt transit-oriented or pedestrian-oriented design strategies and select areas appropriate for these designs in the general plan.
    - Support higher density development in proximity to commonly used services and transportation facilities.
  - Develop in a compact, efficient form to reduce vehicle miles traveled and to improve the efficiency of alternatives to the automobile consistent with the 2014 RTP and SCS.
    - Use the control of public services to direct development to the most appropriate locations.
    - Promote infill of vacant land and redevelopment sites.
  - Encourage project site designs and subdivision street and lot designs that support walking, bicycling, and transit use.
    - Adopt design guidelines and standards promoting plans that encourage alternative transportation modes.
    - Require certain sites to be created to allow convenient access by transit, bicycle, and walking.

- ✓ **Intelligent Transportation**

  - Develop an Intelligent Transportation Systems strategy, consistent with the updated ITS Strategic Plan, to implement the Integrated Performance Management System Network that will:
    - Interconnect the region's local transportation management centers, including the use of cameras, and computer hardware and software to detect and clear accidents

- Use technology to improve traffic signal timing in order to optimize traffic flow and transit service
- Involve new equipment to improve on-time transit performance and provide real-time transit information at stops and stations.

✓ **Continue Development of a GHG Reduction Funding Program**

Fresno COG will continue to develop a GHG Reduction Funding Program to reduce GHG emissions from transportation projects. Fresno COG member agencies (the cities and the County) will be eligible to apply for the funding through a formal funding application process.

✓ **Continue the Public Education Program on Individual Transportation Behavior and Climate Change**

Through the Valley Planners' Network and in conjunction with key partners such as local air districts, public utility providers, area chambers of commerce and others, Fresno COG will continue the public information program to educate the public about the connection between individual transportation behavior and global climate change, including transportation behavior modifications the public can make to reduce their GHG emissions over time. Fresno COG shall continue to include information on its website that is focused on global climate change. The website shall continue to identify actions the public can take to reduce their carbon footprint, and provide web links to sources of information designed to promote alternative mode use (carpools, vanpools, public transit, bicycling, walking, and telecommuting) and other travel demand management strategies.

✓ **Provide Funding for Workshop on Global Climate Change for Local Government Officials and Include in the Blueprint Toolkit**

Fresno COG will provide funding for a workshop on global climate change for local government officials that will focus on practical techniques that local governments can implement to reduce greenhouse gas emissions at the city and county level. Workshop topics shall include, but are not limited to the following:

- The basic science behind climate change and its effects on the Fresno County Region
- Addressing the California Environmental Quality Act (CEQA) and the effects of AB 32
- What cities and counties are doing to address climate change and CEQA
- Cost effective actions cities can take to reduce greenhouse emissions
- Actions being taken in the Fresno County area to advance and support innovative "green" business

Fresno COG, in conjunction with other key partners, shall update the Blueprint toolkit (as part of the Blueprint and SCS implementation process) for local governments to use to take effective action to reduce greenhouse gas emissions over time. The toolkit will continue to incorporate recommendations by the workshop participants to identify which issues are important for the region and the tools and resources they would like to have available to reduce greenhouse emissions .

- ✓ **Fresno COG shall work closely with its member agencies to help them participate in the statewide Active Transportation Program (ATP) as well as develop a MPO-Level Active Transportation Program at Fresno COG.**

- ✓ **Continue to Work with the SCS Implementation Committee**

  Fresno COG will continue to work with the SCS implementation committee or a Policy Advisory Committee (PAC) subcommittee as directed by the Fresno COG Policy Board to develop SCS implementation policies and strategies, and identify appropriate funding mechanisms. Stakeholders will be invited to attend the meetings; however, only committee members (member agencies) will have voting authority.

- ✓ **Project level environmental documents**

  Project level environmental documents shall analyze construction and maintenance and land use development project Greenhouse Gas (GHG) emissions.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce increased transportation GHG emissions on climate change, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Fresno County is estimated to grow in population by an estimated 466,668 persons between 2012 and 2040. Fresno COG has used the best available information to determine whether the 2014 RTP and SCS

is consistent with the State's achievement of the AB 32 GHG emission reductions and addresses SB 375 mandates. Implementation of the mitigation measures described above will assist in the reduction of per capita VMT levels throughout Fresno County, which will assist in meeting the stated goals of AB 32 and requirements set forth in SB 375. The 2014 RTP and SCS has included numerous projects, action items, funding priorities, a land use allocation to support an active transportation system, and programs to develop and improve alternative modes of transportation throughout the County. Fresno COG will continue to coordinate with local land use agencies to assist in the development of plans and policies aimed at reducing VMT.

Fresno COG responds to congestion through the investment in roadway capacity increasing measures once all reasonable non-capacity measures have been employed. The 2014 RTP and SCS includes approximately $1.99 billion available to transit, and $775.8 million available to other active transportation modes including non-motorized (bicycle and pedestrian), alternative-fuel vehicle projects, transit oriented infrastructure for in-fill developments, and others.

The Fresno County Regional Blueprint has been prepared to establish a coordinated long-range (year 2050) regional vision between transportation, land use, and the environment from an overall quality of life perspective. The completion of the Regional Blueprint served as a starting point for Fresno COG as they prepared the SCS in accordance with the requirements of SB 375. In developing the SCS, Fresno COG considered the Blueprint Regional Vision Statement, the Blueprint Guiding Principles, and the Blueprint Performance Measures & Indicators (PMIs) that were developed for the Regional Blueprint. In addition, they utilized the best available tools and techniques to develop an SCS strategy that contributes to the State's achievement of the AB 32 GHG emission reductions.

GHG emissions for 2020 and 2035 with the Project are between 8.9% (2020) and 11.0% (2035) lower than the GHG emissions level of 2005, as indicated above. As a result, the RTP would meet ARB per capita emission targets set pursuant to SB 375. Mitigation measures that are presented above help reduce GHG emissions even further to the extent feasible considering requirements set forth in AB 32 and requirements set forth in SB 375. Such measures will also assist in the promotion and implementation of Smart Growth and sustainable planning practices by the cities and the County consistent with the SCS.

3.7 CULTURAL RESOURCES

The patterns of human occupation of the area now known as Fresno County have left traces of their existence on the land. There are thousands of recorded archeological sites in the county, most of which are located in the foothills and mountains. Recorded prehistoric artifacts include village sites, campsites, bedrock milling stations, pictographs, petroglyphs, rock rings, sacred sites, and resource gathering areas.

Fresno County also contains a significant number of potentially significant historical sites, including homesteads and ranches, mining and logging sites and associated features (such as small camps, railroad beds, logging chutes and trash dumps).

This section describes the potential for significant archaeological and historic sites within Fresno County and describe possible conflicts between these resources and the project. Data collected for this evaluation is derived from resource discussions from various project EIRs, and from the State Office of Historic Preservation.

Regulatory Setting

Federal Regulations

Various federal laws, regulations, and guidelines specify how cultural resources must be managed in the context of projects that are considered "federal undertakings" (per 36 CFR 800). These federal statutes and guidelines may be relevant to the proposed project if federal funding is used, federal permits or authorizations are required, or a project crosses land managed by a federal agency.

Among the most relevant federal laws and regulations are: the *National Historic Preservation Act of 1966* (NHPA), as amended; the *National Environmental Policy Act of 1969* (NEPA); the *Archaeological Resources Protection Act of 1979* (ARPA); the Advisory Council on Historic Preservation's regulations, *Protection of Historic Properties* (36 CFR 800), establishing procedures for compliance with Section 106 of the NHPA; the National Park Service (NPS) regulations, *National Register of Historic Places* (36 CFR 60); *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (FR 190: 44716–44742); the *Native American Graves Protection and Repatriation Act of 1990* (PL 101–601, NAGPRA) and its implementing regulations (43 CFR 10); and the NPS regulations, *Curation of Federally-Owned and Administered Archaeological Collections* (36 CFR 79). Pertinent federal laws and regulations are summarized below.

- ✓ **National Historic Preservation Act of 1966** - Requires federal agencies to consider the preservation of historic and prehistoric resources. The Act authorizes the Secretary of the Interior to expand and maintain a National Register of Historic Places (NRHP), and it establishes an Advisory Council on Historic Preservation (ACHP) as an independent federal entity. Section 106 of the Act requires federal agencies to take into account the effects of their undertakings on historic properties and afford the ACHP a reasonable opportunity to comment on the undertaking prior to licensing or approving the expenditure of funds on any undertaking that may affect properties listed, or eligible for listing, in the NRHP.

- ✓ **Archaeological Resources Protection Act of 1979 (16 USC 470aa–470ll)** - Requires a permit for any excavation or removal of archaeological resources from public lands or Native American lands. The statute provides both civil and criminal penalties for violation of permit requirements and for excavation or removal of protected resources without a permit.

- ✓ **Advisory Council Regulations, Protection of Historic Properties (36 CFR 800)** - Establishes procedures for compliance with Section 106 of the National Historic Preservation Act of 1966. These regulations define the Criteria of Adverse Effect, define the role of State Historic Preservation Officer (SHPO) in the Section 106 review process, set forth documentation requirements, and describe procedures to be followed if significant historic properties are discovered during implementation of an undertaking. Prehistoric and historic resources deemed significant (i.e., eligible for listing in the National Register of Historic Places, per 36 CFR 60.4) must be considered in project planning and construction. The responsible federal agency must submit any proposed undertaking that may affect NRHP-eligible properties to the SHPO for review and comment prior to project approval.

- ✓ **Archaeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines (FR 190:44716–44742) -** Offers non-regulatory technical advice about the identification, evaluation, documentation, study, and other treatment of cultural resources. Notable in these Guidelines are the "Standards for Archaeological Documentation" (p. 44734) and "Professional Qualifications Standards for Archaeology" (pp. 44740–44741).

- ✓ **Department of Transportation Act of 1966. Section 4(f) -** Cultural resources regulations of the Act requires a comprehensive evaluation of all environmental impacts resulting from federal-aid transportation projects administered by the Federal Highway Administration, Federal Transit Administration, and Federal Aviation Administration that involve the use—or interference with use—of several types of land: public park lands, recreation areas, and publicly or privately owned historic properties of federal, State, or local significance. The Section 4(f) evaluation must be sufficiently detailed to permit the U.S. Secretary of Transportation to determine that there is no feasible and prudent alternative to the use of such land, in which case the project must include all possible planning to minimize harm to any park, recreation, wildlife and waterfowl refuge, or historic site that would result from the use of such lands. If there is a feasible and prudent

alternative, a proposed project using Section 4(f) lands cannot be approved by the Secretary. Detailed inventories of the locations and likely impacts on resources that fall into the Section 4(f) category are required in project-level environmental assessments.

- ✓ **Federal Antiquities Act of 1906 -** Establishes national monuments and reservation of lands that have historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands. It prohibits excavation or destruction of such antiquities unless a permit (Antiquities Permit) is obtained from the Secretary of the department, which has the jurisdiction over those lands.

- ✓ **Historic Sites Act of 1935 (HSA) -** The HSA *(16 USC 461-467)* became law on August 21, 1935 and declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance." The NHPA expanded the scope to include important State and local resources. Provisions of NHPA established the National Register maintained by the National Park Service, advisory councils on Historic Preservation, State Historic Preservation Offices, and grants-in-aid programs. Section 106 of the NHPA requires all federal agencies to consult the Advisory Council before continuing any activity affecting a property listed on or eligible for listing on the National Register. The Advisory Council has developed regulations for Section 106, to encourage coordination of agency cultural resource compliance requirements under Executive Order 11593 and NEPA with those of Section 106.

- ✓ **National Environmental Policy Act (NEPA) -** The National Environmental Policy Act (NEPA) provides general information on effects of federally funded projects. The Act was implemented by regulations included in the Code of Federal Regulations (40CFR6). The code requires careful consideration concerning environmental impacts of federal actions or plans, including projects that receive federal funds. The regulations address impacts on land uses and conflicts with State, regional or local plans and policies, among others. They also require that projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions, and also to restore and enhance environmental quality as much as possible.

- ✓ **Native American Graves Protection and Repatriation Act -** This act assigns ownership and control of Native American cultural items, human remains, and associated funerary objects to Native Americans. It also establishes requirements for the treatment of Native American human remains and sacred or cultural objects found on Federal land. This act further provides for the protection, inventory, and repatriation of Native American cultural items, human remains, and associated funerary objects. Museums that receive public funds must consult with Native Americans regarding museum collections of human remains, grave goods, and sacred items.

Federal Agencies

- ✓ **National Park Service (NPS)**

  The National Park Service manages all National Park, many National Monuments, and other conservation and historical properties with various title designations. It also evaluates proposed historic sites and administers the National Register of Historic Places.

State Regulations

- ✓ **California Environmental Quality Act (CEQA) -** Under the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.; CEQA), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. A historical resource is a resource that is either listed or eligible for listing in the California Register of Historical Resources, listed in a local registry, or determined to be significant by the lead agency. (See Section 5024.1 and Section 21084 of the Public Resources Code.)

  A resource eligible for listing on the California Register of Historical Resources (PRC 5024.1, Title 14 CCR, Section 4852) is a resource that:

  - Is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States.
  - Is associated with the lives of persons important to the nation or to California's past.
  - Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
  - Has yielded, or may be likely to yield, information important to the prehistory or history of the state and the nation.

  The fact that a resource is not listed in - or determined to be eligible for listing - in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

  The CEQA *Statutes and Guidelines* direct public agencies to avoid damaging effects on historical resources whenever feasible. If avoidance is not feasible, the importance of the resource must be evaluated using the criteria outlined in the Guidelines. Resources deemed not important by CEQA criteria do not require further discussion in the CEQA process.

If the project may damage an important historical resource, it may have a significant effect on the environment. Direct impacts may occur by:

- Physically damaging, destroying, or altering all or part of the resource.
- Altering characteristics of the surrounding environment that contribute to the resource's significance.
- Neglecting the resource to the extent that it deteriorates or is destroyed. Indirect impacts primarily result from the effects of project-induced population growth. Such growth can result in increased construction as well as increased recreational activities that can disturb or destroy cultural resources; or
- The incidental discovery of cultural resources without proper notification.

CEQA provides guidelines for mitigating impacts to archaeological and historical resources in Section 15126.4. Achieving CEQA compliance with regard to treatment of impacts to significant cultural resources requires that a mitigation plan be developed for the resource(s). Preservation in place is the preferred manner of mitigating impacts to significant historical resources.

If human remains are discovered in any location other than a dedicated cemetery, Section 7050.5(b) of the California Health and Safety Code also must be followed.

State Agencies

- ✓ **California Department of Parks and Recreations (CDPR) -** The principal mission of California Department of Parks and Recreation is to preserve biological diversity, protect natural and cultural resources and provide sites for a variety of recreational activities to California residents and tourists.

- ✓ **California Office of Historic Preservation (OHP) -** The California Office of Historic Preservation is responsible for administration of federally- and State-mandated historic preservation programs in California. The mission, in partnership with the people of California and governmental agencies, is to preserve and enhance California's irreplaceable historic heritage as a matter of public interest so that its vital legacy of cultural, educational, recreational, aesthetic, economic, social, and environmental benefits will be maintained and enriched for present and future generations.

- ✓ **California Historical Resources Commission (CHRC) -** California Historical Resources Commission (CHRC) is a nine-member board that reviews sites of potential statewide significance and administers the California Register of Historic Places.

- ✓ **California Native American Heritage Commission -** The California Native American Heritage Commission offers guidelines on obtaining information on, and issues recommendations for the documentation of, Native American heritage resources.

- ✓ **California Department of Transportation (Caltrans)**

  Any project funded or permitted by Caltrans, either directly or through assistance to local governments, is subject to the requirements of federal and State historic preservation laws and regulations. Most Caltrans projects use federal funds or require federal licenses or permits, and are therefore subject to federal environmental laws and regulations. When projects have no federal involvement, only State laws and regulations apply.

  To meet these legal requirements, Caltrans has established detailed guidelines for cultural resources management that are outlined in the Caltrans *Environmental Handbook*, Volume 2. These guidelines set forth the policies and procedures to be followed in order to identify, evaluate, and treat project impacts on cultural resources that might be affected by Caltrans projects. The process outlined in the *Environmental Handbook* is designed to meet the requirements of both federal and State law.

Environmental Setting

Archaeological Resources

The patterns of human occupation of the area now known as Fresno County have left traces of their existence on the land. Fresno County contains distinct geographic regions that have been evaluated for archaeological resources at varying levels of detail through individual research efforts. On a regional basis, however, the level of information is extremely general. Areas of potential impact include:

- ✓ **High Sensitivity** - General areas within the county that have the greatest likelihood of containing resources are located between the lower foothills and the 4,500-foot elevation level. Additionally, areas along the Fresno and San Joaquin rivers are likely to contain important resources.

- ✓ **Moderate Sensitivity** - Foothill areas above 4,500 feet are considered to be of moderate sensitivity. It is believed that seasonal occupation by Native American tribes was common due to discoveries of prehistoric trails and temporary trailside camps. In addition, the rim of the Central Valley is considered moderately sensitive, as well.

- ✓ **Low Sensitivity** - The Valley floor is considered to be of low sensitivity, because leveling of land for agricultural use, construction of dams, water transmission facilities, roads, and general urban development have likely destroyed many archaeological sites in this area.

Historic Resources

✓ Settlement History

Fresno County was originally inhabited by at least five Native American tribes, primarily around streams and rivers. These Native American tribes include the Mono, Yokut, Chukchansi, Choinumi, and Wachumni (aka Wakchumni). The California Gold Rush brought many miners to the area, who eventually built a garrison to protect themselves from the Native Americans. The garrison attracted non-miners and eventually led to the formation of the city of Fresno, the county's seat. Cattle drives between Stockton, California and Texas fueled the city's development, and ranching and farming followed suit. The development of irrigation canals fueled the county's development even more. The streams and rivers were harnessed to provide a series of canals to irrigate crops and orchards on land that was previously swamp or considered non-productive desert. Most early farms consisted of family-worked operations of approximately 20 acres; larger farms produced alfalfa, cotton, wheat, and citrus fruit.

In the 1840s, gold miners migrated south from the Columbia-Sonora goldfields to search for gold in the Sierra Nevada Mountains. Eventually they and others established the town of Millerton, which later became Fresno City (north of the location of the present-day Fresno). Cattle ranching activities sprang up in what would later become Fresno County, when cattle drives from Texas to Stockton passed through the area. During that time, the grasslands, rivers and streams provided excellent grazing lands for not only cattle but also sheep. During the late 1860s, wheat cultivation became the Valley's dominant industry. Towns, such as Reedley, developed as the result of wheat farming endeavors in the Valley. During this period, areas along the San Joaquin and Kings Rivers also began developing irrigation canals, which expanded opportunities for farming from the foothills into the Central Valley. From 1880 to 1890, the new irrigation infrastructures permitted Fresno County farms to increase from 926 to 2,352 (Fresno County General Plan, 2000). In addition to wheat, farmers grew grapes, fruit trees, and alfalfa, until eventually wheat farming was almost entirely replaced with the production of fruits and vegetables of many kinds, vineyards, and alfalfa.

With such an emphasis on agricultural activities, communities within Fresno County were growing rapidly by the turn of the century. In response to the Great Depression of the 1930's, there was a general reversal of growth in urban areas evident in the previous decade. After World War II, Fresno County began to experience population growth as higher prices were earned for farm products. As advances in technology were made in the late 1940s, the ongoing trend of the declining farm population and increasing size of individual farms was firmly established.

✓ **Historic Preservation**

Many historic sites have been identified in Fresno County and are protected by various State and federal agencies. The listings in the National Register and the California Register (updated regularly) of all existing and potential historic objects, sites, buildings, and districts are available from the CHRC and the NPS. A complete list of historic sites in Fresno County that were identified on the National Register and the California Register as of 2013, are identified in Table 3-57. Fresno County contains a significant number of potentially significant historical sites, including homesteads and ranches, mining and logging sites and associated features (such as small camps, railroad beds, logging chutes and trash dumps). These sites have not been included on the National or California Register. However, there are several museums in the county that may help to identify and preserve these resources. These museums are identified in Table 3-58. Historical landmarks, and museums dedicated to a site on a register are not included.

California's Office of Historic Preservation has also designated several historical landmarks in Fresno County, which are identified in Table 3-59.

Ethnic Resources

Places considered sacred to the Native American community in Fresno County have been recorded in EIRs and research papers/studies, although a comprehensive resource study has not been conducted for a majority of the county. The Native American Heritage Commission (NAHC) offers guidelines to archaeologists to obtain information concerning cultural resources of Native American origin. A primary concern of the Native American community is the disturbance of hidden or unmarked sites, such as gravesites, which may not show surface evidence and may be known only to members of the tribe.

Native American burial grounds are of particular concern and the most emotional of archaeological resource issues. Such sites are often on private land, and project development is often approved before the local Native American community is consulted. NAHC has issued recommendations for the documentation of Native American heritage resources in order to assist agencies and individuals in complying with current environmental law. NAHC urges direct consultation with the local Native American community in the course of research conducted for the purpose of site-specific environmental documentation. A resource guide for planners, archaeologists, property owners, tribal organizations and governments, and Native Americans, based on California Public Resources Code (amended Statutes 1982, Chapter 1492) and other State regulations and requirements, is available through the NAHC.

TABLE 3-57
Historic Sites in Fresno County

Resource	Location	Historic Significance	Area of Significance	Period
Bank of Italy	1015 Fulton Mall, Fresno	Architecture/ Engineering	Architecture	1900-1949
Ben Gefvert Ranch Historic District	4770 W. Whites Bridge, Fresno			
Birdwell Rock Petroglyph Site	Address Restricted, Coalinga	Information potential, Architecture/ Engineering	Historic – aboriginal, art, religion, prehistoric	500-1900 AD
Brix, H. H., Mansion	2844 Fresno St., Fresno	Architecture/ Engineering, Event	Architecture, commerce	1900-1924
Coalinga Polk Street School	S. 5th and E. Polk Sts., Coalinga	Event, Architecture/ Engineering	Architecture, Education	1900-1924
Dinkey Creek Bridge	Off Dinkey Creek Rd., W of Camp Fresno, Sierra National Forest, Dinkey Creek	Architecture/ Engineering	Engineering	1925-1949
Einstein House	1600 M St., Fresno	Person, Event, Architecture/ Engineering	Architecture, commerce	1900-1924
Forestiere Underground Gardens	5021 W. Shaw Ave., Fresno	Person, Event, Architecture/ Engineering	Agriculture, architecture, landscape architecture	1900-1949
Fresno Bee Building	1555 Van Ness Ave., Fresno	Architecture/ Engineering, Event	Communications, architecture	1900-1924
Fresno Brewing Company Office and Warehouse	100 M St., Fresno	Architecture/ Engineering, Event	Architecture, industry	1900-1924
Fresno County Hall of Records	2281 Tulare St., Fresno			
Fresno Memorial Auditorium	2425 Fresno St., Fresno	Event	Entertainment/ recreation	1925-1949
Fresno Republican Printery Building	2130 Kern St., Fresno	Event, Architecture/ Engineering	Architecture, commerce	1900-1924

Resource	Location	Historic Significance	Area of Significance	Period
Fresno Sanitary Landfill	West and Jensen Aves., Fresno			2011
Gamlin Cabin	NW of Wilsonia	Architecture/ Engineering, Event	Architecture, conservation, exploration/ settlement	1850-1924
Holy Trinity Armenian Apostolic Church	2226 Ventura St., Fresno	Event, Architecture/ Engineering	Architecture, religion, Asian	1900-1924
Hotel Californian	851 Van Ness Ave., Fresno	Architecture/ Engineering	Architecture	1900-1924
Kearney, M. Theo, Park and Mansion	7160 Kearney Blvd., Fresno	Person, Architecture/ Engineering, Event	Agriculture, landscape architecture, architecture	1875-1924
Kindler, Paul, House	1520 E. Olive Ave, Fresno	Architecture/ Engineering	architecture	1925-1949
Knapp Cabin	W of Cedar Grove in Kings Canyon National Park, Cedar Grove	Event	Conservation	1925-1949
Maulbridge Apartments	2344 Tulare St., Fresno	Architecture/ Engineering	Architecture	1900-1924
Meux House	1007 R St., Fresno	Architecture/ Engineering	Architecture	1875-1899
Old Administration Building, Fresno City College	1101 University Ave., Fresno	Event, Architecture/ Engineering	Agriculture, architecture, education	1900-1924
Old Fresno Water Tower	2444 Fresno St., Fresno	Event, Architecture/ Engineering	Architecture, engineering	1875-1899
Orange Cove Santa Fe Railway Depot	633 E. Railroad Ave., Orange Cove	Event	Agriculture, transportation, commerce	1900-1924
Pantages, Alexander, Theater (Warner's Theater)	1400 Fulton St., Fresno	Person, event, Architecture/ Engineering	Architecture, performing arts	1900-2000
Physicians Building	2607 Fresno St., Fresno	Event, Architecture/ Engineering	Architecture, social history	1925-1949
Reedley National Bank	1100 G St., Reedley	Event, Architecture/	Architecture, commerce	1900-1924

Resource	Location	Historic Significance	Area of Significance	Period
		Engineering,		
Reedley Opera House Complex	10th and G Sts., Reedley	Architecture/ Engineering, event	Social history, performing arts, architecture, commerce	1900-1924
Rehorn House	1050 S St., Fresno	Architecture/ Engineering	Architecture	1900-1924
Romain, Frank, House	2055 San Joaquin St., Fresno	Person, event, Architecture/ Engineering	Architecture, politics/ government, industry	1900-1924
San Joaquin Light & Power Corporation Building	1401 Fulton St., Fresno	Architecture/ Engineering	Architecture	2006
Santa Fe Hotel	935 Santa Fe Ave., Fresno	Event	Hispanic	1925-1949
Santa Fe Passenger Depot	2650 Tulare St., Fresno	Event, Architecture/ Engineering	Architecture, transportation, commerce	1875-1899
Shorty Lovelace Historic District	E of Pinehurst on Kings Canyon National Park, Pinehurst	Architecture/ Engineering, event	Architecture, exploration/ settlement, industry	1900-1949
Southern Pacific Passenger Depot	1033 H St., Fresno	Event, Architecture/ Engineering	Agriculture, architecture, transportation, commerce	1875-1899
Stoner House	21143 E. Welson Ave., Sanger	Person, Architecture/ Engineering	Architecture, exploration/ settlement	1900-1924
Tower Theatre	1201 N. Wishon Ave., Fresno	Architecture/ Engineering	Architecture	1925-1949
Twining Laboratories	2527 Fresno St., Fresno	Architecture/	Architecture, science	1925-1949
Warehouse Row	722, 744, and 764 P St., Fresno	Event, Architecture/ Engineering	Agriculture, architecture, transportation, commerce	1900-1924
Y.W.C.A. Building	1660 M St., Fresno	Architecture/ Engineering	Architecture, social history	1900-1924

TABLE 3-58
Museums in Fresno County

Name	Subject	Location
African-American Museum	Art, history and culture of African-Americans in the Central Valley	Fresno
Arte Americas	Celebration of arts in Mexico, Latin America and the Southwest	Fresno
California Memorial Museum	9-11	Clovis
Central California Historical Military Museum	Military architecture and aviation	Firebaugh
Central Sierra Museum	History of Central Sierra Mountain Area	Shaver Lake
Clovis-Big Creek Historical Museum	Clovis History	Clovis
Coke Hallowell Center for River Studies	Architecture, art and culture of San Joaquin River	Fresno
Discovery Center	Local ecosystems	Fresno
Downey Planetarium	30 foot stargazing dome	Fresno
Eastern Fresno County Historical Museum	History of the Eastern Fresno County Area	Auberry
Fresno Arts Center and Museum	Central California cultural heritage	Fresno
American Historical Society of Germans from Russia	History of Russians of German descent	Fresno
Kearney Mansion Museum	History of Central California agriculture	Fresno
Kingsburg Historical Park	Swedish heritage and architecture	Kingsburg
Legion of Valor Museum	Relics of America's wars	Fresno
Mennonite Quilting Center	Quilting and handmade rugs	Reedley
Meux Home Museum	Early Fresno family life	Fresno
Millerton Courthouse	First County Seat Courthouse	Millerton
R.C. Baker Memorial Museum	Coalinga archaeology and history	Coalinga
Reedley Museum	Reedley history	Reedley
Sanger Depot Museum	Sanger history and numerous collections	Sanger

TABLE 3-59
Historical Landmarks in Fresno County

Landmark	Significance	Location
ARROYO DE CANTUA	The headquarters and place where Joaquin Murrieta was killed.	SW of Cantua Creek Bridge near Coalinga
FORESTIERE UNDERGROUND GARDENS	A unique complex of underground rooms, passages, and gardens throughout a ten-acre parcel.	Fresno
FORT MILLER	The temporary headquarters during the latter part of the Mariposa Indian War and the site of the signing of the peace treaty. Also the first recorded religious services in the Fresno area.	Friant
FRESNO CITY	The original site of 'Fresno City' between 1855 and 1875.	2 miles north of Tranquility
SITE OF FIRST JUNIOR COLLEGE IN CALIFORNIA	Fresno High School was the first junior college of California.	Fresno
SITE OF THE FRESNO FREE SPEECH FIGHT OF THE INDUSTRIAL WORKERS OF THE WORLD	This was the first fight for free speech in California, and the first attempt to organize the valley's unskilled workers by the Industrial Workers of the World.	Fresno
TEMPORARY DETENTION CAMPS FOR JAPANESE AMERICANS-FRESNO ASSEMBLY CENTER	Temporary detention camps for Japanese Americans during World War II	Fresno
TEMPORARY DETENTION CAMPS FOR JAPANESE AMERICANS-PINEDALE ASSEMBLY CENTER	Temporary detention camps for Japanese Americans during World War II	Pinedale

Section 4(f) Requirements

Historic and cultural resources are also protected under regulations of the National Historic Preservation Act and the Department of Transportation Act of 1966. Section 4(f) of the Transportation Act requires a comprehensive evaluation of all environmental impacts resulting from federal-aid transportation projects administered by the Federal Highway Administration, Federal Transit Administration, and Federal Aviation Administration that involve the use - or interference with use - of several types of land:

- ✓ Public parklands.
- ✓ Recreation areas.
- ✓ Wildlife and waterfowl refuges.
- ✓ Publicly or privately owned historic properties of federal, State, or local significance.

This evaluation - called the Section 4(f) statement - must be sufficiently detailed to permit the U.S. Secretary of Transportation to determine that:

- ✓ There is no feasible and prudent alternative to the use of such land.
- ✓ The program includes all possible planning to minimize harm to any park, recreation area, wildlife and waterfowl refuge, or historic site that would result from the use of such lands.

If there is a feasible and prudent alternative, a proposed project using Section 4(f) lands cannot be approved by the Secretary. If there is no feasible and prudent alternative, the proposed project must include all possible planning to minimize harm to the affected lands. Detailed inventories of the locations and likely impacts on resources that fall into the Section 4(f) category are only required for project-level environmental assessments.

Applicable Policies and Regulations

Archaeologic and paleontologic resources are frequently uncovered during construction of development projects, while historic resources are generally known. Strict mitigation and protection measures are required whenever such resources are discovered. In addition, there is a general requirement that a cultural resource survey and environmental analysis be prepared prior to commencement of any action, development, or land use change subject to CEQA or NEPA on lands subject to federal jurisdiction or for projects involving federal funds.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

To determine the actual potential for significant impacts on cultural resources resulting from implementation of transportation improvements, project-specific studies would be necessary. It is recognized that important cultural resources may be encountered during ground-disturbing construction work on any individual improvement project contained in the RTP. It is also recognized that projects associated with the operation and maintenance of the transportation system, such as signalization equipment replacement, and pavement maintenance, would not directly affect cultural resources. Since the specific locations of cultural resources are not generally mapped, and since the extent of ground disturbance associated with various improvement projects is unknown at this time, it is not possible to assess the specific impacts on cultural resources based upon the location of these projects - many of whose specific alignments have not been established. Accordingly, no project-specific

reviews or field studies have been undertaken for this EIR. The analysis of the impact on cultural resources potentially resulting from implementation of improvement projects under the 2014 RTP is, therefore, based upon cultural resource impacts that are generally associated with any activities that involve ground-disturbing activities.

Criteria for Significance

The CEQA Guidelines establish that a significant impact would be expected to occur if the project would:

- ✓ Cause a substantial adverse change in the significance of an historical resource.
- ✓ Cause a substantial adverse change in the significance of an archaeological resource.
- ✓ Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- ✓ Disturb any human remains, including those interred outside of formal cemeteries.

In addition, CEQA defines the need for evaluating the impacts that a project may have on a community, ethnic, or social group. A project will normally have a significant effect on the environment if it will cause one of the following, as defined in Appendix G of the CEQA Guidelines, Significant Effects:

- ✓ Significant effects to cultural resources in each planning area would occur if population increases occur in areas of historic districts and historic sites
- ✓ Significant effects to cultural resources would result if the improvement projects placed significant future populations in areas of potential or known archaeological and/or paleontological significance

All regions in the project area have the potential for yielding undiscovered archaeological and paleontological resources and human remains. The development of new transportation facilities may affect archaeological and paleontological resources, primarily through the disturbance of buried resources. Frequently, these resources are previously unidentified. Therefore, any excavation in previously undisturbed soil has the potential to impact archaeological and paleontological resources.

Development of new transportation facilities may affect historic architectural resources (structures 50 years or older), either through direct affects to buildings within the proposed individual improvement project area, or through indirect affects to the area surrounding a resource if it creates a visually incompatible structure adjacent to a historic structure. Impacts to historic resources fall into three categories:

- ✓ Direct disturbance of buried resources.
- ✓ Direct impact or alternation of structures.
- ✓ Indirect impacts to structures, such as vibration and corrosive air contaminants, and creation of a visually incompatible environment.

Fresno County contains a large number of historic properties and historic residential districts; therefore, the potential for impacts to historic properties is significant. Improvements within existing rights-of-way are less likely to affect historical architectural resources. However, new highway segments through historic districts (within or adjacent to urban areas and throughout the rural area), would constitute a significant impact. In addition, reducing buffer zones between transportation corridors and reduction of historic resources through lane widening could cause significant impacts.

Public Resources Code *(Section 5020.1),* defines a potential historic resource as including, but not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, regardless of age. The 45-year criteria was designed by the OHP to take into consideration resources, which may be considered significant in the near future. Types of projects that may potentially impact cultural resources include:

- ✓ Regionally significant streets and highways that involve the development of new lanes and right-of-way acquisition.
- ✓ Freeway projects include developing mixed flow lanes, some new lanes, and possible right-of-way acquisition.
- ✓ Bridge crossing projects that include the development of new lanes and right-of-way acquisition.
- ✓ Interchange improvement projects that include new lanes and possible right-of-way acquisition.
- ✓ Future land use developments consistent with the RTP and SCS and the general plans of local jurisdictions.

Since some excavation is involved in all of the above mentioned project types, it is necessary that prior to beginning each of the proposed projects, potential impacts to individual cultural resources and appropriate mitigation measures should be identified on a project-by-project basis. It is important that the vicinity of individual projects be carefully evaluated to identify resources and potential impacts. As time passes and structures age, the status of structures change as their age (45 years or older) makes them eligible for historic status. In addition, data on archaeological resources changes since data is added to the regional database on a continuous basis. Thus, the potential for encountering archaeological resources changes, because knowledge of their location allows them to be avoided.

<u>Impact 3.7.1</u> – Impacts on historic resources

Historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript, which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

Development of highway, arterial, bridge crossing, transit, and future land use development projects may impact historic resources. Due to the size and potentially large number of historic resources that could be disturbed because of the combined projects, this impact would be potentially significant at a regional level. Types of projects that have the potential to impact historic resources include highway projects and bridge crossings that entail the development of new lanes and in some instances acquisition of new right-of-ways, arterial and interchange projects, which entail the development of new lanes, right-of-way acquisition, and the development of land and sites for future land use developments.

Mitigation Measures

All mitigation measures will be included in program-level analysis, as appropriate. The implementing agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Fresno COG will be provided with documentation indicating compliance with mitigation measures.

- ✓ As part of the appropriate environmental review of individual projects, the project implementation agencies will identify potential impacts to historic resources. A record search at the appropriate Information Center will be conducted to determine whether the individual transportation improvement project or future land use development area has been previously surveyed and whether resources were identified.

- ✓ As necessary, prior to construction activities, the implementing agencies will obtain a qualified architectural historian to conduct historic architectural surveys as recommended by the Archaeological Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the individual transportation improvement project or future land use development area for cultural resources.

- ✓ Implementing agencies will comply with Section 106 of the National Historic Preservation Act if federal funding or approval is required. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register of Historic Places. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. These mitigation measures may include, but are not limited to the following:

    - ➢ Carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, relocation, or reconstruction of any impacted historic resource, which will be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

- ✓ In some instances, the following mitigation measure may be appropriate in lieu of the previous mitigation measure:

  - ➢ Secure a qualified environmental agency and/or architectural historian, or other such qualified person to document any significant historical resource(s), by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of a resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce significant impacts on historic resources identified above, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.7.2 – Construction impacts on archaeological resources

Construction activities involving excavation and earthmoving may encounter archaeological resources. This would be considered a significant impact. The OHP defines an archaeological "site" as consisting of three or more related resources discovered in one locality. In the event of archaeological and paleontological discovery, the resources are collected, documented and curated at an educational institution, such as a school or a museum. The curation facility is usually appropriated by the landowner or lead agency. A unique archaeological resource includes artifacts or sites in which it can be demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any one or all of the following criteria:

- ✓ It has made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- ✓ It is associated with the lives of persons important to California's past.
- ✓ It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- ✓ It has yielded, or may be likely to yield, information important to the prehistory or history of California.

The project includes new streets, roads and highways, street, road and highway widening (for wider lanes, shoulders or new lanes), new transit facilities, grade crossings, consolidated rail corridors, bridge projects, a number of interchanges, and future land use development activities. These types of projects have the potential to impact archaeological materials, because they could take place in previously undisturbed areas. Excavation and soil removal of any kind, irrespective of depth, has the potential to yield resources of archaeological significance. Improvements and modifications to existing transportation facilities and land use developments would have less of an impact to archaeological resources because these project locations have previously been disturbed. However, construction of additional lanes and future land use development, would potentially impact archaeological materials, if it would entail brush clearing, grading, trenching, excavation, and/or soil removal of any kind, in an area not previously used as a paved transportation facility. Due to the size and potentially large number of archaeological sites that could be disturbed because of the combined projects, this impact would be potentially significant to archaeological resources at a regional level.

Mitigation Measures

All mitigation measures will be included in project-level analysis, as appropriate. The implementing agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Fresno COG will be provided with documentation indicating compliance with mitigation measures.

Implementation of the following mitigation measures for archaeological resources is recommended to reduce impacts to a less-than-significant level. Implementing agencies will require the following measures as part of the individual transportation improvement project or future land use development review process:

- ✓ As part of the appropriate environmental review of individual projects, the implementation agencies will consult with the Native American Heritage Commission to determine whether known sacred sites are in the project area, and identify the Native American(s) to contact to obtain information about the project site.

- ✓ Prior to construction activities, the implementation agencies will obtain a qualified archaeologist to conduct a record search at the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified.

- ✓ As necessary prior to construction activities, the implementation agencies will obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a

recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources.

- ✓ If the record search indicates that the project is located in an area rich with cultural materials, the implementing agencies will retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property.

- ✓ Construction activities and excavation will be conducted to avoid cultural resources (if found). If avoidance is not feasible, further work may need to be done to determine the importance of a resource. The implementation agencies will obtain a qualified archaeologist familiar with the local archaeology, and/or an architectural historian should make recommendations regarding the work necessary to determine importance. If the cultural resource is determined to be important under State or federal guidelines, impacts on the cultural resource will be mitigated.

- ✓ The project implementation agencies will stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine the importance of these resources.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce significant construction impacts on archeological resources identified above, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.7.3 – Construction impacts on paleontological resources

Construction activities involving excavation and earthmoving may encounter paleontological materials. This is a significant impact. Construction of projects may cause unearthing of buried paleontological resources, such as true fossils, fossil casts, and breas. Construction occurring in previously undisturbed areas and deep excavation activities would have the greatest likelihood to affect paleontological resources. Improvements proposed in existing right-of-ways would have less potential to affect paleontological resources, since these areas have been previously disturbed. However, excavation and

soil removal of any kind, irrespective of depth, has the potential to yield resources of paleontological significance. Fossils can be found at the surface in an outcrop, whereby chances are that same formation may extend many feet straight down into the ground, and may well extend for miles just below the surface. This makes the task of predicting which areas are paleontologically sensitive difficult. Construction and excavating activities relating to this project pose a significant impact to paleontological materials.

Mitigation Measures

All mitigation measures will be included in project-level analysis, as appropriate. The implementing agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Fresno COG will be provided with documentation indicating compliance with mitigation measures. Implementing agencies in the Fresno region will implement the following measures as part of the review process for proposed transportation projects:

- ✓ As part of the appropriate environmental review of individual projects, the project implementation agencies will obtain a qualified paleontologist to identify and evaluate paleontological resources where potential impacts are considered high; the paleontologist will also conduct a field survey in these areas.

- ✓ Construction activities will avoid known paleontological resources, especially if the resources in a particular lithic unit formation have been determined through detailed investigation to be unique. If avoidance is not feasible, paleontological resources will be excavated by the qualified paleontologist and given to a local agency, State University, or other applicable institution, where they can be displayed.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce significant impacts on paleontological resources identified above, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.7.4 – Impacts on human remains

Construction activities involving excavation and earthmoving may encounter human remains. This is a significant impact.

Humans have occupied Fresno County for at least 10,000 years, and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, it is likely that excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials. Construction and excavation activities associated with this project are considered to potentially yield a significant impact relative to the discovery of human remains. Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity". Human remains are also protected under the Native American Graves and Repatriation Act (NAGPRA) of 1990, which was enacted to provide for the protection of Native American graves, as well as culturally affiliated items, associated funerary objects, unassociated funerary objects, sacred objects, and objects of cultural patrimony. NAGPRA states the following:

- ✓ A burial site means any natural or prepared physical location, whether originally below, on, or above the surface of the earth, into which as part of the death rite or ceremony of a culture, individual remains are deposited.

As previously stated, the project includes new highways, highway widening, new transit facilities, grade crossings, rail corridors, bridge crossings, interchanges, and future land use developments. These activities all have a potential to yield previously undiscovered human remains, because they could take place in previously undisturbed or under-disturbed areas. Excavation and soil removal of any kind, irrespective of depth, has the potential to yield human remains. Improvements and modifications to existing rights-of-way or existing land use developments would have less of an impact because these individual project locations have previously been disturbed. However, construction of additional lanes or new land use developments, could potentially impact human remains, if it would entail brush clearing, grading, trenching, excavation, and soil removal of any kind, in an area not previously developed.

Mitigation Measures

All mitigation measures will be included in project-level analysis, as appropriate. The implementing agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Fresno COG will be provided with documentation indicating compliance with mitigation measures.

As part of the appropriate environmental review of individual projects, the project implementation agencies - in the event of discovery or recognition of any human remains, during construction or excavation activities associated with the project, in any location other than a dedicated cemetery - will

cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Fresno County coroner has been informed and has determined that no investigation of the cause of death is required.

- ✓ If the remains are of Native American origin, the coroner will contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner will make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.

- ✓ If the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission, in which case:

  - ➢ The landowner or his authorized representative will obtain a Native American monitor - and an archaeologist, if recommended by the Native American monitor - and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following conditions occur:

    - The Native American Heritage Commission is unable to identify a descendent.
    - The descendant identified fails to make a recommendation.
    - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce significant impacts on human remains identified above, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.8 ENERGY AND ENERGY CONSERVATION

This section describes the existing energy resources, and analyzes the effects on energy consumption and conservation that would result from implementing the proposed RTP and SCS.

Regulatory Setting

Federal

- ✓ **Energy Policy and Conservation Act -** The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the USDOT, is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

- ✓ **Energy Policy Act of 1992 (EPAct) -** The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

- ✓ **Energy Policy Act of 2005 -** The Energy Policy Act of 2005 was signed into law by President Bush on August 8, 2005. Generally, the act includes provisions for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

- ✓ **Moving Ahead for Progress in the 21st Century (MAP-21) -** MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), was signed into law by President Obama on July 6, 2012. The ACT is the first long-term highway endorsement enacted since 2005 and creates an efficient multimodal plan that will handle the numerous challenges facing the nation's transportation network. Some of the challenges facing our nation's transportation system include safety improvements, reducing travel times, creating a more efficient system for the freight movement, and improving project delivery time. MAP-21 also supports the programs and policies enacted in 1991, which were related to the advancement of the highway, transit, bike, and pedestrian system.

State of California

- ✓ **Senate Bill 1078 -** SB 1078 establishes a renewable portfolio standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward by SB 1078 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least 1 percent each year. The outcomes of this legislation will impact regional transportation powered by electricity.

- ✓ **State of California Integrated Energy Policy Report -** In 2002, the Legislature reconstituted the State's responsibility to develop an integrated energy plan for electricity, natural gas, and transportation fuels. The California Energy Commission (CEC) adopts and transmits to the Governor and Legislature a report of findings every 2 years. At a Special Business Meeting on November 12, 2003, the CEC adopted the 2003 Integrated Energy Policy Report. The 2004 Update to the Integrated Energy Policy Report was adopted by the CEC on November 3, 2004. The 2005 Integrated Energy Policy Report was adopted by the CEC on November 21, 2005. These reports make recommendations to increase California's energy supplies, reduce energy demand, broaden the range of alternatives to conventional energy sources, and improve the State's energy delivery infrastructure.

- ✓ **California Strategy to Reduce Petroleum Dependence (AB 2076) -** AB 2076 (Chapter 936, Statutes of 2000) requires the CEC and the Air Resources Board (ARB) to develop and submit to the Legislature a strategy to reduce petroleum dependence in California. The statute requires the strategy to include goals for reducing the rate of growth in the demand for petroleum fuels. In addition, the strategy is required to include recommendations to increase transportation energy efficiency as well as the use of nonpetroleum fuels and advanced transportation technologies including alternative fuel vehicles, hybrid vehicles, and high-fuel efficiency vehicles.

  The strategy, Reducing California's Petroleum Dependence, was adopted by the CEC and ARB in 2003. The strategy recommends that California reduce on-road gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future; the Governor and Legislature work to establish national fuel economy standards that double the fuel

efficiency of new cars, light trucks, and SUVs; and increase the use of nonpetroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

- ✓ **Alternative Fuels Plan Assembly Bill 1007 -** AB 1007 requires the CEC to prepare a state plan to increase the use of alternative fuels in California. The plan shall include an evaluation of alternative fuels for emissions or criteria air pollutants, air toxics, GHGs, water pollutants, and other harmful substances, and their impacts on petroleum consumption. The plan shall set goals for increased alternative fuel use in the state for the years 2012, 2017, and 2022 and recommend policies to ensure the alternative fuel goals are attained, including standards on transportation fuels and vehicle and policy mechanisms to ensure vehicles operating on alternative fuels use those fuels to the maximum extent feasible. The plan was adopted in December 2007.

- ✓ **Bio-energy Action Plan – Executive Order #S-06-06 -** Executive Order #S-06-06 establishes targets for the use and production of bio-fuels and bio-power and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bio-energy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its bio-fuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the state to meet a target for use of biomass electricity.

- ✓ **Governor's Low Carbon Fuel Standard (Executive Order #S-01-07) -** Executive Order #S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a Low Carbon Fuel Standard. The Low Carbon Fuel Standard shall be incorporated into the State Alternative Fuels Plan required by AB 1007 and is one of the proposed discrete early action GHG reduction measures identified by ARB pursuant to AB 32.

Environmental Setting

Energy Consumption and Conservation

The study area is comprised of highways, railways, bicycle trails, state routes, roads, and Caltrans rights-of-way. This analysis assumes that automobiles, trucks, transit buses, and other forms of transportation would continue to operate within the Fresno region and use a variety of energy forms, including gasoline, compressed natural gas, diesel, and electricity. This section considers the supply and demand for both electricity and fossil fuels.

Energy is fundamental to the economy and the quality of life of the Fresno County region. The primary energy source for the U.S. is petroleum (also referred to as "oil"), which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily since 1983; as of 2005, world consumption of oil had reached 84

million barrels per day (GAO 2007) and 93 million by 2010 (GAO 2010). The world supply of oil is anticipated to peak (i.e., reach the point of maximum production) sometime between now and 2040, before beginning a terminal decline that will put a significant strain on the economy if not anticipated and mitigated. However, the timing of the peak depends on multiple, uncertain factors that will affect how quickly remaining oil is consumed, such as the amount of oil that still remains in the ground; how much of the amount in the ground can be extracted and produced based on technological, economic, and environmental feasibility; and future demand for oil.

The U.S., with approximately 4.5 percent of the world's population, accounts for nearly 21 percent of world oil consumption, roughly 18.5 million barrels per day (EIA 2013), which is a decrease in consumption from 19.2 million barrels per day in 2010. U.S. oil production peaked around 1970 and declined every year until 2005 to about 8.3 million barrels per day. Since 2005, U.S. oil production has increased to 11.1 million barrels per day in 2012. The U.S. transportation sector is heavily dependent on oil and represents about 70 percent of U.S. petroleum consumption. Within the transportation sector, light vehicles (i.e., cars, light trucks [two-axle, four-tire trucks], and motorcycles) represent about 65 percent of the petroleum-based energy consumption.

California's transportation sector is equally dependent upon oil, with petroleum-based fuels currently providing nearly all (96 percent) of California's transportation energy needs (CEC 2014). Furthermore, transportation-related activities represent almost half (48 percent) of California's petroleum-based fuel consumption. California refineries increasingly rely on imported petroleum products to meet this demand. In 2003 the CEC and ARB adopted a two-part strategy to reduce the state's petroleum demand: promoting improved vehicle efficiency and increasing the use of alternative fuels. In 2006, CEC and ARB set a goal that 20 percent of all transportation energy in 2020 comes from alternative fuels. State plans, programs, and regulations to implement this strategy are further discussed in the Regulatory Setting section below.

Similar to California and the U.S. as a whole, the Fresno region relies primarily on oil to meet its transportation needs. Motor vehicles are the largest consumer of fuels in the region's transportation sector. After gasoline, diesel fuel is the most utilized transportation energy source. The primary consumers of diesel fuel in the transportation sector are heavy-duty trucks, with medium-duty trucks, buses, light-duty passenger cars, and railway locomotives accounting for remaining diesel fuel consumption.

Alternative fuels are defined as fuels not derived from petroleum, such as natural gas, ethanol, and electricity. However, like petroleum, alternative fuels like natural gas and ethanol (which is primarily composed of diesel fuel) are also nonrenewable, finite resources. Electricity is also considered nonrenewable when generated from natural gas or coal, but considered renewable when generated from sources like solar, hydroelectric, or wind energy. Most alternative fuel facilities in the region supply

compressed natural gas (CNG) or electricity. The region's limited alternative fuel infrastructure severely constrains the use of alternative fuel passenger vehicles.

Although average fuel efficiency for autos and trucks has experienced some improvements during the last quarter-century, fuel consumption associated with the large increase in VMT has exceeded the fuel consumption reductions achieved by improved efficiency, and the total amount of annual fuel consumption has continued to increase. The equipment and vehicles involved in the construction of transportation infrastructure (i.e., roadway and highway improvements; rail lines; etc.) also consume energy. Currently, construction equipment and vehicles are generally dependent on petroleum-based fuels.

Energy Conservation and Global Climate Change

The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with construction activities and the operation of passenger, public transit, and commercial vehicles and future land use development results in GHG emissions that cause global climate change (also referred to herein as "climate change" and "global warming"). In addition, alternative fuels like natural gas (including CNG and liquid natural gas [LNG]), ethanol, and electricity (unless derived from solar, wind, nuclear, or another energy source that does not produce carbon emissions) also result in GHG emissions and contribute to global climate change. An overview of climate change, the anticipated impacts of climate change to California, and the climate change impacts of the proposed 2014 RTP and SCS are provided in Chapter 3, Section 3.6 of this EIR. Impacts and mitigation measures associated with climate change also relate to the conservation of energy resources.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Criteria for Significance

The following significance criteria were used to determine the level of significance of impacts on energy resources and energy conservation resulting from the proposed Project. Significance criteria were developed based on Appendix F of the State CEQA Guidelines and on professional judgment. In general, an individual improvement project or new land use development contained within the RTP/SCS would result in a significant energy impact if it:

- ✓ Results in a substantial increase in total consumption of nonrenewable energy or reduces the ability of the region to conserve energy resources.

Impact Analysis

The proposed 2014 RTP and SCS plans improvements to the region's transportation network and identified the location of future land use development consistent with local city and county general plans through the year 2040. Since the transportation and land use development sectors account for a very large portion of the energy consumed in the Fresno region, implementation of transportation network improvements and new development would affect the region's energy consumption through 2040. In addition, construction of these improvements would result in increased energy consumption due to the operation of construction equipment and vehicles during construction activities. Multiple factors beyond the control of Fresno COG and outside the scope of the proposed 2014 RTP and SCS may influence future transportation- and future land use development-related energy consumption patterns under the proposed 2014 RTP and SCS. These factors include but are not limited to state and federal regulatory actions; local land use decisions; technological improvements; regional economic conditions; the fuel-efficiency and fuel-source of private automobiles; the price of oil, gasoline, diesel, electricity, and other fuels; the source of region's electric power (i.e., proportion of renewable and nonrenewable sources); the amount of oil imported by the U.S. and others.

There are a few alternative fuel projects identified in the 2014 RFP that would assist in minimizing the Fresno County's overall energy consumption. The Fresno Area Express (FAX) seeks to purchase two electric buses and recharging stations as part of its Circulator Program, which will provide service in downtown Fresno during peak commute hours. The Kings Canyon Unified School District is planning to purchase two all electric, zero emission buses as well as an all electric, zero emission delivery truck. Finally, the City of Selma plans to purchase three GEM electric vehicles and two Chevy Volt electric vehicles, which will replace existing city fleet vehicles. Vehicle fuel consumption was projected from a baseline year of 2012 through the RTP and SCS build out year of 2040 using the EMFAC 2011 model. Fuel consumption for 2008 is not available from the modeling. Table 3-60 quantifies the projected vehicle fuel consumption in gallons per day using EMFAC data. The total fuel consumption is projected to increase from 1,481,790 gallons in 2012 to 2,112,100 gallons in 2040, representing an increase of 43 percent over 28 years. The largest increase is projected in diesel fuel with a 61 percent increase over 28 years, while gasoline consumption is projected to increase by 37 percent during the same time. It should be noted that the fuel consumption estimate is an overestimate, as "Pavely and Low Carbon Fuels" will have an impact on fleet efficiency.

TABLE 3-60
Fresno County Vehicle Fuel Consumption (2012 through 2040)

	2012	2020	2035	2040
Gasoline (gal/day)	1,122,090	1,221,770	1,458,500	1,532,310
Diesel (gal/day)	359,700	464,850	551,860	579,790
Total Fuel (gal/day)	1,481,790	1,686,620	2,010,360	2,112,100
Total Fuel per capita (gal/day)	1.53	1.56	1.55	1.54

Source: Fresno COG, EMFAC 2011.

The fuel consumption outputs reflect an increasing trend of fuel consumption per capita. This analysis shows that even with implementation of the various multi-modal improvements (bike/pedestrian facilities, transit infrastructure/service, etc.), considering future land use development under the 2014 RTP and SCS, VMT and fuel consumption will increase. Not reflected in the emission outputs is the potential for GHG benefits as a result of the Fresno COG's Smart Growth incentives and as a result of the 2014 RTP and SCS.

Although energy consumption would increase under the proposed 2014 RTP and SCS, the transportation improvements are designed to the improve energy efficiency of the regional transportation system by increasing use of more fuel-efficient public transit, carpools, and vanpools, and improving circulation system levels of service. In addition, building codes have been prepared to reduce energy consumption by future lad use development. See the Climate Change discussion in Section 3.6 of this EIR for a detailed discussion of RTP actions that promote GHG emissions reductions, energy conservation, energy efficiency and reduced fuel consumption.

Examples of transportation improvements included in the proposed 2014 RTP and SCS that would improve energy efficiency include proposed transit improvements that would encourage optimized use of public transportation, and enhanced transit programs with new routes that would operate at higher speeds. Public transportation provides a more energy-efficient mode of travel than single-passenger vehicles, thereby reducing the region's transportation energy consumption. Any reductions in traffic congestion realized through implementation of enhanced transit operations would also allow for more energy-efficient vehicular travel.

The SCS proposes an allocation of new land use development that would support new transportation facilities, including the densification of land uses along major transportation corridors. The intent is to reduce auto use and increase transit system use resulting in reduced energy resources.

The proposed 2014 RTP and SCS would also involve highway and arterial widenings, and new freeway interchanges. This in turn would decrease travel time and congestion and consequently decrease fuel consumption from individual vehicles. Despite these energy efficient improvements, total and per capita energy consumption associated with the transportation system is still anticipated to increase in 2040 under the proposed 2014 RTP and SCS.

The 2014 RTP and SCS encourages the transport of goods by rail to reduce congestion on the freeway system. Hauling goods by rail has a positive energy impact. The Federal Railroad Administration estimates that intermodal rail is 2 to 4 times more fuel efficient than trucks. This indicates reduced energy efficiency of goods movement in the region and increased nonrenewable energy consumption.

The construction of transportation infrastructure and future land use development identified in the proposed 2014 RTP and SCS would involve the use of construction equipment and vehicles, which are generally dependent upon nonrenewable petroleum-based fuels, on a large scale. However, it is not feasible to estimate energy consumption associated with future construction of the transportation projects and future land use development in the proposed 2014 RTP and SCS at this program level of analysis. Nevertheless, the large scale of construction activities that would be required to implement the proposed 2014 RTP and SCS would result in an additional amount of additional energy consumption associated with the proposed 2014 RTP and SCS.

Lastly, the implementation of new transit stations and centers, transit priority measures, freeway and arterial widenings, and other improvements would include street and station lighting, parking structure lighting, traffic signals, electronic signage, and other ancillary components associated with the types of transportation improvements included in the proposed 2014 RTP. The energy consumption associated with these features would also increase under the proposed 2014 RTP.

Impact 3.8-1 - Energy consumption and conservation impacts

Construction of the transportation improvements programmed in the proposed 2014 RTP and new development identified in the SCS would increase energy consumption due to the operation of construction equipment and vehicles. Given the number of large-scale improvements programmed into the proposed 2014 RTP and SCS and the amount of future land use development planned through to the year 2040, the increase in energy consumption associated with construction activities would be substantial. Although construction equipment and vehicles would be operated in accordance with all applicable rules and regulations, the substantial increase in energy consumption associated with the

construction equipment and vehicles primarily powered by nonrenewable fuels under the proposed 2014 RTP and SCS is considered a significant impact.

Operation of the transportation improvements and future land use development identified in the proposed 2014 RTP and SCS would increase the total and per capita amount of gasoline and diesel fuel consumption associated with the regional transportation network, as well as the increase in electricity and natural gas. Since gasoline, diesel, and natural gas resources are nonrenewable, the increase in such energy consumption under the proposed 2014 RTP and SCS is considered a significant impact.

In addition to increased energy consumption directly associated with transportation activities, energy consumption would also increase as a result of new lighting including, but not limited to, lighting for land use developments, streets stops or stations, transit station parking structures, and rail tunnels; traffic signals; electronic signage; and other ancillary electric, natural gas, or other energy-consuming components of transportation improvements and new development that would be implemented under the proposed 2014 RTP and SCS. Increased energy consumption levels associated with these ancillary project and land use development features are considered a significant impact.

The proposed 2014 RTP and SCS includes goals and policies supporting smart growth through financial incentives, housing and mixed-use projects at existing and planned transit stations, support for local efforts to develop pedestrian master plans, and other activities that tend to reduce GHG emissions. However, since Fresno COG has no direct authority over land use planning and other local decisions, the extent to which the goals and policies supporting smart growth would be implemented by local jurisdictions is unknown.

Mitigation Measures

The specific impacts on energy consumption and energy conservation will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Implementing agencies shall review energy impacts as part of any CEQA-required project-level environmental analysis and specify appropriate mitigation measures for any identified energy impacts.

- ✓ During the design and approval of transportation improvements and future land use development projects, the following energy efficiency measures shall be incorporated when applicable:

- The design or purchase of any lighting fixtures shall achieve energy reductions beyond an estimated baseline energy use for such lighting.
- LED technology shall be used for all new or replaced traffic lights, rail signals, and other new development lighting features compatible with LED technology.

✓ Implementing agencies should consider various best practices and technological improvements that can reduce the consumption of fossil fuels such as:

- Expanding light-duty vehicle retirement programs
- Increasing commercial vehicle fleet modernization
- Implementing driver training modules on fuel consumption
- Replacing gasoline powered mowers with electric mowers
- Reducing idling from construction equipment
- Incentivizing alternative fuel vehicles and equipment
- Developing infrastructure for alternative fueled vehicles
- Implementing truck idling rules, devices, and truck-stop electrification
- Requiring electric truck refrigerator units
- Reducing locomotives fuel use
- Modernizing older off-road engines and equipment
- Encouraging freight mode shift
- Limit use and develop fleet rules for construction equipment
- Requiring zero-emission forklifts

✓ Implementing agencies should include energy analyses in environmental documentation and general plans with the goal of conserving energy through the wise and efficient use of energy. For any identified energy impacts, appropriate mitigation measures should be developed and monitored. Fresno COG recommends the use of Appendix F, Energy Conservation, of the *CEQA Guidelines.*

✓ Project and land use development implementing agencies should streamline permitting and provide public information to facilitate accelerated construction of solar and wind power.

✓ Project and land use development implementing agencies should adopt a "Green Building Program" to promote green building standards. Green buildings can reduce local environmental impacts, regional air pollutant emissions and global greenhouse gas emissions. Green building standards involve everything from energy efficiency, usage of renewable resources and reduced waste generation and water usage. For example, water-related energy use consumes 19 percent of the state's electricity. The residential sector accounts for 48 percent of both the electricity and natural gas consumption associated with urban water use. While interest in green buildings has been growing for some time, cost has been a main consideration as it may cost more up front to provide energy-efficient building components and systems. Initial costs can be a hurdle even when the installed

systems will save money over the life of the building. Energy efficiency measures can reduce initial costs, for example, by reducing the need for over-sized air conditioners to keep buildings comfortable. Undertaking a more comprehensive design approach to building sustainability can also save initial costs through reuse of building materials and other means.

A comprehensive study of the value of green building savings is the 2003 report to California's Sustainable Building Task Force. In the words of the report: "While the environmental and human health benefits of green building have been widely recognized, this comprehensive report confirms that minimal increases in upfront costs of about 2% to support green design would, on average, result in life cycle savings of 20% of total construction costs -- more than ten times the initial investment. For example, an initial upfront investment of up to $100,000 to incorporate green building features into a $5 million project would result in a savings of $1 million in today's dollars over the life of the building."

- ✓ Where identified, local governments should alter zoning to improve jobs/housing balance, create communities where people live closer to work, and bike, walk, and take transit as a substitute for personal auto travel consistent and in support of the SCS. Creating walkable, transit oriented modes would generally reduce energy use and greenhouse gas emissions. Residential energy use (electricity and natural gas) accounts for 7 percent of California's greenhouse gas emissions. It is estimated that households in transit-oriented developments drive 45 percent less than residents in auto-dependent neighborhoods. In addition, mixed land uses (i.e., residential developments near work places, restaurants, and shopping centers) with access to public transportation have been shown to save consumers up to 512 gallons of gasoline per year. Furthermore, studies have shown that the type of housing (such as multi-family) and the size of a house have strong relationships to residential energy use. Residents of single-family detached housing consume over 20 percent more primary energy than those of multifamily housing and 9 percent more than those of single-family attached housing.

- ✓ Project and land use development implementing agencies should increase the number of AFVs (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in publically owned vehicles, as well as those owned by franchisees of these agencies, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers.

- ✓ Bid solicitations for construction of projects should preference the use of alternative formulations of cement and asphalt with reduced GHG emissions to the extent that such cement and asphalt formulations are available at a reasonable cost in the marketplace. Solicitations should also preference the recycling of construction waste and debris if market conditions permit.

- ✓ Fresno COG shall continue to develop, in coordination with the California Air Resources Board, a data and information collection and analysis system that provides an understanding of the energy demand and greenhouse gas emissions in the Fresno region.

- ✓ All mitigation measures listed in Chapter 3, Section 3.6 (Climate Change) of this EIR, are incorporated by reference and shall be implemented by implementing agencies to address energy conservation impacts.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on energy and energy resources, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.9 GEOLOGY/SOILS/MINERAL RESOURCES

This section includes a discussion of existing geology, soils, and seismic conditions in the Fresno region. This section also describes the criteria for determining the significance of geologic, seismic and soils impacts, and where appropriate, mitigation measures are recommended to reduce project-related (2014 RTP and SCS) impacts.

Regulatory Setting

Federal Agencies and Regulations

- ✓ **United States. Department of Agriculture, Natural Resources Conservation Service (NRCS)**

  The NRCS maps soils and farmland uses to provide comprehensive information necessary for understanding, managing, conserving and sustaining the nation's limited soil resources. In addition to many other natural resource conservation programs, the NRCS manages the Farmland Protection Program, which provides funds to help purchase development rights to keep productive farmland in agricultural uses. Working through existing programs, USDA joins with State, tribal, or local governments to acquire conservation easements or other interests from landowners.

- ✓ **Uniform Building Code (UBC)**

  The Uniform building Code (UBC) defines and ranks the regions of the United States based on their seismic hazard potential. There are four types of regions defined by seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest. The UBC is published by the International Conference of Building Officials and forms the basis for California's building code, as well as approximately half of the state building codes in the United States. It has been adopted by the California Legislature to address the specific building conditions and structural requirements for California, as well as provide guidance on foundation design and structural engineering for different soil types.

- ✓ **Earthquakes Hazard Reduction Act**

  The Earthquake Hazards Reduction Act (EHRA) of 1977 (42 U.S.C. § 7701 et. seq.) established the National Earthquake Hazards Reduction Program as a long-term earthquake risk reduction program for the United States which focuses on: developing effective measures to reduce earthquake hazards; promoting the adoption of earthquake hazard reduction activities by federal, state, and local governments, building standards and model building code organizations, engineers, architects,

building owners, etc.; improving the understanding of earthquakes and their effects on people and infrastructure through interdisciplinary research.

State Agencies and Regulations

✓ **California Department of Conservation**

In 1982, the State of California created the Farmland Mapping and Monitoring Program within the California Department of Conservation to provide maps and statistical data for use in planning for the best utilization of California's agricultural resources.

The California Land Conservation Act of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Williamson Act contracts, also known as agricultural preserves, offer tax incentives for agricultural land preservation by ensuring that land will be assessed for its agricultural productivity rather than its highest and best uses.

✓ **California Building Code**

The *California Building Code* is another name for the body of regulations contained in Title 24, Part 2, of the California Code of Regulations, which is a portion of the California Building Standards Code (CBSC, 1995). Title 24 is assigned to the California Building Standards Commission which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. Published by the International Conference of Building Officials, the Uniform Building Code (UBC) is a widely adopted model building code in the United States. The California Building Code incorporates by reference the UBC with necessary California amendments. About one-third of the text within the California Building Code has been tailored for California earthquake conditions. Although widely accepted and implemented throughout the United States, local, city and county jurisdictions can adopt the UBC either in whole or in part.

✓ **Alquist-Priolo Special Study Zones**

California's Alquist-Priolo Act, originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones. The Alquist-Priolo Act's main purpose is to

prevent the construction of buildings used for human occupancy on the surface trace of active faults. This Act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

- ✓ **Seismic Hazards Mapping Act**

The Seismic Hazards Mapping Act of 1990 addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. The purpose of the Act is to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act.

- ✓ **Surface Mining Area Reclamation Act (SMARA)**

SMARA was enacted by the California Legislature to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property and the environment. SMARA mandates the California Geological Survey (CGS) to provide objective economic-geologic expertise to assist in the protection and development of mineral resources through the land-use planning process. The primary products are mineral land classification maps and reports for urban and non-urban areas of the state. Local agencies are required to use the classification information when developing land-use plans and when making land-use decisions.

- ✓ **Building Code**

The State of California's minimum standards for structural design and construction are given in the California Building Code (CBC) (C.C.R. Title 24). The CBC is based on the UBC (International Code Council, 1997), which is used widely throughout United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for California with numerous, more detailed or more stringent regulations. The CBC provides standards for various aspects of construction, including excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In addition, to limit and prevent damage from earthquake motion, the CBC requires structures for human occupancy, with limited exceptions, to be designed and constructed to resist these motions based upon engineering properties and soil-type of the proposed site.

- ✓ **California Department of Transportation (Caltrans)**

Caltrans' jurisdiction includes rights-of-way of state and interstate routes within California. Any work within the right-of-way of a federal or state transportation corridors is subject to Caltrans' regulations

governing allowable actions and modifications to the right-of-way. Caltrans issues permits to encroach on land within their jurisdiction to ensure encroachment is compatible with the primary uses of the State Highway System, to ensure safety, and to protect the State's investment in the highway facility. The encroachment permit requirement applies to persons, corporations, cities, counties, utilities, and other government agencies. A permit is required for specific activities including opening or excavating a state highway for any purpose, constructing or maintaining road approaches or connections, grading within rights-of-way on any state highway, or planting or tampering with vegetation growing along any state highway. The encroachment permit application requirements relating to geology, seismicity and soils include information on road cuts, excavation size, engineering and grading cross-sections, hydraulic calculations, and mineral resources approved under SMARA.

Local Agencies and Regulations

✓ **General Plans and Seismic Safety Element**

City and county governments typically develop as part of their General Plans, safety and seismic elements that identify goals, objectives, and implementing actions to minimize the loss of life, property damage and disruption of goods and services from man-made and natural disasters including floods, fires, non-seismic geologic hazards and earthquakes. Local governments may provide policies and develop ordinances to ensure acceptable protection of people and structures from risks associated with these hazards. Ordinances may include those addressing unreinforced masonry construction, erosion or grading.

Environmental Setting

Fresno County encompasses 5,963 square miles and is defined by distinct geological features, including the nearly level alluvial plains of the San Joaquin Valley, the foothills of the Coast Ranges, and the foothills/mountains of the southern Sierra Nevada. Elevations in the county range widely from approximately 4,000 feet in the Coastal Ranges, to 365 feet above sea level near the City of Fresno, to nearly 14,000 feet peaks in the Sierra Nevada. San Joaquin Valley lies mostly below 1,000 feet.

Fresno County covers portions of three of the eleven geologic provinces of California (Figure 3-10). These provinces include the eastern Coast Ranges, the Great Valley of California, and the southern Sierra Nevada. Each province differs from the others in the nature of its geologic history.[1]

[1] California Division of Mines and Geology, Mines and Mineral Resources of Fresno County, California, County Report 1 (1962)

- ✓ Coast Ranges – The segment of the Coast Ranges province that lies within Fresno County is characterized by north-northwest trending mountain ranges of moderate relief. These ranges are underlain primarily by folded marine sedimentary rocks are and cut by the San Andreas Fault. Within the Coast Ranges province, sedimentary rocks trend mostly north-northwest and are moderately to mildly deformed along folds parallel to the mountain ranges.

- ✓ Sierra Nevada – The southern Sierra Nevada province, comprised of the southern Sierra Nevada and Tehachapi Mountains, contains most of the high mountains in Fresno County. Granitic rocks underlie most of the southern part of the province and are part of the Sierra Nevada batholith.

- ✓ Great Valley – The southern part of the Great Valley province is a nearly flat north trending trough bounded by the Coast Ranges, San Emigdio Mountains, and Sierra Nevada. Sedimentary rocks, largely of marine origin, underlie a relatively thin cover of alluvium.

Seismic and Geologic Hazards

Fresno County is subject to several types of hazards associated with seismic and geological conditions. These include earthquake faults, ground shaking, and ground failure.

- ✓ **Faults**

  Fresno County is subject to risks associated with several major fault systems (Figure 3-11) currently identified in the region.

  The San Andreas Fault is at least 600 miles long and runs along the western edge of the County; it is considered the boundary between the North American Plate and the Pacific Plate. Although the geologic history of displacements (movement) along the San Andreas Fault is a difficult study area for scientists, it is clear that the San Andreas system holds the greatest energy potential in terms of the Richter Scale.

- ✓ **Ground Shaking**

  Fresno County is located near one of the more seismically active faults of California, the San Andreas Fault, and may, at any time, be subject to moderate or severe ground shaking. Ground shaking hazards exist because of stress that accumulates deep within the earth. This stress, or elastic strain, becomes so great that the rock can no longer be contained as a single rock mass and breaks. Movement along a fracture zone occurs, and an enormous amount of energy is released. This movement may or may not produce a surface fault rupture.

FIGURE 3-10
Geologic Provinces in Fresno County

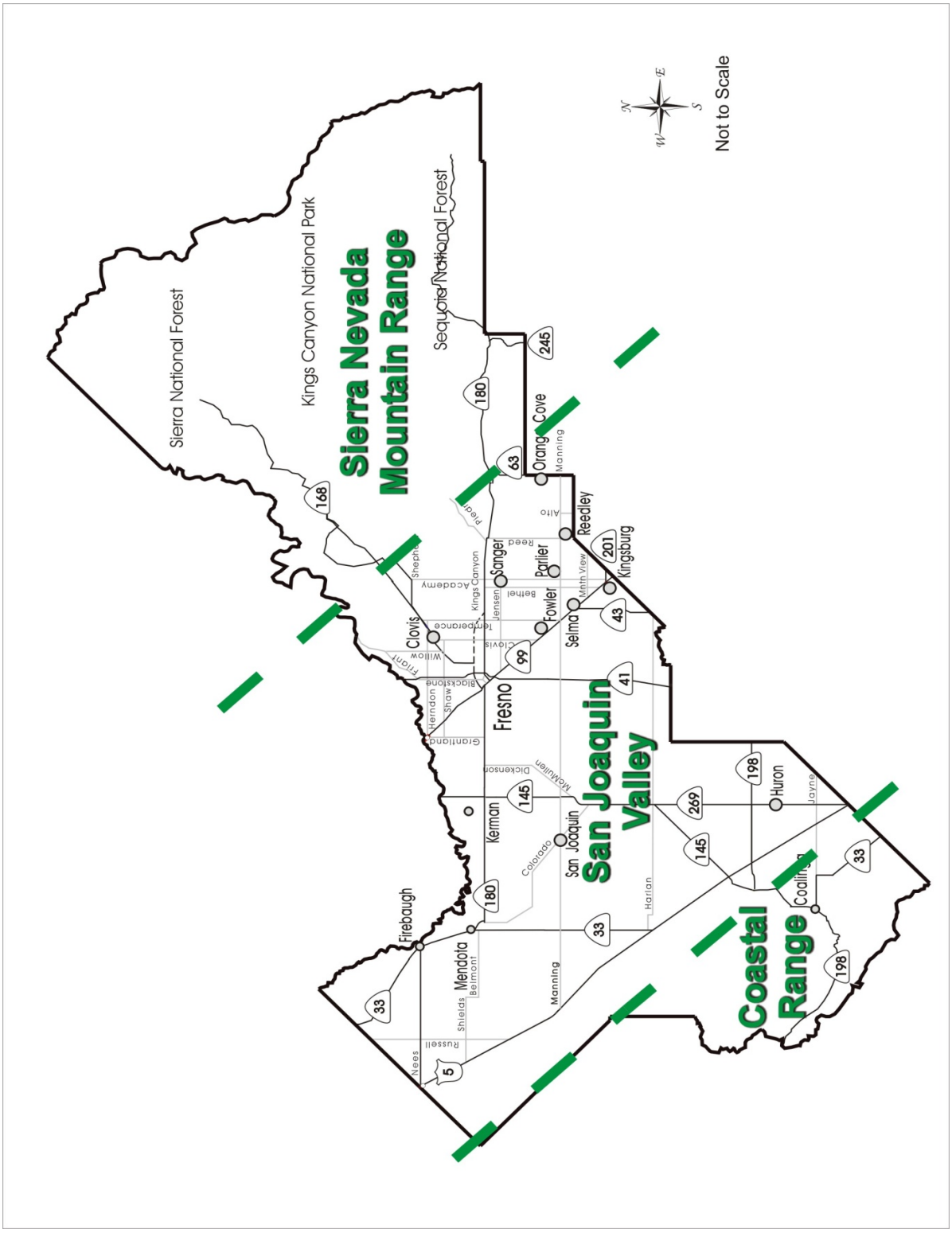
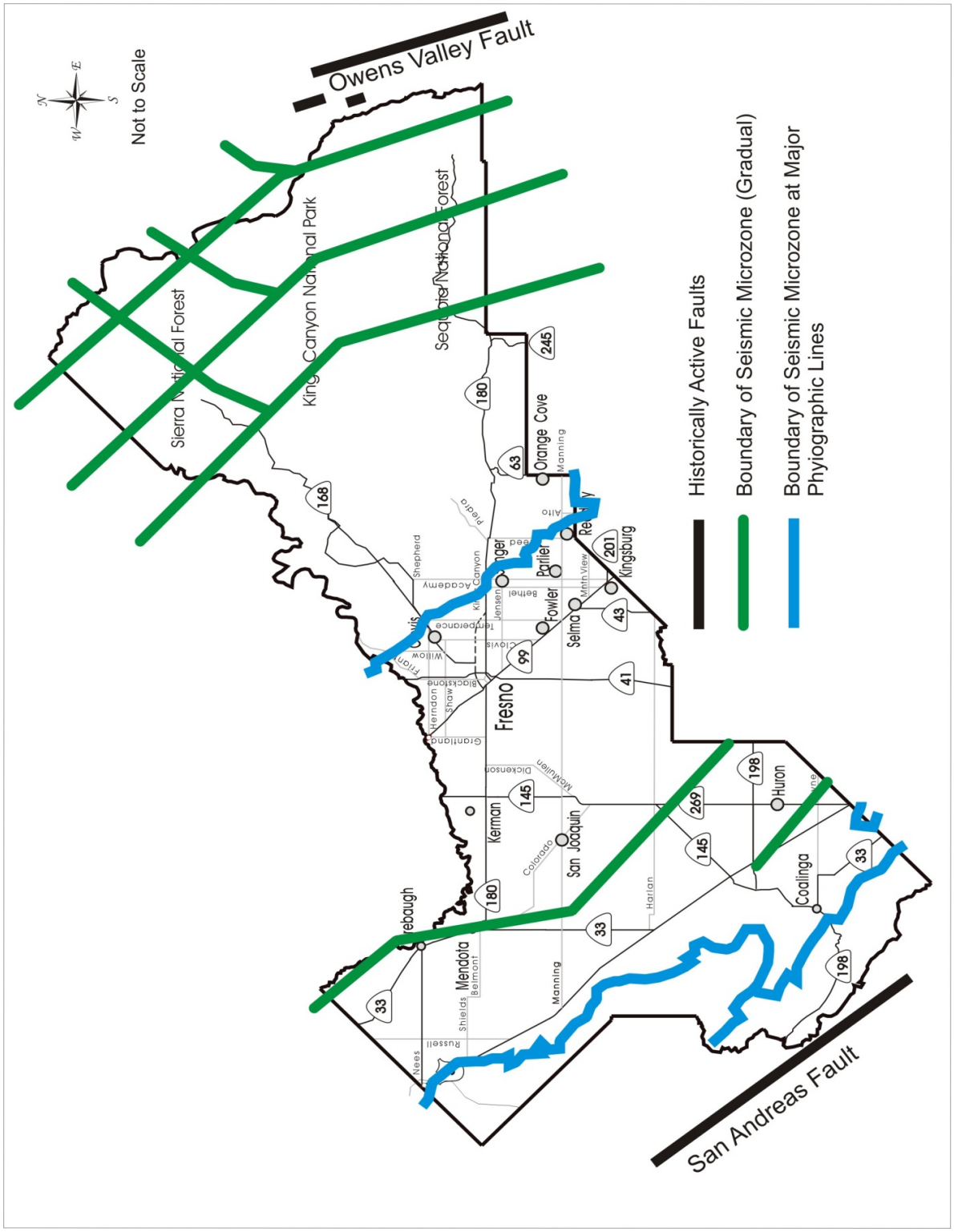


FIGURE 3-11
Major Potentially Active Faults in Fresno County



At any given location, the amount of the resulting shaking motion caused by the sudden movement to a large extent depends on local ground conditions (including the degree of water saturation), and may be as severe ten miles from the fault as immediately adjacent to it. Local ground conditions that affect the intensity of the ground shaking include the magnitude of the earthquake, the distance from the epicenter, the type of rock or sediment in the area, and the degree of water saturation. Since the valley portions of Fresno County are composed of alluvial deposits, the intensity of ground shaking would be greater than the foothill or mountain areas in the County that are composed of rock.

Ground shaking is commonly described in terms of peak ground acceleration as a fraction of the acceleration of gravity (g), or by using the Modified Mercalli (MM) Intensity Scale. The MM Intensity Scale is a descriptive method involving 12 levels of intensity. Table 3-61 below illustrates MM intensity ranges from level I (shaking that is not felt) to level XII (total damage). MM intensities ranging from IV to X could cause moderate to significant structural damage.

TABLE 3-61
Modified Mercalli Intensity Scale

Scale	Description
I.	Not felt except by a very few under especially favorable conditions.
II.	Felt only by a few persons at rest, especially on upper floors of buildings.
III.	Felt quite noticeably by people indoors, especially on the upper floors of buildings. Many do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibration similar to the passing of a truck. Duration can be estimated. Indoor objects
IV.	Felt indoors by many to all people, and outdoors by few people. Some awakened. Dishes, windows, and doors disturbed, and walls make cracking sounds. Chandeliers and indoor objects shake noticeably. The sensation is more like a heavy truck striking buildin
V.	Felt inside by most or all, and outside. Dishes and windows may break and bells will ring. Vibrations are more like a large train passing close to a house. Possible slight damage to buildings. Liquids may spill out of glasses or open containers. None to a
VI.	Felt by everyone, outside or inside; many frightened and run outdoors, walk unsteadily. Windows, dishes, glassware broken; books fall off shelves; some heavy furniture moved or overturned; a few instances of fallen plaster. Damage slight to moderate to po
VII.	Difficult to stand. Furniture broken. Damage light in building of good design and construction; slight to moderate in ordinarily built structures; considerable damage in poorly built or badly designed structures; some chimneys broken or heavily damaged. N
VIII.	Damage slight in structures of good design, considerable in normal buildings with a possible partial collapse. Damage great in poorly built structures. Brick buildings easily receive moderate to extremely heavy damage. Possible fall of chimneys, factory s
IX.	General panic. Damage slight to moderate (possibly heavy) in well-designed structures. Well-designed structures thrown out of plumb. Damage moderate to great in substantial buildings, with a possible partial collapse. Some buildings may be shifted off fou
X.	Many well-built structures destroyed, collapsed, or moderately to severely damaged. Most other structures destroyed, possibly shifted off foundation. Large landslides.
XI.	Few, if any structures remain standing. Numerous landslides, cracks and deformation of the ground.
XII.	Total destruction – everything is destroyed. Lines of sight and level distorted. Objects thrown into the air. The ground moves in waves or ripples. Large amounts of rock move position. Landscape altered, or leveled by several meters. Even the routes of ri

Source: U.S. Geology Survey, National Earthquake Information Center Website

The Five County Seismic Safety Element was prepared for Fresno, Kings, Madera, Mariposa and Tulare Counties in 1974, but has not been updated and does not include recent seismic activity. However, the California Division of Mines and Geology (CDMG) have compiled their Probabilistic Seismic Hazard Map, which is based on a 10 percent probability of earthquake occurrence in 50 years for Fresno County. The Fresno County portion of that map can be viewed on Figure 3-11.

Identified faults must be considered in planning and land use activities, and faults identified as active deserve special consideration. No structure, including roadway bridges, should be built astride an active fault. Similarly, utilities that cross such faults must be designed to remain functional even after fault movement.

✓ **Ground Failure**

Fresno County has a diversity of microenvironments and activities that have the potential for ground failure. Factors that cause or contribute to ground failure can include, but are not limited to soil type and condition, bedrock condition, presence of moisture, presence or lack of vegetation, ground slope, seismic activities, and human activities. Specific types of ground failure and provided local data are described below:

- Landslides – The severity of landslide problems depends on the local soil and bedrock conditions, including moisture content, slope, and vegetation. Human activities also tend to destabilize earth materials and thus increase the chance of ground failure. Human-induced causes include the cutting of slopes for roadways, overloading slopes with artificial fill, extensive irrigation, poor drainage, excessive groundwater withdrawal, and the removal of stabilizing vegetation. Added moisture injected into the soils by water and sewer systems tends to be detrimental in unstable areas, and can cause the reoccurrence of landslides in a previously stable area. Small landslides are common within the mountain areas as loose material moves naturally down slope.
- Land Subsidence – Land subsidence is occurring within the San Joaquin Valley. This type of ground failure can be aggravated by ground shaking, and is most often caused by the withdrawal of large volumes of fluid from underground reservoirs. Other causes of subsidence include sinking tectonics, oil and gas extraction, and deficient alluvial deposits. Subsidence from any cause accelerates maintenance problems on roads, canals, and underground utilities, and contributes to drainage and flood problems. Seismic activities also aggravate subsidence areas. Western Fresno County contains large areas of intense land subsidence caused by excessive groundwater pumping. Maintenance or raising water tables can mitigate effects from subsidence.
- Clay soils – Fine-grained, cohesive clay soils that expand when moisture is added tend to lose their ability to support foundations of structures. Swelling soils usually occurs during the winter and spring rains, and can lead to heaving of highways and roadways, disruption of utility lines, cracked driveways and foundations, and doors and windows that will not open properly. Construction

may aggravate the problem due to adding moisture, and heaving may not occur on the site until six months to a year later.

- Liquefaction – Liquefaction occurs when ground shaking produced by earthquakes destabilizes or "liquefies" saturated soils. Liquefaction can occur in certain types of soil, such as loosely consolidated sands, alluvial deposits, or poorly engineered fill. Liquefaction usually occurs in areas that are associated with a willow water table, within 30 feet of the ground surface. Liquefaction can affect roads, runways and utility lines.
- Erosion – Erosion is the process whereby materials of the earth's crust are worn down, removed by weathering, and deposited in other places by the flow of water, wind and seismic activity. Erosion usually occurs in Fresno County during the winter and spring rains, as well as during windstorms. Erosion can be an on-going, gradual process or a rapid process during wind and flood events. Areas in Fresno County where erosion may present a problem include areas that contain one or more of the following: alluvial fans, urban drainage systems, seismic activity, steep slopes, and stripped vegetation due to recent fires. Proper engineering, grading, construction, landscaping, drainage and enforcement can reduce losses associated with erosion.

Soils

Soil types within Fresno County are as diverse as the County's climate, topography, and underlying geology. Fifty different mapping units are identified on the General Soil Map for the County, named for the major soils series that occur within each unit[2]. A soil series is a group of soils that have similar characteristics and layers.

These mapping units are organized into eight major groups, based on soil characteristics and qualities, including slope. The soil groups, their associated risk of geologic hazard, and their suitability to agricultural uses are briefly described below.

- ✓ Group 1 areas are dominated by nearly level coarse to moderately fine textured alluvial soils. This group consists of 13 separate soil associations and is used primarily for sheep grazing, cotton and alfalfa production. Soil corrosiveness ranges widely, depending on the specific soil association.

- ✓ Group 2 areas are dominated by gently sloping to moderately steep slope areas, and contain coarse to moderately fine textured alluvial soils. This group contains nine separate soil associations and is used predominantly for grazing, small grain, cotton and alfalfa production, although some soils may support orchards. Shrink-swell and erosion hazards are moderate, as is soil corrosiveness.

[2] U.S. Dept. of Agriculture Soil Conservation Service, Report and General Soil Map of Fresno County.

- ✓ Group 3 areas consist of nearly level clayey soils. This group contains four soil associations and supports cotton, alfalfa, sugar beets and other row crops. Shrink-swell potential for this soil group is severe.

- ✓ Group 4 areas are dominated by nearly level soils with dense, very slowly to moderately slowly permeable subsoils or hardpan. This group contains four separate soil associations that support grain crops, cotton and vineyard. Shrink-swell potential for this soil group is very high.

- ✓ Group 5 areas are dominated by sloping soils with dense, slowly to moderately slowly permeable subsoils. This group consists of two soil associations that support range uses and shallow root crops. Shrink-swell potential ranges from low to high between the two soil associations.

- ✓ Group 6 areas consist primarily of coarse to moderately fine textured, gently sloping to very steep residual soils, and are found mainly above 2,500 feet. This group consists of seven soil associations that are best suited for rangeland, oil and timber production, and wildlife habitat. Shrink-swell potential and erosion hazard is generally severe.

- ✓ Group 7 areas are dominated by clayey soils on gently sloping to very steep slopes. This group contains seven soil associations that support citrus production, rangeland, and dry land crops. Shrink-swell and erosion potential are moderate to severe.

- ✓ Group 8 areas are dominated by very shallow soils, rock or very coarse textured soils. This group contains four soil associations that are poorly suited for agricultural uses, and its soil associations are subject to flooding and severe erosion, presenting a threat to construction sites.

As indicated above, Soil Groups 3, 4, 6 and 7 present the greatest constraints to development or construction because of sever shrink-swell potential and the high corrosiveness of associated soils. Group 8 also contains severe limitations because of the potential for flooding and erosion.

Mineral Resources

A number of mineral resources can be found within the region, including construction aggregate (sand, gravel, and crushed stone), clay, gold, etc. Mineral Resource Zone (MRZ) classifications are provided in accordance with the California's State and Surface Mining and Reclamation Act (SMARA) of 1975 (Pub. Resources Code §2710-2796) described in further detail in the Regulatory Setting. MRZ-2 locations indicate the presence of or high likelihood of high-quality mineral resources.

MRZs are classified as follows:

- ✓ MRZ-1 – Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- ✓ MRZ-2 – Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.
- ✓ MRZ-3 – Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- ✓ MRZ-4 – Areas where available information is inadequate for assignment into any other MRZ.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

This impact analysis looks at each significance criterion individually, it assesses how implementation of the proposed RTP, including changes in the transportation network and to the land use pattern, may impact geology, seismicity, soils and mineral resources. The analysis is programmatic and considers potential impacts on the regional level in terms of both land use and transportation impacts.

By 2040, implementation of the proposed RTP will result in a land use pattern and transportation network that is different from existing conditions. Unless otherwise stated, "existing conditions" in the proposed RTP refers to conditions in the baseline. The proposed RTP uses 2008 because it is the most recent year for which comprehensive land use, demographic, traffic count, and VMT data are available for Fresno County.

The land use analysis requires assessing the amount of growth (population, housing, and employment) projected for the region by 2040, and considering how that growth will impact geology, seismicity, soils, and mineral resources in the region. A brief description of the types of geological, mineral resources, seismicity, and soils issues found within the region are discussed above.

Criteria for Significance

- ✓ Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - ➢ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
  - ➢ Strong seismic ground shaking.
  - ➢ Seismic-related ground failure, including liquefaction.
  - ➢ Landslides.

- ✓ Result in substantial soil erosion or the loss of topsoil.
- ✓ Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- ✓ Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- ✓ Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
- ✓ Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- ✓ Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Impact 3.9.1 – Damaged transportation infrastructure and other land use development structures from seismic activity

Seismic events can damage transportation infrastructure and land use development through ground shaking, liquefaction, surface rupture and land sliding. The potential for projects to be significantly affected by seismic activity are projects that would be located in areas close to faults that are known to experience severe ground acceleration during earthquakes making these areas susceptible to severe ground shaking and earth movement. The potential for projects to be significantly affected by liquefaction would be higher in areas exhibiting shallow groundwater levels and unconsolidated soils such as fill material, and some alluvial soils. Property and public safety from seismic activity would be considered a significant impact in some cases.

Mitigation Measures

The specific impacts on damaged transportation infrastructure and other future land use development structures from seismic activity will be evaluated as part of the implementing agencies' project-level environmental review process regarding proposed individual transportation improvement projects and future land use development projects. Implementing agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Implementing agencies will be responsible for ensuring that transportation improvement projects and future land use development projects are built to the seismic standards contained in the most recent edition of the Uniform Building Code (UBC).

- ✓ Implementing agencies will ensure that transportation improvement projects and future land use development projects located within or across active fault zones comply with design requirements, published by the CGS, as well as local, regional, state, and federal design criteria for construction of projects in seismic areas.

- ✓ Implementing agencies will guarantee that geotechnical analysis is conducted within construction areas to establish soil types and local faulting prior to the construction of transportation improvements and future land use developments is subject to geotechnical analysis.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce damaged transportation infrastructure and other land use development structures from seismic activity, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.9.2 – Slope failure and erosion due to project construction

Some transportation improvement projects and future land use development uses require significant earthwork, increasing potential slope failure and long-term erosion. New land uses and transportation development included in the RTP and SCS could result in soil erosion or the loss of topsoil because of new exposed graded surfaces, excavation, stock piling, or boring which are necessary during development. Development may disturb previously undisturbed soils, and new development may increase water runoff, causing erosion problems, and potentially, slope failure. Earthwork can also alter unique geologic features. Transportation improvement projects and future land use development would be considered significant in some cases.

Several transportation improvement projects would involve substantial construction of new highway segments within previously undisturbed areas. Some of these projects could require significant earthwork or cuts into hillsides, which can become unstable over time. Road cuts can expose soils to erosion over the life of the Project, creating potential landslide and falling rock hazards. Engineered roadways can be undercut over time by storm water drainage and wind erosion. Some areas would be more susceptible to erosion than others due to the naturally occurring soils with high erosion potential. Other improvement

projects on steep grades or winding mountain passes would pose the greatest potential impacts. Notwithstanding natural soil types, engineered soils can also erode due to poor construction methods and design features or lack of maintenance. Appropriate construction methods, earthwork design, and road cut design can reduce this potential impact to less than significant levels.

New roadways can also permanently alter unique geologic features, particularly in canyons, coastlines, and mountain passes. However, most of the improvement projects would occur in urbanized portions of the region or in existing transportation corridors. Nonetheless, new lanes may require earthwork that would affect existing natural geologic features.

Mitigation Measures

The specific impacts on slope failure and erosion do to project construction will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Implementing agencies will ensure that individual transportation improvement projects and future land use developments provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion.

- ✓ Transportation improvement project and future land use development design features will include measures to reduce erosion from storm water.

- ✓ Road cuts will be designed to maximize the potential for revegetation.

- ✓ Implementing agencies will ensure that transportation improvement projects and future land use developments avoid landslide areas and potentially unstable slopes wherever feasible.

- ✓ Where practicable, transportation improvement project and future land use development designs that would permanently alter unique geologic features will be avoided.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While

implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce slope failure and erosion due to project construction, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.9.3 - Subsidence and the presence of expansive soils

Local geology can affect transportation infrastructure and the location for new development. Potentially significant impacts to property and public safety could occur due to subsidence and the presence of expansive soils.

Subsidence has historically occurred within Fresno County due to groundwater overdraft and petroleum extraction. Unconsolidated soils containing petroleum or groundwater often compress when the liquids are removed, causing the surface elevation to decrease. Improperly abandoned oil wells or underground hard rock mining can also cause localized subsidence.

Subsidence can also occur in areas with unconsolidated soils that have not historically shown elevation changes. Transportation infrastructure designs and future land use development must include appropriate reinforcement to minimize potential impacts from subsidence in areas where such activity has not been witnessed. In addition, soils with high percentages of clay can expand when wet, causing structural damage to surface improvements. These clay soils can occur in localized areas throughout Fresno County, making it necessary to survey individual transportation improvement project and future land use development areas extensively prior to construction. Each new transportation improvement project and future land use development location would have the potential to contain expansive soils, although they are more likely to be encountered in lower drainage basin areas. Expansive soils are generally removed during foundation work to avoid structural damage.

Figure 3-12 reflects future land use development associated with the SCS by soil type. As can be seen, most future land use development will be located within Alluvium Terrace soil areas, which are very common on the Valley floor and can support transportation structures and future land use development. Due to the generally more granular nature of the alluvium, it should be less likely to contain expansive clays.

Mitigation Measures

The specific impacts of subsidence and the presence of expansive soils will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual

transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Implementing agencies will ensure that geotechnical investigations are conducted by a qualified geologist to identify the potential for subsidence and expansive soils.

- ✓ Implementing agencies should take corrective measures, such as structural reinforcement and replacing soil with engineered fill, will be implemented in individual transportation improvement project and future land use development site designs, where applicable.

- ✓ Implementing agencies will ensure that, prior to preparing individual transportation improvement project and future land use development site designs, new and abandoned wells are identified within construction areas to ensure the stability of nearby soils.

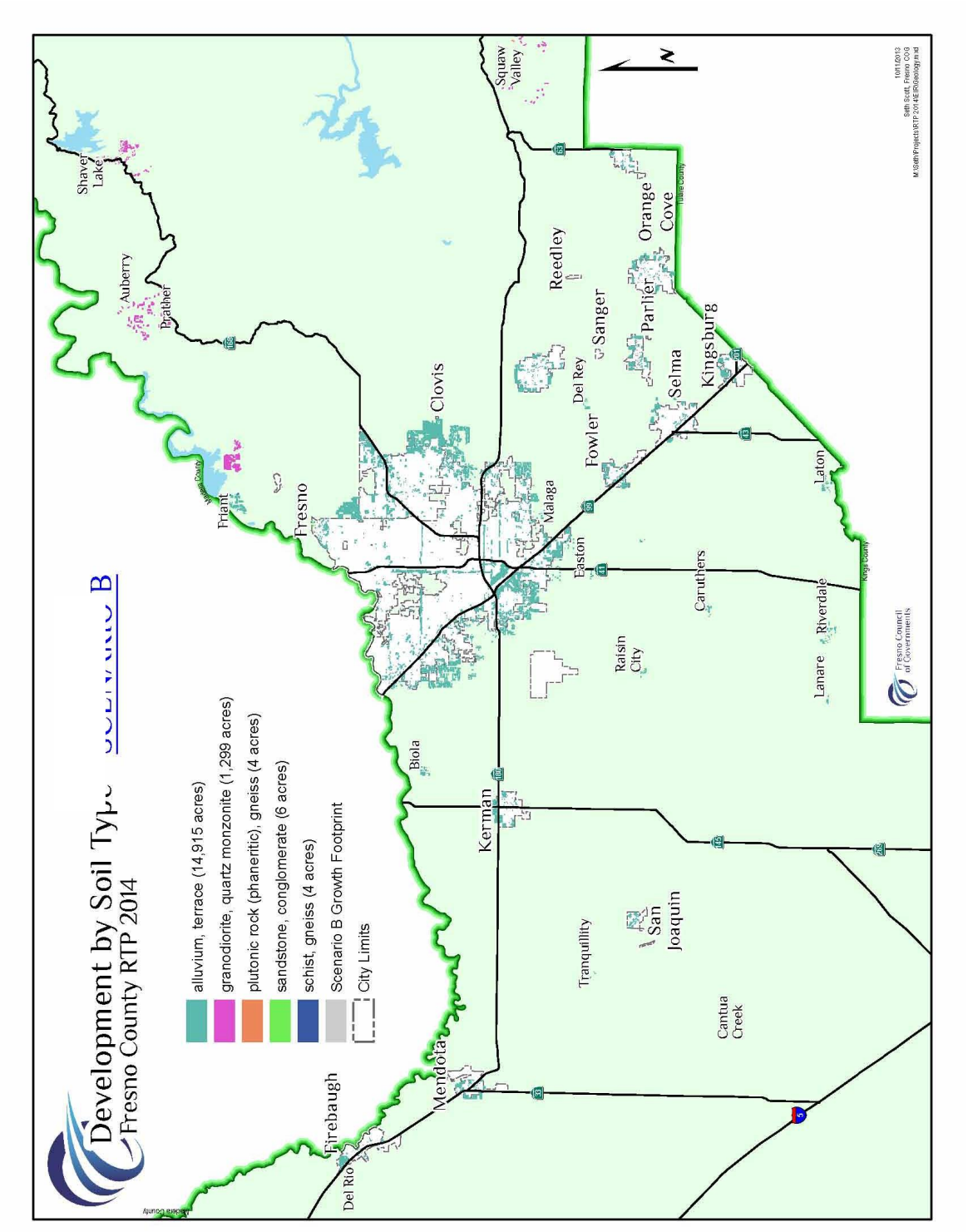
Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce subsidence and the presence of expansive soil**s** it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.9.4 – Result in the loss of availability of a designated mineral resource that would be of value to the region and the residents of the State

Transportation improvements and future land use development associated with implementation of the proposed RTP and SCS could result in a reduction in availability of important designated mineral resources to the region by making certain mineral resources inaccessible for future extraction. The San Joaquin River mineral resource area is located along the Fresno and Madera County line. This resource area covers an estimated 4,271 acres and is part of the alluvial materials from the San Joaquin River. Aggregate resources in this area are identified as being MRZ-1 and MRZ–2. This resource area extends for approximately 15 miles, averages about 0.5 miles along its width, and generally follows the historical floodplain of the San Joaquin River. The Kings River Resource Area is an alluvial fan that covers an estimated 16,380 acres and is designated as a MRZ-2.

FIGURE 3-12
Development by Soil Type



Many MRZ-2 areas in the proposed RTP and SCS may already be developed, and the proposed RTP and SCS emphasizes further construction or development within these already developed areas. The proposed RTP and SCS would not likely interfere with existing or new mineral resource production activities in those areas.

Local jurisdictions have policies to manage mineral resources through general plans, and are required to respond to mineral resource recovery areas that have been designated MRZ-2 locations under SMARA, indicating that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists, thus reducing the impact to a designated mineral resource. However, local policies will not prevent the potential loss of availability of such mineral resources that would be of value to the region and the residents of the state because the decision to implement transportation improvement projects or permit uses and developments or to protect designated mineral resources is a local decision.

Potential, but unproven mineral resource lands are designated as MRZ-3. These lands can be found along the San Joaquin and Kings Rives in Fresno County but they may not be of high quality to formulate concrete.

Mines and other mineral resources such as major oil and natural gas fields, and other mineral resources are located throughout Fresno County. Major oil and natural gas fields are located near Coalinga. Transportation improvement projects and future land use development projects may be proposed along alignments or near areas that will effect mineral resource lands.

Therefore, the potential for loss of availability of a designated mineral resource related to transportation improvement projects and future land use developments from implementation of the proposed 2014 RTP and SCS at the regional level is considered potentially significant.

Mitigation Measures

The specific impacts on the loss of availability of a designated mineral resource that would be of value to the region and the residents of the state will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ The implementing agency should protect against the loss of availability of a designated mineral resource through identification of locations with designated mineral resources and adoption and

implementation of policies to conserve land that is most suitable for mineral resource extraction from development of incompatible uses.

- ✓ Where possible, transportation improvement project and future land use development sites will be designed by responsible agencies to limit potential impacts on mineral resource lands.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the mineral resource impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.9.5 - Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

Implementation of the proposed transportation improvements and future land use developments included in the 2014 RTP and SCS would include new transportation improvement projects and new residential, commercial, and other land uses, including infill development.

Local general plans, specific plans, and other land use plans include policies to protect existing and future mineral production and extraction activities from surrounding uses, and require that future projects near mining activities have compatible land uses. In addition, compliance with Surface Mining and Reclamation Act (SMARA) requirements for mineral resource sites and notice requirements would further minimize impacts to locally-important mineral resource sites. SMARA requires that companies obtain permits before conducting surface mining. The permit applications must describe what the pre-mining environmental conditions and land use are, what the proposed mining and reclamation will be, how the mine will meet the performance standards, and how the land will be used after reclamation is complete. This information is intended to help the government determine whether to allow the mine and set requirements in the permit that will protect the environment. Expansion or extension of the roadway network from implementing proposed RTP and SCS projects would require the need for additional land. Any improvements proposed in federal or state right-of-ways are required to obtain an encroachment permit from Caltrans and provide information on mineral resources to mitigate potential or known impacts. Therefore, the potential for an impact that results in the loss of availability of a locally-important mineral resource recovery site related to transportation improvement projects or future land use

development from implementation of the proposed RTP and SCS at the regional level is considered potentially significant based on the reasons given below.

Transportation improvement projects or future land use development near locally-important resources are regulated by local jurisdictions through policies incorporated into general plans, specific plans, and other land use plans; these policies provide protection of mineral resource production and extraction activities. In addition, compliance with SMARA requirements for mineral resource sites and notice requirements would further minimize impacts to locally-important mineral resource sites. Therefore, the potential for an impact that results in the loss of availability of a locally-important mineral resource recovery site related to transportation improvements from implementation of the proposed RTP and SCS is considered potentially significant based on the reasons given below.

Mitigation Measures

The specific impacts resulting in the loss of availability of a locally-important mineral resource recovery site delineated on a local General Plan, Specific Plan, or Other Land Use Plan will be evaluated as part of the implementing agencies' project-level environmental review process regarding their proposed individual transportation improvement project and future land use development projects. Implementing agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ The implementing agency should protect against the loss of availability of a locally-important mineral resource recovery site through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection of mineral resource production and extraction activities.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.10 HAZARDOUS MATERIALS

This section of the EIR contains an overview of hazards and hazardous waste issues in Fresno County. It also discusses potential impacts that may result from implementation of the Project (2014 RTP and SCS) and appropriate mitigation measures to address known impacts.

Regulatory Setting

Numerous laws and regulations at all levels of government serve to minimize the potential impacts associated with the use and handling of hazardous materials. The most relevant federal, state, and local hazardous materials laws and regulations are summarized in this section.

Federal Agencies and Regulations

- **United States Environmental Protection Agency (EPA) -** The EPA is the primary federal agency charged with protecting human health and with safeguarding the natural environment: air, water, and land. EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. EPA is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Since 1970, the EPA has enacted numerous environmental laws including the Resource Conservation and Recovery Act (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); and the Toxic Substances Control Act (TSCA).

- **Resource Conservation and Recovery Act (RCRA) -** The 1976 Resource Conservation and Recovery Act (RCRA) is the principle federal law that regulates generation, management, and transportation of waste. RCRA gave the EPA authority to develop strict requirements for all aspects of hazardous waste management including the treatment, storage, and disposal of hazardous waste. In addition, RCRA requires the inspection, enforcement, and formal corrective action for facilities that do not live up to the terms of their permits and other requirements. To achieve these goals, RCRA established three programs:

  - Subtitle D (Solid Waste Program): Encourages states to develop comprehensive plans to manage non-hazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits the open dumping of solid waste.
  - Subtitle C (Hazardous Waste Program): Establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal ("cradle to grave").

- Subtitle I (UST Program): The underground storage tank (UST) program regulates the design and operation of underground storage tanks containing hazardous substances and petroleum products.

A cornerstone of RCRA is management of waste "from cradle to grave," in other words, from generation, to transportation, treatment, storage, and ultimately, disposal. To assure this, the RCRA utilizes a manifest system, which is a data sheet that identifies each waste shipment. Identification from generators and transporters, and permits for Toxic Substance Disposal Facilities (TSDFs) is required, enabling waste shipments, such as special hazardous waste, to be tracked. The manifest will accompany the waste from the generating facility to the final disposal site, thus, allowing for "cradle to grave" tracking of the waste.

- ✓ **Hazardous Materials Transportation Act -** The U.S. Department of Transportation (DOT) regulates hazardous materials shipping at the federal level (49 CFR Parts 171-180). Congress passed the Hazardous Materials Transportation Act in 1975 to give authority to the Secretary of Transportation "to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in commerce."

- ✓ **Research and Special Programs Administration (RSPA) -** The RSPA of DOT issues the hazardous materials regulations. The regulations cover definition and classification of hazardous materials, communication of hazards to workers and the public, packaging and labeling requirements, operational rules for shippers, and training. They apply to interstate, intrastate, and foreign commerce by air, rail, ships, and motor vehicles, and also cover hazardous waste shipments. The Federal Highway Administration (FHWA) is responsible for highway routing of hazardous materials and highway safety permits. The U.S. Coast Guard regulates bulk transport by vessel. The hazardous material regulations include emergency response provisions, including incident reporting requirements. Reports of major incidents go to the National Response Center, which in turn is linked with CHEMTREC, a service of the chemical manufacturing industry that provides details on most chemicals shipped in the U.S.

- ✓ **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) -** CERCLA (generally referred to as Superfund) was enacted by Congress on December 11, 1980. CERCLA established a trust fund to provide for toxic waste cleanup when no responsible party could be identified. Additionally, this Act gave EPA power to seek out those parties responsible for any release and assure their cooperation in the cleanup. The law authorizes two kinds of response actions:

  - Short-term Removals: Actions are taken to address releases or threatened releases requiring prompt response.

  - Long-term Remedial Response: Actions are taken to permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening.

These actions can be conducted only at sites listed on EPA's National Priorities List (NPL). CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the NPL sites, which is the list of hazardous waste sites eligible for long-term remedial action financed under the federal Superfund program. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

- ✓ **Superfund Amendments and Reauthorization Act (SARA) -**The Superfund Amendments and Reauthorization Act (SARA) of 1986 reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and technical requirements were added to the legislation, including additional enforcement authorities.

- ✓ **Emergency and Community Right to Know Act (EPCRA) -** Also known as Title III of SARA, EPCRA was enacted by Congress as the national legislation on community safety. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. EPCRA was passed in response to concerns regarding the environmental and safety hazards posed by the storage and handling of toxic chemicals. EPCRA establishes requirements for federal, state and local governments, tribes and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The Community Right-to-Know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. States and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment. To implement EPCRA, Congress required each state to appoint a State Emergency Response Commission (SERC). The SERC's were required to divide their states into Emergency Planning Districts and to name a Local Emergency Planning Committee for each district.

- ✓ **Toxic Substances Control Act (TSCA) -** The Toxic Substances Control Act (TSCA) of 1976 was enacted by Congress to give EPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. EPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. EPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

State Agencies and Regulations

The identification and cleanup, or remediation, of environmentally contaminated properties is regulated by several agencies in California, depending on the size and nature of the site, its past uses, and whether soil or groundwater are impacted.

- ✓ **California Environmental Protection Agency (Cal/EPA) -** The Cal/EPA was created in 1991 by Governor's Executive Order. The six agencies (Air Resources Board, Department of Pesticide

Regulation, Department of Toxic Substances Control, Integrated Waste Management Board, Office of Environmental Health Hazard Assessment and the State Water Resources Control Board) were placed within the Cal/EPA "umbrella" to create a cabinet level voice for the protection of human health and the environment and to assure the coordinated deployment of state resources.

- ✓ **California Department of Toxic Substances Control (DTSC) -** In California, the DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Hazardous waste is defined by Section 25117 of Division 20 of the Health and Safety Code as:

  A waste or combination of wastes, which because of its quantity, concentration, physical, chemical, or infectious characteristics, may:

  - *Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or*
  - *Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed.*

  The DTSC regulates hazardous waste, cleans up existing contamination and researches ways to reduce the hazardous waste produced in California. In addition, the DTSC develops legislation, coordinates with lawmakers and responds to constituent complaints. The regulations spell out what those who handle hazardous waste must do to comply with the laws.

  Under RCRA, DTSC cleans-up or oversees approximately 220 hazardous substance release sites at any given time and completes an average of 125 cleanups each year. Ensuring compliance through inspection and enforcement is an important part of effectively regulating hazardous waste. DTSC conducts roughly 200 inspections a year. DTSC's Criminal Investigations Branch has the only law enforcement officers in the Cal/EPA. These peace officers, with the powers of arrest, and search and seizure, investigate alleged criminal violations of the Hazardous Waste Control Law. They work closely with district attorneys' offices, the federal Environmental Protection Agency, the Federal Bureau of Investigation, and law enforcement personnel in other states.

  The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a business plan, which must include the following:

  - Details, including floor plans, of the facility and business conducted at the site.
  - An inventory of hazardous materials that are handled or stored on site.
  - An emergency response plan.
  - A safety and emergency response training program for new employees with annual refresher courses.

- ✓ **Hazardous Transportation Materials Regulations -** Transportation and use of hazardous materials are the concern of several state and local agencies, including Caltrans, which tracks hazardous materials spills at the District level; the California Highway Patrol (CHP), whose Commercial Vehicle Section includes a Motor Carrier/Licensing & HazMat Regulations Unit; and the state Office of Emergency Services, which responds to hazardous materials emergencies in cooperation with local responders. In addition, state law has established Certified Uniform Program Agencies (CUPA), often housed within local fire departments, to oversee local hazardous materials storage, usage, and disposal.

- ✓ **California Unified Program Agency (CUPA) -** In 1993, the CUPA was created by SB 1082 in order to simplify the process of regulating and managing hazardous materials and hazardous wastes. Rather than having numerous state and local agencies regulating a single business, SB 1082 consolidated the enforcement of several different environmental regulations under the administration of one local agency called a CUPA. The CUPA can be a county, city or JPA (Joint Powers Authority). Under SB 1082, the state required all counties to apply for status as a CUPA. In order to address the needs of cities, some of which already had strong environmental inspection programs in place, the law allowed cities to opt in to the CUPA program as long as they could show that they had the minimum expertise and training to implement the six program elements.

  Each CUPA, whether housed in a Fire Department, Environmental Health Department, or some other department within the city or county would consolidate six existing environmental regulation programs with the goal of reducing: 1) the number of regular inspections to each site by combining different inspections into a single visit, and 2) the amount each regulated business paid in inspection fees. The six programs include the following: 1) Hazardous Materials Business Plan/Emergency Response Plan; 2) Hazardous Waste/Tiered Permitting; 3) Underground Storage Tanks; 4) Aboveground Storage Tanks (SPCC only); 5) California Accidental Release Program; and 6) the Uniform Fire Code Hazardous Materials Management Plan. The CUPA designates a Participating Agency (PA) to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA.

Environmental Setting

As in many parts of California, the individual cities and Fresno County have prepared an Integrated Hazardous Waste Management Plan. It is the responsibility of each jurisdiction, under the provisions of the hazardous waste management plan, to enforce planning decisions or designations regarding the transport and treatment of hazardous waste and the siting of hazardous waste treatment facilities.

Hazardous Waste Management and Transportation

Waste management generally falls into four categories: source reduction, recycling, treatment, and residuals disposal. Waste management locations typically accommodate all of these types of activities

onsite. Recycling, treatment, and disposal can also occur off-site. However, they would require additional intermediate support not only to store but also to transport the waste.
Public exposure to hazardous materials is elevated, because these materials are transported primarily on highways and local roads. This fact causes the national and local governments to be concerned about the safe transport of hazardous materials and the potential harm that hazardous waste can cause to people and the environment.

Local governments can regulate hazardous material and waste transport in one of two ways. First, they may prohibit or limit hazardous material and waste transport. Local governments are generally not responsible for regulating hazardous waste transport on state and interstate highways; however, they are explicitly given the responsibility for regulating hazardous waste transport on local streets. Under AB 1861 (Campbell 1985), local governments can regulate hazardous material and waste transport on local roads considering the following guidelines:

- ✓ The road is appreciably less safe than reasonable alternatives as determined using the Federal Highway Administration's "Guidelines for Applying Criteria to Designate Routes for Transporting Hazardous Materials".
- ✓ The local regulation is not preempted by federal law.
- ✓ The local regulation does not limit necessary access to businesses requiring the services of hazardous materials transporters.
- ✓ The local regulation allows hazardous materials transporters access to service facilities that are within one-half mile of a state or interstate highway.
- ✓ Neighboring jurisdictions agree that the regulation is not incompatible with through transportation;
- ✓ The regulated road is posted.
- ✓ The California Highway Patrol (CHP) is notified of the regulations and includes the restricted road in their published list of restricted highways.

The CHP supports the local governments' responsibility for regulating hazardous materials transport on local roads. As such, the CHP has issued regulations to trucking companies and drivers who carry explosives requiring drivers to follow routes that have been prescribed or established by local authorities. Further, the CHP requires that:

> *Where routes are not prescribed by local authority, every driver of a vehicle transporting explosives will avoid so far as practicable, and, where feasible, by prearrangement of routes, driving into or through congested thoroughfares, places where crowds are assembled, streetcar tracks, tunnels, viaducts, and dangerous crossings.*

The second way that local governments can regulate transportation is to conduct a transportation risk analysis to determine hazardous waste facility siting. The Integrated Waste Management Plan (IWMP) identifies the adopted commercial hazardous materials shipping routes within Fresno County. For the Fresno County system of routes, a number of State Routes (SR) and US highways are designated in the

IWMP. Although local laws may exist to regulate various aspects of hazardous waste transportation on city and county roads, movement usually involves long-distance travel on state and interstate highways.

Response Procedures for Hazardous Materials Spills

Emergency response programs will address either of the following two scenarios:

- ✓ Responding to a release of hazardous materials into the environment.
- ✓ Implementing AB2185, AB2187, and AB3777 and local emergency response/disclosure ordinances.

Hazardous material releases, typically spills or gas vapor releases, pose potentially serious health threats, and as such, require special attention. Specially trained and equipped crews are assigned to respond to these situations to handle the unique problems presented by hazardous materials.

State-mandated disclosure and emergency response programs (AB 2185, AB 2187, and AB 3777) require local users of hazardous materials to submit emergency response plans and hazardous material inventory lists to a local agency. The local agency is responsible for developing an emergency response plan for the area.

Hazardous Waste Sites

Hazardous wastes may be liquid, solid or sludge. The waste is considered hazardous if it has any of these four characteristics, ignitable, reactive, corrosive, and/or toxic. The wastes may be the by-products of manufacturing processes or simply unwanted commercial products. Hazardous waste generators in Fresno County include industries, businesses, public and private institutions, and households. Because the Valley portion of the County is largely agricultural, the use and storage of pesticides is prominent.

County Department of Health Services (DHS) classifies waste into three categories: “large quantity”, or those who produce 1,000 kilograms or more per month; “small quantity”, or those producing between 100 and 1,000 kilograms per month, including businesses, farms and households; and “household wastes”, which includes solvents, pesticides, and miscellaneous wastes, such as car batteries, tires, cleaners, fertilizer and paints. According to the Fresno County General Plan, in 1995 there were approximately 400 small-quantity hazardous waste generators, and approximately 300 large-quantity hazardous waste generators. According to EPA, currently there are 847 small quantity generators and98 large quantity generators in Fresno County. There are two treatment, storage and disposal (TSD) facilities in Fresno County, Big Blue Hills Disposal Site and Safety-Kleen Systems, INC.

Hazardous wastes are transported through Fresno County by truck and rail. Caltrans has established nine hazardous materials classifications, all of which may be through-transported on Interstate 5. In addition, the County contains six hazardous waste transportation routes (SR 33, 41, 63, 99, 180 and 198), subject

to certain restrictions. Therefore, transportation of thousands of tons of hazardous waste is made via state highways and County roadways, causing potential danger of spills caused by accidents.

There are sites where soil or groundwater contamination from hazardous materials has occurred. According to Fresno County's 1988 Hazardous Waste Management Plan, there are twenty "major contaminated sites". The Fresno County Department of Community Health, Environmental Health System has determined that no new major contaminated sites have been identified. The 1998 California Department of Substances Control Hazardous Waste and Substances have determined that there are approximately 400 smaller contaminated sites. The majority of smaller sites is related to underground storage tanks and is located in the Fresno-Clovis Metropolitan Area (FCMA). Hazardous waste sites listed by California Environmental Protection Agency are provided in Table 3-62 below.

Environmental Impacts, Mitigation Measures, and Significance after Mitigation

Methodology

The impact assessment for hazardous materials transport focuses on potential effects the RTP might have on hazardous material use and transport within the County. The assessment is not site or project-specific but is a regional analysis.

Criteria for Significance

The proposed Project could create a potential significant impact if the following conditions are present:

- ✓ Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- ✓ Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- ✓ Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- ✓ Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or environment;
- ✓ For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- ✓ For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- ✓ Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or

- ✓ Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

TABLE 3-62
Hazardous Waste Sites in Fresno County

Site /Facility Name	Site/Facility Type	Status	Location	City
ATLAS ASBESTOS MINE	FEDERAL SUPERFUND - LISTED	ACTIVE - LAND USE RESTRICTIONS	20 MILES NW OF COALINGA-LOS GATO	COALINGA
BRITZ FERTILIZERS, INC - FIVE POINTS	STATE RESPONSE	CERTIFIED / O&M - LAND USE	21817 SOUTH COALINGA ROAD	FIVE POINTS
CITY OF COALINGA ASBESTOS SITE	FEDERAL SUPERFUND - DELISTED	CERTIFIED / O&M - LAND USE	AREA SE OF LUCILLE AVENUE & HWY 198	COALINGA
COALINGA ASBESTOS MINE	FEDERAL SUPERFUND - DELISTED	CERTIFIED / O&M - LAND USE RESTRICTIONS	PINE CANYON, 15 MILES NW OF COALINGA	COALINGA
COMMERCIAL ELECTROPLATERS	STATE RESPONSE	ACTIVE	2940 SOUTH ELM AVENUE	FRESNO
FMC CORPORATION - FRESNO	STATE RESPONSE	ACTIVE	2501 SOUTH SUNLAND AVENUE	FRESNO
FORMER BURLINGTON NORTHERN SANTA FE ICE HOUSE	STATE RESPONSE	ACTIVE	3090 E CHURCH AVE	FRESNO
FRESNO AIR TERMINAL/OLD HAMMER FIELD (J09CA0823)	STATE RESPONSE	ACTIVE	MCKINLEY AND CLOVIS AVENUES	FRESNO
FRESNO SANITARY LANDFILL	FEDERAL SUPERFUND - LISTED	ACTIVE - LAND USE RESTRICTIONS	SW CORNER OF JENSEN & WEST AVENUES	FRESNO
H S MANN METAL WASTE COMPANY	STATE RESPONSE	ACTIVE - LAND USE RESTRICTIONS	5404 SOUTH DEL REY AVENUE	DEL REY
MOUNT OWEN RIFLE RANGE- IR/MMRP(J09CA0877)	STATE RESPONSE	ACTIVE	APPROXIMATELY 6 MILES NE OF CLOVIS	CLOVIS
PINEDALE AREA GROUNDWATER	STATE RESPONSE	BACKLOG	PINEDALE/N. FRESNO AREA	FRESNO
PURITY OIL SALES, INC	FEDERAL SUPERFUND - LISTED	ACTIVE	3265 SOUTH MAPLE AVENUE	MALAGA
SELMA TREATING COMPANY	FEDERAL SUPERFUND - LISTED	ACTIVE - LAND USE RESTRICTIONS	1735 DOCKERY AVE & ADJOINING	SELMA
SOUTH FRESNO PCE GROUNDWATER PLUME	STATE RESPONSE	ACTIVE	2376 S. RAILROAD AVENUE	FRESNO
SOUTH FRESNO REGIONAL GROUNDWATER PLUME	STATE RESPONSE	ACTIVE	NORTH OF CHURCH AVENUE AT SOUTH EAST AVE	FRESNO
T H AGRICULTURE & NUTRITION, L.L.C.	FEDERAL SUPERFUND - DELISTED	LAND USE RESTRICTIONS	7183 EAST MCKINLEY AVENUE	FRESNO
TRI-AIR, INCORPORATED	STATE RESPONSE	ACTIVE - LAND USE RESTRICTIONS	915 TENTH STREET	FIREBAUGH
VALLEY FOUNDRY AND MACHINE WORKS	STATE RESPONSE	ACTIVE	2510 SOUTH EAST AVENUE	FRESNO
VENDO COMPANY, THE	STATE RESPONSE	ACTIVE	7209 NORTH INGRAM AVENUE	FRESNO
WEIR FLOWAY INC.	STATE RESPONSE	ACTIVE - LAND USE RESTRICTIONS	2494 SOUTH RAILROAD AVENUE, P.O. BOX 164	FRESNO

Source: California Environmental Protection Agency, http://www.calepa.ca.gov, Last updated August, 2007.

<u>Impact 3.10.1</u> - Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The 2014 RTP and SCS includes projects that may involve the transportation, use, and/or disposal of hazardous materials, particularly the proposed freight rail improvements and other goods movement capacity enhancements, which may result in transport of hazardous goods as well as the use of equipment that contains or uses routine hazardous materials (e.g., diesel fueled equipment), or the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated.

It is anticipated that these activities would result in a less than significant hazard to the public and/or the environment, because these activities are subject to numerous laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers. These include the EPA, the Occupational Safety and Health Administration (OSHA), USDOT, and the Food and Drug Administration (FDA) for the federal government. State agencies, including the Health and Welfare Agency (HWA),under which is the DTSC, have parallel, and in some cases more stringent, rules governing the use of hazardous materials.

USDOT requires the use of hazardous waste manifests, which are used to ensure that hazardous wastes are strictly monitored and tracked from the point of generation through ultimate disposal. To operate in California, all hazardous waste transporters must be registered with the DTSC. Unless specifically exempted, hazardous waste transporters must comply with the California Highway Patrol Regulations; the California State Fire Marshal Regulations; and the United States Department of Transportation Regulations.

In addition, the construction and maintenance of transportation facilities included in the 2014 RTP and SCS would involve the use of hazardous materials such as solvents, paints and other architectural coatings. The use and storage of these materials will be regulated by local fire departments, CUPAs, and the California Division of Occupational Safety and Health. Materials left over from construction projects can likely be re-used on other projects. For materials that cannot be or are not reused, disposal would be regulated by the DTSC under state and federal hazardous waste regulations.

The following mitigation measure is included to ensure compliance with applicable regulations.

Mitigation Measures

- ✓ The implementation agency and project sponsors shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine

appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.10.2 - Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The implementation of the 2014 RTP and SCS could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during transportation. Implementation of the 2014 RTP and SCS would facilitate the movement of goods, including hazardous materials, through the region. Transportation of goods, in general, and hazardous materials in particular, can thus be expected to increase substantially with implementation of the 2014 RTP and SCS.

The 2014 RTP and SCS transportation improvements and future land use development will increase density and population, and it will include a variety of land uses, ranging from residential to commercial or industrial, that will increase the potential for upset or accident conditions involving the release of hazardous materials into the environment. Specific, parcel-level land uses are unknown, but future land use development will generally increase the number of land uses that require the use, storage, and transport of hazardous materials. Such land uses could include residential, dry cleaners, gas stations, service stations, industrial uses, agricultural uses, etc.

Businesses that store large quantities of hazardous materials (e.g., gas storage facility, chemical warehouse, etc.), and accidents that result from transporting, pumping, pouring, emptying, injecting, spilling, and dumping or disposing, could release hazardous materials into the environment. The severity of potential effects varies with the activity conducted and the concentration and type of waste present. The possible adverse effects to the public or environment from these and other activities are addressed through regulations and monitoring by federal, state, and local regulations discussed below.

Established by the EPA with additional requirements specific to the State of California, CalARP applies to a wide variety of facilities that contain regulated substances. CalARP aims to prevent an accidental release of hazardous materials into the environment through proper storing, containing, and handling. The USDOT enforces the HMTA by regulating transportation of hazardous materials by truck and rail, and governs every aspect of the movement of hazardous materials from packaging, to labeling and shipping. Cal EMA administers the Emergency Response Plan to respond to hazardous materials incidents that may occur. Additionally, roadway improvements in the contained in the RTP and SCS will improve road safety, thereby reducing the potential for accidents related to hazardous materials.

Transportation improvements contained in the 2014 RTP and SCS involve the expansion or extension of the transportation system, which may increase the capacity to transport hazardous materials. For example, gas or oil spilling from vehicle accidents or a tanker overturning on a highway could release

hazardous materials. Transportation improvements that expand the transportation system and extend it to new areas expose more adjoining land uses to risks associated with risk of upset on the roadway, highway, or railroad. These impacts are addressed through CalARP, which manages risks associated with accidental release. To prevent or minimize the accidental release of hazardous materials into the environment, precautions, such as proper securing of the materials and proper container design, are required by CalARP. California Vehicle Code Section 31303 outlines general routing and parking restrictions (Table 10.3) for hazardous material and hazardous waste shipments; the CHP also publishes a list of restricted or prohibited highways. Roadway improvements in the proposed MTP/SCS will improve road safety, thereby reducing the potential for accidents related to hazardous materials.

Given the large volume of materials currently and projected to be transported through the region, some portion of which is and will continue to be, hazardous, the risk of upset as a result of accident or human interference is significant.

Mitigation Measures

- ✓ Implementing agencies shall encourage the USDOT, the Office of Emergency Services, and Caltrans to continue to conduct driver safety training programs and encourage the private sector to continue conducting driver safety training.

- ✓ Implementing agencies shall encourage the USDOT and the CHP to continue to enforce speed limits and existing regulations governing goods movement and hazardous materials transportation.

- ✓ The implementing agencies and project sponsors shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.10.3 – Disturb contaminated property during the construction of new transportation or future land use developments or the expansion of existing transportation facilities or land use developments.

The implementation of the 2014 RTP and SCS could create a hazard to the public or the environment through the disturbance of contaminated property during the construction of new transportation facilities or future land use developments or the expansion of existing transportation facilities or land use developments. Construction of the projects in the 2014 RTP and SCS could involve construction through or next to sites that are contaminated due to past use or disposal of hazardous materials. In the two decades since federal and state laws were adopted providing for remediation of these sites, it is likely that the majority of contaminated sites have been identified or are easily identifiable from existing information. Given the intensity of past use of land in the region, there are substantial numbers of contaminated sites and it is likely that most improvement and future land use development projects will have to address this issue.

Because of the large number of contaminated sites and the risk associated with encountering and cleaning up these sites, this impact is considered to be significant.

Mitigation Measures

- ✓ Prior to approval of any improvement project or future land use development project, the project implementation agency shall consult all known databases of contaminated sites and undertake a standard Phase 1 Environmental Site Assessment in the process of planning, environmental clearance, and construction for projects included in the 2014 RTP and SCS. If contamination is found the implementing agency shall coordinate clean up and/or maintenance activities.

- ✓ Where contaminated sites are identified, the project implementation agency shall develop appropriate mitigation measures to assure that worker and public exposure is minimized to an acceptable level and to prevent any further environmental contamination as a result of construction.

- ✓ Local agencies should contact the Chevron Environmental Management Company (CEMC) to determine whether an improvement or future land use development project may be in the vicinity of the Tidewater Oil Company or Standard Oil Company historical pipeline alignments.

Significance After Mitigation

The mitigation measure would assure that contaminated properties are identified and appropriate steps taken to minimize human exposure and prevent any further environmental contamination. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and

direction to avoid or reduce the disturbance of contaminated property during the construction of new transportation or future land use developments or the expansion of existing transportation facilities or land use developments, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.10.4 – Emit hazardous materials within one-quarter mile of a school

Increased development within Fresno County will increase population and density in the RTP and SCS region. As discussed previously, the implementation of the 2014 RTP and SCS could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during transportation.

Based on the Fresno County Office of Education, there are 32 school districts within Fresno County which provide schooling for nearly 200,000 students. There is just over 360 schools in the County; this includes elementary, middle, and high schools, as well as colleges and charter schools. There are over 40 schools within Fresno County that are within one-quarter mile of a state highway facility. Transportation of hazard materials on these state highways could possibly impact these schools in the event there was a release or accident. Transportation of hazardous materials and other activities are subject to numerous laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers. These include the EPA, the Occupational Safety and Health Administration (OSHA), USDOT, and the Food and Drug Administration (FDA) for the federal government. State agencies, including the Health and Welfare Agency (HWA),under which is the DTSC, have parallel, and in some cases more stringent, rules governing the use of hazardous materials.

Due to the strict and numerous regulations governing the use of hazardous materials, impacts are expected to be less than significant.

The following mitigation measure is included to ensure compliance with applicable regulations.

Mitigation Measures

- ✓ The implementing agencies shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.

Significance After Mitigation

The mitigation measure would assure appropriate steps taken to minimize any hazard to the public or the environment. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the emission of hazardous materials within one-quarter mile of a school, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.10.5 - For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

Transportation improvements and future land use development associated with implementation of the proposed RTP and SCS could result in a safety hazard within an airport plan area. Regional development could increase the number of land uses and developments within an airport plan area and within airport hazard zones, creating hazards from tall structures, glare producing objects, bird and wildlife attractants, radio waves from communication centers, or other features that have the potential to interfere with take-off or landing procedures.

Implementing agencies are responsible for analyzing compliance with Airport Land Use Commission (ALUC) plans as a part of their land use approval authority. Legislation passed in the 1994 ALUP Handbook requires that when preparing an environmental impact report for any project situated within an airport influence area as defined in an ALUC compatibility plan lead agencies shall utilize the California Airport Land Use Planning Handbook as a technical resource with respect to airport noise and safety compatibility issues.

Military airfields are required to adopt AICUZ studies to evaluate compatible land uses in the vicinity of military airfields. Hazards associated with development in the proximity of military airports would be reduced through California PRC Section 21098. The FAA also evaluates projects located within two miles of a public use airport, and other projects that may pose a potential hazard for people residing or working in the project area, due to height, visual hazard, or the attraction of wildlife.

Mitigation Measures

- ✓ Implementing agencies should comply with ALUC plans as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

Significance After Mitigation

If implementing agencies adopt this mitigation measure, impacts resulting in a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area would be reduced to less than a significant level. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce safety hazards for people residing or working in the project area for a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.10.6 - For a project located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

Transportation improvements and future land use development associated with implementation of the 2014 RTP and SCS could result in a safety hazard within the vicinity of a private airstrips, creating hazards from tall structures, glare producing objects, bird and wildlife attractants, radio waves from communication centers, or other features that have the potential to interfere with take-off or landing procedures.

Activities and accessibility of private airstrips is limited, and these airstrips affectless land than public airports. Therefore safety hazards are comparatively less than public or public use airports. In addition, private airstrips are regulated by both local land use regulations and state and federal aviation guidelines. Implementing agencies are responsible for analyzing safety and compatibility issues as a part of their land use approval authority. Also, local governments require operators to obtain a conditional use permit prior to air operations on private airstrips. Furthermore, Caltrans requires operators to obtain a permit from

the Division of Aeronautics prior to air operations, and FAA regulation (14 C.F.R. § 77) includes provisions that apply to public as well as private airstrips. Although the regulatory environment for private airstrips is not as explicit as for public airstrips, adherence to state and local permits, existing regulations, and FAA requirements would reduce the potential for a safety hazard for people residing or working in the vicinity of private airstrips. In addition, general plan policies within the area ensure that development in areas to private airstrips address compatibility issues.

Mitigation Measures

- ✓ Implementing agencies should analyze and adhere to all safety and compatibility issues as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

Significance After Mitigation

If implementing agencies adopt this mitigation measure, impacts resulting in a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area would be reduced to less than a significant level. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce safety hazards for people residing or working in the project area for a project located within the vicinity of a private airstrip, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.10.7- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Public service standards, performance measures, and related policies are usually set in city and county general plans. For fire, police, and emergency services these standards are measured in the form of response times or service ratios. Existing facilities would likely need additional personnel and equipment to maintain adequate service levels with increased demand. In some areas, depending on the level of development, constructing new facilities may be necessary to maintain adequate response times, capital capacity, equipment, and personnel.

Historically, local jurisdictions have accommodated increases in demand by constructing new facilities and leveraging existing facilities, equipment, and personnel. Future demand increases will likely be handled in the same manner. The timing, siting, and project-specific details of individual development projects will necessitate increasing service in existing service areas or expanding service to new areas. In most cases, local jurisdictions will not grant building permits until public services are in place to serve the new development. The 2014 RTP and SCS land use allocation assumes increases in public service facilities and infrastructure as the population increases. However, because public services are regulated at the local level, local jurisdictions have different goals, standards, and policies related to the provision of public services.

Emergency response and emergency evacuation plans are designed by the Office of Emergency Services for the Fresno region to respond to a possible emergency situation (e.g., fires, floods, earthquakes, etc.). These plans cover all of the land within the region including both incorporated and unincorporated areas. These plans provide a process for evacuating people from danger, preventing or minimizing loss of life and property.

Mitigation Measures

- ✓ Implementing agencies should adhere to all emergency plans as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Significance After Mitigation

If implementing agencies adopt this mitigation measure, impacts resulting in a project to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan would be reduced to less than a significant level. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impaired implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.10.8 - Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands.

People and property can sustain significant damage from wildfires because they can spread quickly across large areas. The 2014 RTP and SCS could pose a hazard if it results in the loss, injury, or death and damage to property adjacent to wild lands where there are intermixed residences with wildlands.

Regional development can include different land uses, ranging from residential to commercial or industrial uses, to provide increased goods and services to the region. Regional development could increase the number of structures adjacent to wild lands. The threat of wildfires from development of areas within CALFIRE's responsibility, which include non-federal lands in unincorporated areas with watershed value, is addressed through compliance with Title 14 of the C.C.R., Division 1.5 to minimize exposing people and structures to loss, injury, or death and damage. Title 14 sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent damage to structures or people by reducing wildfire hazards.

In addition, wildfire prevention is a shared responsibility between federal, state, and local agencies. Federal lands fall under Federal Responsibility Areas, and all incorporated areas and other unincorporated lands are classified as Local Responsibility Areas. The 2014 RTP and SCS projects involve the expansion or extension of the transportation system, which may increase the threat of adverse impacts from wild land fires. Transportation improvements that expand the transportation system and extend it to new areas expose more urban-adjoining land uses to risks associated with wild land fires.

Transportation improvements, especially capacity improvements, generally improve the transportation network to move people more efficiently, in case there is a need to evacuate due to a wildfire. The threat of wildfires from transportation improvements within CAL FIRE's responsibility, which include non-federal lands in unincorporated areas with watershed value, is addressed through compliance with Title 14 of the C.C.R., Division 1.5 to minimize exposing people and structures to loss, injury, or death and damage. Title 14 sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent damage to structures or people by reducing wildfire hazards. In addition, wildfire prevention is a shared responsibility between federal, state, and local agencies. Federal lands fall under Federal Responsibility Areas, and all incorporated areas and other unincorporated lands are classified as Local Responsibility Areas.

Mitigation Measures

- ✓ Implementing agencies should analyze and adhere to all safety and compatibility issues as a part of their design and construction of transportation facilities and their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within wildland areas.

Significance After Mitigation

If the implementing agency adopts this mitigation measure, impacts resulting in a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area would be reduced to less than a significant level. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the exposure of people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.11 HYDROLOGY & WATER RESOURCES

Issues related to surface-water resources, flooding, ground-water resources, storm water runoff, and water quality are addressed in this section. In addition, impacts of the 2014 RTP and SCS have been reflected and appropriate mitigation measures have been identified to lessen the impacts. Further discussion of water supply can be found in the Public Utilities, Other Utilities, and Services Systems section.

Water is currently the most critical issue being faced by the San Joaquin Valley. Many pressing concerns - new as well as long standing - are affecting water supply reliability, quantity, and quality of the region's agricultural, urban, and environmental water needs. The Southwest is already the driest and hottest region in the United States, and California is in the midst of a historic drought. In February 2014, the Fresno COG Board also approved a request to make Water Policy the number one priority for the Fresno COG advocacy trip.

Regulatory Setting

Water resources in the County are regulated at the federal, state, and local agencies as follows:

Federal Regulations

- ✓ **Clean Water Act (CWA) -** Enacted by Congress in 1972, the Clean Water Act mandates cooperative effort by federal, state, and local governments to implement its pollution control measures. This law was the first comprehensive national clean water legislation to protect our nation's waters. In an effort to address pollution and poor water quality, the law uses a framework of standards, technical tools, and financial assistance as. The law is intended to improve the quality of the nation's waters.

  The National Pollutant Discharge Elimination System (NPDES) was established by the Clean Water Act to regulate discharges into "navigable waters" of the United States. This is accomplished by using pollutant thresholds and operational conditions for industrial facilities and wastewater treatment plants. The Act also established Storm Water Management Plans, municipal authority for non-point source NPDES permits, in communities with populations of greater than 100,000 to control urban storm water runoff.

  These plans ensure best management practices to reduce pollutant loads. Water quality thresholds called Total Maximum Daily Loads were also developed for pollutants and other stressors affecting water quality. Finally, in an effort to ensure that the actions will be consistent with the state's water quality requirements, Section 401 of the Clean Water Act grants states the authority to review federal permits or licenses that will result in a discharge or disruption to wetlands and other waters under state jurisdiction.

- ✓ **Safe Drinking Water Act -** The Safe Drinking Water Act (SDWA) ensures the quality of Americans' drinking water. The law requires actions to protect drinking water and its sources—rivers, lakes, reservoirs, springs and groundwater wells—and applies to public water systems serving 25 or more people. It authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants. In addition, it oversees the states, municipalities and water suppliers that implement the standards.

  EPA standards are developed as a Maximum Contaminant Level (MCL) for each chemical or microbe. The MCL is the concentration that is not anticipated to produce adverse health effects after a lifetime of exposure, based upon toxicity data and risk assessment principles. EPA's goal in setting MCLs is to assure that even small violations for a period of time do not pose significant risk to the public's health over the long run. National Primary Drinking Water Regulations (NPDWRs or primary standards) are legally enforceable standards that limit the levels of contaminants in drinking water supplied by public water systems.

  Secondary standards are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, states may choose to adopt them as enforceable standards.

Federal Agencies

- ✓ **U.S. Army Corps of Engineers -** The Corps of Engineers regulates placement of dredged or fill material in waters of the United States, and regulates work in navigable waters of the United States.

- ✓ **U.S. Environmental Protection Agency (EPA**) - The U.S. Environmental Protection Agency is the federal agency responsible for water quality management and administration of the federal Clean Water Act (CWA). In California, the EPA has delegated most of the administration of the CWA to the State Water Resources Control Board (SWRCB).

  - ➢ **The Safe Drinking Water Act (SDWA) of 1974** (42 U.S.C. § 300(f) et seq.) is the principal federal law protecting drinking water quality. It empowers U.S. EPA to set drinking water quality standards and oversee water providers that implement the standards. It includes provisions for protecting surface waters and wetlands to support drinking water quality. The California Department of Public Health Division of Drinking Water and Environmental Management is delegated implementation authority for well water permits, regulation of potable water monitoring, regulation of septic and sewer systems, regulation of hazardous materials and wastes, and regulation of underground storage tanks and solid waste disposal facilities.

- ✓ **U.S. Fish and Wildlife Service (USFWS) -** The U. S. Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (FESA) and designates critical habitat for endangered species to carry out its mission to conserve, protect, and enhance the nation's fish and wildlife and their habitats for the continuing benefit of people. Critical habitat areas cannot be disturbed without permission from the USFWS or other federal agencies, depending on land ownership. The USFWS also manages a system of land and waters for the conservation of wildlife and associated ecosystems. These National Wildlife Refuges are primarily managed for the preservation and protection of unique or important resources and ecosystems.

- ✓ **The Federal Emergency Management Agency (FEMA*)* -** The U.S. Congress passed the National Flood Insurance Act in 1968 and the Flood Disaster Protection Act in 1973 in order to restrict certain types of development on floodplains and provide for a national flood insurance program. The purpose of these programs is to reduce the need for large publicly funded flood control structures and disaster relief.

  FEMA classifies flood hazard zones as follows:

  - ➢ Zone A – Areas of 100 year flood. Base flood elevations and flood hazard factors are not determined.
  - ➢ Zone B – Areas between the limits of the 100-year flood and 500 year flood; or certain areas subject to the 100 year flooding with average depth of less than one foot; or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood.
  - ➢ Zone C – Areas of minimal flooding not requiring flood insurance.

- ✓ **The U.S. Bureau of Reclamation (USBR*)* -** The USBR operates the Colorado River project, an extensive network of dams, canals and related facilities. USBR serves as Watermaster overseeing contentious water rights issues, and runs drought protection programs.

State Regulations

- ✓ **Safe, Clean, and Reliable Drinking Water Supply Act of 2010 (the Water Bond) -** Signed into law by the California legislature in 2009, a reexamination of the Water Bond's provisions is set to appear on the November 2014 General Election ballot. Fresno COG enacted Resolution No. 2010-12 on April 29, 2010 in support of the 2010 Water Bond specifically for funding to enhance local water supply and reliability, including above ground storage projects such as the Temperance Flat Dam, improvements to the physical infrastructure of the water system, and to lay the groundwork for development of a Delta alternative water conveyance system.

The Fresno COG Board passed another Resolution in September 2013 to reaffirm the 2010 Resolution and requested the ecological problems in the Delta be fixed, operational flexibility to the state's water storage and delivery system, and aid for disadvantaged communities with water quality problems, while expanding water recycling and conservation. The signed Resolution specifically states that Fresno COG will not support any Water Bond that fails to contain all provisions in the current Water Bond's Chapter 8, including but not limited to $3 billion in continuous appropriation funding to develop new above-ground water storage, the Delta Sustainability section, and adequate funding for regional infrastructure improvements and development, including means of meeting the ever-growing challenges faced by disadvantaged communities throughout California in dealing with and resolving water quality problems.

In addition, Governor Brown has recently asked Californians to conserve at least 20% of their water usage to help with the drought and Fresno COG's member agencies have passed resolutions, reaffirmed resolutions, and tightened their conservation enforcement measures during the current water crisis.

State Agencies

- ✓ **California State Water Resource Control Board (SWRCB) -** The SWRCB was established through the California Porter Cologne Water Quality Act of 1969. It is the primary State agency responsible for water quality management issues in California.

- ✓ **Regional Water Quality Control Board (RWQCB) – Central Valley Region -** The Regional Water Quality Control Board is responsible for implementing policies of the SWRCB, such as ensuring compliance with discharge thresholds and operating standards. The County is located within the RWQCB's Central Valley Region.

- ✓ **California Department of Fish and Wildlife (CDFW) -** The mandate of the California Department of Fish and Wildlife is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. In particular, CDFW is required under the California Endangered Species Act, the California Native Plant Protection Act, the California Environmental Quality Act and the Natural Community Conservation Planning Act to conserve species through listing, habitat acquisition and protection, review of local land use planning, multi-species conservation planning, stewardship, recovery, research, and education. The CDFW protects rare, threatened and endangered species by managing habitat in legally designated ecological reserves or wildlife areas.

- ✓ **California Fish and Wildlife Code -** Under Sections 1600–1616 of the California Fish and Wildlife Code, CDFW regulates projects that affect the flow, channel, or banks of rivers, streams, and lakes. Projects that involve construction near or across a river, stream, or lake are required to comply with these

regulations. Section 1602 requires public agencies and private individuals respectively to notify and enter into a streambed or lakebed alteration agreement with CDFW before beginning construction of a project that will: divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; or use materials from a streambed. Section 1602 contains additional prohibitions against the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake.

- ✓ **Delta Water Agency -** The Delta Agency was established in 1965 for maintenance of agricultural water quality throughout the Delta. In 1973, the agency was replaced by the following three agencies: North, Central, and South Delta Water Agencies.

- ✓ **Delta Protection Commission -** The Delta Protection Commission was established by the Delta Protection Act of 1992 to develop a long-term resource management plan for the Delta Primary Zone. The goals of the regional plan are to protect, maintain and, where possible, enhance and restore the overall quality of the delta environment, including but not limited to, agriculture, wildlife habitat, and recreational activities.

- ✓ **The Department of Water Resources (DWR) -** The DWR is responsible for the planning, construction and operation of State Water Project (SWP) facilities, including the California Aqueduct, and sets conditions on use of SWP facilities. In addition, DWR is responsible for statewide water planning, evaluating urban water management plans, overseeing dam safety and flood control, and transfer of certain water rights permits (e.g., pre-1914).

- ✓ **The California Department of Public Health (DPH) -** DPH implements the SDWA. In addition, it oversees the operational permitting and regulatory oversight of public water systems. DPH requires public water systems to perform routine monitoring for regulated contaminants that may be present in their drinking water supply. To meet water quality standards and comply with regulations, a water system with a contaminant exceeding an MCL must notify the public and remove the source from service or initiate a process and schedule to install treatment for removing the contaminant. Health violations occur when the contaminant amount exceeds the safety standard (MCL) or when water is not treated properly. In California, compliance is usually determined at the wellhead or the surface water intake. Monitoring violations involve failure to conduct or to report in a timely fashion the results of required monitoring.

  In addition, DPH conducts water source assessments, oversees water recycling projects, permits water treatment devices, certifies water system employees, promotes water system security, and administers grants under the State Revolving Fund and State bonds for water system improvements.

- ✓ **The California Water Plan -** The California Water Plan provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future.

The plan, updated every five years, presents basic data and information on California's water resources including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the State's water needs (DWR, n.d.a).

- ✓ **The California Department of Toxic Substances Control (DTSC) -** DTSC is responsible for oversight of hazardous substances and remediation of contaminated sites, including in some cases water sources.

- ✓ **Porter Cologne Water Quality Control Act -** The Porter Cologne Water Quality Control Act of 1967 (Water Code Section 13000 et seq.) requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative to the applicable and numerical water quality standards, and implementation procedures.

  The Porter-Cologne Water Quality Control Act authorizes the state boards to adopt, review and revise policies for all waters of the state (including both surface and ground waters) and directs the regional boards to develop Basin Plans. The act also authorizes state boards to adopt Water Quality Control Plans. In the event of inconsistencies among state and regional board plans, the more stringent provisions apply.

- ✓ **California Emergency Management Agency**

  - ➢ Dam Inundation Mapping - Dam owners must submit flood routing information, land surveys to delineate the floodplain, and a technical report to support a dam failure inundation map to the California Emergency Management Agency. The purpose of the program is to provide decision support for emergency preparedness planning, mitigation, response to, and recovery from potential damage to life and property from dam inundation flood waves. Based upon approved inundation maps, or the delineated areas, cities and counties with territory in the mapped areas are required to adopt emergency procedures for the evacuation and control of populated areas below the dams. The technical study must contain information about dam specifications, physical conditions affected by the dam, including downstream areas and floodwater routing, and the areas that could be affected by a dam failure. The requirements of the technical study can also include modeling of worst case breaching parameters and identification of the downstream hazard potential from partial or complete failure of the dam.

Environmental Setting

Hydrology

✓ **Drainage Patterns**

Fresno County straddles two hydrologic regions, the San Joaquin region in the northern third of the county and the Tulare Lake region in the southern two-thirds of the county. In the Tulare Lake region, the majority of the water drains into the Kings River that flows west from the Sierra Nevada to the Valley, which historically terminated at the now-dry Tulare Lake. In the San Joaquin region, the remaining area drains into the San Joaquin River, which flows into counties north of Fresno County. In both regions, the coastal foothills are drained by small creeks eastward toward the Fresno Slough on the valley floor (reference Figure 3-13).

✓ **Surface Waters**

There are numerous surface water sources in the area, including lakes, rivers, and streams. In addition, there are numerous creeks and canals. A number of wetland and vernal pool areas also exist.

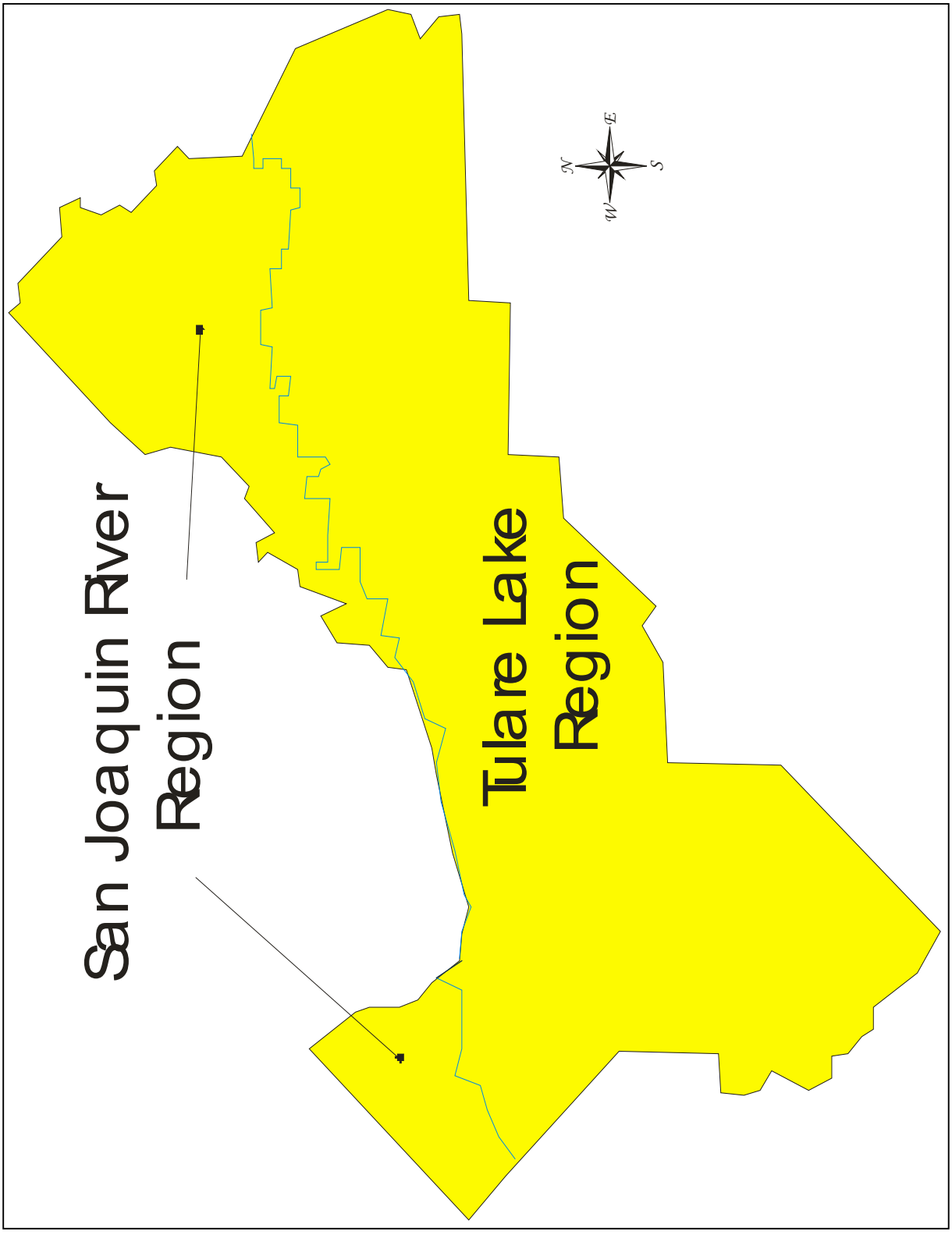
The San Joaquin River and the Kings River are the primary natural surface water sources within Fresno County. Both rivers originate in the Sierra Nevada's and flow toward the valley floor. The San Joaquin River's approximate annual run-off is 1,600,000 acre-feet (an acre-foot is 325,851 gallons). The Kings River's annual run-off is very similar to that of the San Joaquin River.

Vernal pools represent an important surface water feature. These pools collect seasonal rains that typically provide habitat for plants and animals, often rare or endangered species. These water bodies are small and usually underlain by semi-impermeable soils, which restrict percolation into the water table below, resulting in pools that often last from winter to summer.

California has lost a greater proportion of its original wetlands than has any other state. As such, wetlands protection in general is a challenge here, as it is in the rest of the country. The regulation of wetlands falls mainly with the U.S. Army Corps of Engineers, through the authority of Section 404 of the Clean Water Act. Wetlands as a biological resource habitat are discussed further in Section 3-6 - Biotic Resources.

The San Joaquin River and the Kings River are the only two navigable rivers for recreation purposes in Fresno County. There are no waterways navigable by commercial vessels.

FIGURE 3-13
Hydrologic Regions in Fresno County



✓ **Flooding**

The Valley portions of Fresno County can receive between six and ten inches of precipitation annually on average, while the mountainous areas can receive up to 70 inches per year. Flooding in Fresno County can occur as a result of natural phenomena such as heavy rains, excessive snowmelt and runoff; as a result of man-made structural problems, such as dam failure, levee failure, and localized drainage problems; or any combination thereof. Flooding usually occurs during the late fall and winter due to rainfall, and late spring to early summer due to snowmelt.

The principal impact of flooding includes damage to permanent structures, relocation of non-stationary objects, loss of human life and damage to infrastructure and soil conditions. After the initial damage from floodwaters, standing water often creates a secondary level of destruction, ruining crops, further undermining and damaging infrastructure, and contaminating water wells.

Flooding generally occurs when soil and vegetation cannot absorb excess moisture, and water runs off the land in quantities that cannot be carried in stream channels or kept in natural ponds or man-made reservoirs. Periodic floods occur naturally on many rivers, forming an area known as the flood plain. These river floods usually result from heavy rain, sometimes combined with melting snow, which causes the rivers to overflow their banks. Floods in the mountain region are typically confined to narrow valleys, where flood flows from streams or rivers peak quickly and have high velocities. A flood that rises and falls rapidly with little or no advance warning is called a flash flood. Flash floods usually result from intense rainfall over a relatively small area.

Flooding occasionally occurs on streets and roads where storm waters are diverted into man-made or artificial drainage systems in urbanized areas. Storm water is not able to permeate and percolate into the soil in urbanized areas with significant surface areas covered with impervious surfaces and is, therefore, diverted into a storm drainage system. Storm drainage systems can include street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels. In some areas, these drainage systems are occasionally overloaded with storm water drainage, or the drains become clogged with leaves or other debris and impede storm water drainage from transportation facilities. The ability of the storm drainage system to accommodate water flows is also largely based on ground permeability and infrastructure capacity. In the metropolitan area, local cities and counties are the agencies responsible for maintaining and upgrading drainage facilities to accommodate water volume.

A system of reservoirs serves as large-scale flood control basins. Strategic management of reservoir releases and the use of canals serve to minimize the likelihood of flooding, by rerouting of water around populated areas. However, substantial flooding can result from dam failure.

According to the California Department of Water Resources, there are 16 dams in service within the County, and four of which could cause substantial flooding in Fresno County, including Friant Dam, Big Dry Creek Dam, Redbank-Fancher Creek Project Dams, and Pine Flat Dam. Dam failure could result from earthquakes, erosion, improper siting, rapidly rising floodwaters and structural and design flaws.

Fresno County has historically been vulnerable to flooding, due to the network of rivers that run through the valley and the adjacent low-lying terrain. Accordingly, the U.S. Department of Housing and Urban Development (HUD) has designated portions of Fresno County as special Flood Hazard areas. In compliance with the Federal Flood Insurance Program, HUD has provided Fresno County with a series of Flood Boundary Maps. These maps, which delineate major areas of flooding throughout the County, are on file in the Fresno County Planning Department, and hereby incorporated by reference.

A 100-year flood is defined as a flood event that has a one percent chance of occurring in any given year, and is more or less a statistical probability. Many low-lying areas near rivers in Fresno are located in the 100-year floodplain. This type of flood is determined for the purposes land use planning and protection of property and human safety. The Federal Emergency Management Act (FEMA) determines areas subject to flooding in general, as well as the 100-year flood hazard.

✓ **Groundwater Resources**

In addition to surface water systems, groundwater is a significant water resource. Groundwater is water that is stored underground, typically between saturated soil and rock. Because of their capacity to store usable water in a manner that is perennially secure from loss or evaporation, groundwater reservoirs are a significant water resource. Most groundwater reservoirs store far more water than the volume that flows through them annually. However, only the flow-through volume is renewable. A groundwater resource can contain several aquifers, or water-bearing zones. An aquifer refers to a rock formation that is water bearing.

Infiltration of rainfall, seepage from streams, canals, ditches, and underflow that enters the valley from tributary stream canyons recharges groundwater reservoirs. Significant areas of groundwater recharge are located along the stream channels of the rivers, where porous soils and gravels contribute extensive amounts of aquifer recharge. Other areas away from river flood plains are characterized by semi-consolidated gravels with low recharge capability or, more often, clay or hardpan soils, which allow minimal amounts of groundwater recharge.

Water Supply and Quality

Water is an important resource for Fresno County. It is necessary for the production of crops in one of the largest agricultural producing regions in the state/nation, as well as meeting the needs of its approximately 950,000 inhabitants.

Water quality is generally determined by the concentrations of harmful trace elements and the condition of salinity.

✓ Surface Water

Fresno County is located in the state's Regional Water Quality Control system and is marked by an abundance of surface water resources. Surface water systems in Fresno County are generally characterized by a series of reservoirs that collect and store snowmelt in the upper elevations of the Sierra. These include Pine Flat Dam on the Kings River and Friant and Mendota Dams on the San Joaquin River. These and other lakes and reservoirs within the Valley have been developed over the years by Southern California Edison Company, the Army Corps of Engineers, and Pacific Gas and Electric Company. Water stored in the reservoirs is typically used for hydro-generation then released into natural rivers. Most of the water is then captured into lower elevation reservoirs in the foothills and stored for transmission in irrigation canals. These facilities are owned and operated by a number of public agencies including the U.S. Bureau of Reclamation, Southern California Edison, and several local irrigation and water districts. The water supply varies, however, depending on the particular area and season. Many communities within the San Joaquin Valley must supplement natural surface water with water diverted from other sources. A major source is the State Water Project's California Aqueduct.

Water "banking" also occurs among San Joaquin Valley communities in order to preserve water for future use. The City of Fresno and local water agencies operate a recharge facility, "Leaky Acres" within the City of Fresno where surplus water is recharged for withdrawal in drier years.

According to the County of Fresno, surface water in Fresno County is typically of good quality for agricultural irrigation and municipal and industrial uses. The concentration of total dissolved solids (TSDs) is typically low and harmful levels of trace elements are not present. Accordingly, conventional water treatment processes are used. However, bacterial counts and parasite cysts loads are emerging concerns. The streams on the western side of the County contain large volumes of sediment and naturally occurring minerals such as selenium, arsenic, boron and asbestos.

In February 2014, Gov. Jerry Brown declared a drought emergency in California as the state struggled with the least amount of rainfall in its 163-year history. Water retention reservoir levels have fallen and firefighters are on high alert.

✓ **Groundwater**

Use of groundwater has produced serious overdraft in some areas of the County and has resulted in constraints to the availability of water supplies. The California Water Plan Update 2013 identifies the Tulare Lake Basin, which the majority of Fresno County is in, as being in a critical condition of overdraft. Overdraft can lead to numerous issues, such as increased extraction costs, land subsidence, water quality degradation, and environmental impacts. In reaction to drought conditions, nearly all communities in the region have introduced water conservation programs.

The groundwater situation in the Valley is ideal; high clay content and other impervious sediments in the soils sometime known as "Corcoran Clay", combined with a low water table, make it difficult for contaminants to reach the groundwater supply. Groundwater naturally contains pollutants, which occur when water contacts rocks and soils and carries away dissolved solids. However, human activities further impact water quality by affecting the quantity and quality of water that eventually percolates back into the soil and recharges groundwater sources. High concentrations of dissolved solids create objectionable odors, taste, and staining. The quality of groundwater is affected by three main factors in Fresno County: agricultural pollution, industrial pollution, and urban pollution in the form of storm water runoff. As with surface water contamination, storm water that washes over transportation facilities carries urban pollutants. When this untreated effluent percolates into the soil, some contaminants are filtered out before reaching the groundwater aquifer. Reductions in permeable surfaces limit percolation and associated filtration that treat these contaminants.

Groundwater in some localized areas contain elevated levels of boron, dibromochloropropane (DBCP), dichloroethylene (DCE), nitrates, selenium, sulfates, and trichloroethylene (TCE). Groundwater in the western Valley floor area is highly saline and contains other toxic elements resulting from water percolation through marine sediments, and is not suitable for use. Naturally occurring arsenic is a concern for domestic well water supplies.

✓ **Storm Water Runoff**

Storm water runoff in the urbanized portions of Fresno County is diverted into storm drain systems that funnel these effluents to the network of surface waters. Drainage of surface waters is augmented by natural drainage patterns in non-urban areas. The quality of storm water runoff affects the quality of the surface water into which the runoff eventually flows. Untreated pollutants such as suspended solids, pathogens, oil, grease, air pollutants, pesticides, fertilizers, and animal wastes are carried in storm water when it passes over transportation facilities. In 1987, the federal government created the National Pollutant Discharge Elimination System (NPDES) to address this problem. The NPDES enables state water quality agencies to issue permits to cities and counties to develop, implement, and enforce runoff management programs. Therefore, local jurisdictions are responsible for

regulating the harmful constituents of storm water runoff by regulating non-point source pollutants, and for developing methods for containing and treating storm water runoff.

Methodology

Regulatory information and recommended mitigation measures were obtained from state-recommended best management practices for storm water management.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

To determine the actual potential for significant impacts on hydrology and water resources resulting from implementation of the 2014 RTP and SCS, transportation project- and future development project-specific studies would be necessary. However, some general impacts can be identified based on the nature of the individual transportation improvements and future land use development. Projects and future land use development located in watersheds, adjacent to impaired water bodies, or in flood hazard areas are most likely to affect water resources. Construction of the proposed projects and future land use development could cause water quality impacts, because the individual improvement projects and future developments would increase the area of paved surface. Water quality could be affected by storm water runoff that passes over paved surfaces before it reaches a major creek, river, or water body.

Floodplains are areas that are periodically inundated during high flows of nearby streams or high water levels in ponds or lakes. Natural floodplains offer wildlife and plant habitat, open space, and groundwater recharge benefits. Project and future development construction could affect these uses if not mitigated.

A proposed individual improvement project or future development project would be likely to have a greater impact on water resources in areas where proposed improvements are directly adjacent to or crosses a drainage facility or water body, and in areas where projects are located in 100-year flood hazard areas, than projects further from drainage facilities, water bodies, or 100-year flood hazard areas.

Criteria for Significance

CEQA Guidelines establish that a significant impact would be expected to occur if the Project would:

- ✓ Violate Regional Water Quality Control Board water quality standards or waste discharge requirements.
- ✓ Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

- ✓ Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- ✓ Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- ✓ Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
- ✓ Otherwise substantially degrade water quality.
- ✓ Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- ✓ Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- ✓ Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- ✓ Inundation by seiche, tsunami, or mudflow.

Short-Term Impacts

Short-term impacts are temporary and generally related to construction activities. Construction activities undertaken to implement transportation improvements and future development could include excavation, soil stockpiling, boring, and grading. Soil erosion is probable during construction and could directly affect the water quality of local drainage, which could potentially be directed into surface water systems. Soils can contain nitrogen and phosphorus which, when carried into water bodies, can trigger algal blooms.

Extensive blooms of algae can reduce water clarity, deplete oxygen concentrations, and create unpleasant odors. Excessive deposition of sediments in stream channels can blanket fauna and clog streambeds, degrading aquatic habitat. Increased turbidity from suspended sediments can also reduce photosynthesis that produces food supply and aquatic habitat. Additionally, sediment from individual improvement project- and new development-induced on-site erosion could accumulate in downstream drainage facilities and interfere with stream flow, thereby aggravating downstream flooding conditions.

Impacts from construction could affect local storm drain catch basins, culverts, flood control channels, streams, and rivers, depending on the individual improvement project and new development location. Most runoff in urban areas is eventually directed to either a storm drain or water body.

Long-Term Impacts

Increases in the amount of nonpoint-source pollutants generated regionally could occur. In general, they would be attributed to increases in impervious surface area associated with new development and paving,

combined with increased overall regional traffic. These nonpoint source pollutants include oil and grease, petroleum hydrocarbons, metals and possibly nutrients. The paving required for highway projects and the construction of future land use development could have significant effects on the amount of surface water that filters into the ground. Pollutants in the runoff from proposed transportation facilities and future development could affect groundwater basins.

Impact 3.11.1 – Violate Regional Water Quality Control Board water quality standards or waste discharge requirements

Local surface water quality would be affected by increased urban runoff and construction runoff. Increasing impervious surface area would increase urban runoff, which transports greater quantities of contaminants to receiving waters. Construction activities can increase pollutant loads in storm water. In addition, road cut erosion can increase long-term siltation in local receiving waters.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Improvement projects and new development will include upgrades to storm water drainage facilities to accommodate increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce velocity.

- ✓ Transportation network improvements and future land use developments will comply with local, state and federal floodplain regulations. Proposed transportation improvements and applicable new developments will be engineered by responsible agencies to accommodate storm drainage flow.

- ✓ Responsible agencies should ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are provided to prevent water quality degradation. Responsible agencies implementing projects requiring continual water removal facilities should provide monitoring systems including long-term administrative procedures to ensure proper operations for the life of the Project.

- ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce violations of Regional Water Quality Control Board water quality standards or waste discharge requirements, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.11.2 – Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level

The installation of transportation infrastructure, the expansion of project facilities, and the construction of new development could encounter groundwater. Individual projects and future land use developments may require dewatering during construction and for the life of a project. The process of dewatering includes removal of water (groundwater or surface water) from a construction site by pumping or evaporation. The dewatered effluent must be discharged at another location which could have impacts on groundwater. In addition, individual projects under the RTP and SCS could impact groundwater recharge by increasing the amount of paved surface area. The paving required for highway projects and the construction of future land use development could have significant effects on the amount of surface water that filters into the ground. Pollutants in the runoff from proposed transportation facilities and future development could affect groundwater basins.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Transportation network improvements and future land use developments will comply with local, state and federal floodplain regulations. Proposed transportation improvements and applicable new developments will be engineered by responsible agencies to accommodate storm drainage flow.

- ✓ Responsible agencies should ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are provided to prevent water quality degradation. Responsible agencies implementing projects requiring continual water removal facilities should provide monitoring systems including long-term administrative procedures to ensure proper operations for the life of the Project.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on groundwater supplies or groundwater recharge activities, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact: 3.11.3 – Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site

Construction activities related to the individual RTP and SCS projects could potentially involve soil disturbance, excavation, cutting/filling, stockpiling, and grading. Consequently, erosion and sedimentation could increase, affecting water quality and pollutants in the water. In addition, road cut erosion can increase long-term siltation in local receiving waters. During site grading, trenching, and other construction activities, areas of bare soil are exposed to erosive forces during periods of rainfall. They are much more likely to erode than vegetated areas due to lack of dispersion, infiltration, and retention properties created by covering vegetation. The extent of potential impacts is dependent on soil erosion potential, type of construction practice, size of disturbed area, timing of rainfall, and topography and proximity to drainage channels.

Before construction activities can begin, a project applicant must submit a Storm Water Pollution Prevention Plan (SWPPP) and Standard Urban Stormwater Mitigation Plans that will be used in the planned project construction. The applicant must receive approval and submit a Notice of Intent prior to initiating construction. Each individual project in the 2014 RTP and SCS is expected to adopt Best

Management Practices (BMPs) appropriate to local conditions and to the proposed construction techniques that will reduce pollution runoff.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Prior to construction within the vicinity of a watercourse, the project sponsor can and should obtain all necessary regulatory permits and authorizations from the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), California Department of Fish and Game, California Coastal Commission, and local jurisdictions, and should comply with all conditions issued by applicable agencies. Required permit approvals and certifications may include, but not be limited to the following:

  - U.S. Army Corps of Engineers (Corps): Section 404. Permit approval from the Corps should be obtained for the placement of dredge or fill material in Waters of the U.S., if any, within the interior of the project site, pursuant to Section 404 of the federal Clean Water Act.
  - Regional Walter Quality Control Board (RWQCB): Section 401 Water Quality Certification. Certification that the project will not violate state water quality standards is required before the Corps can issue a 404 permit, above.
  - California Department of Fish and Game (CDFG): Section 1602 Lake and Streambed Alteration Agreement. Work that will alter the bed or bank of a stream requires authorization from CDFG.

  A qualified environmental consultant can and should be retained and paid for by the project sponsor to make site visits as necessary; and as a follow-up, submit to the Lead Agency a letter certifying that all required conditions have been instituted during the grading activities.

- ✓ Project sponsors can and should comply with the State-wide construction storm water discharge permit requirements including preparation of Storm Water Pollution Prevention Plans for transportation improvement construction projects. Roadway construction projects can and should comply with the Caltrans storm water discharge permit. BMPs can and should be identified and implemented to manage site erosion, wash water runoff, and spill control.

- ✓ Project sponsors can and should implement BMPs to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. Plans demonstrating BMPs

should be submitted for review and approval by the lead agency. At a minimum, the project sponsor can and should provide filter materials deemed acceptable to the lead agency at nearby catch basins to prevent any debris and dirt from flowing into the local storm drain system and creeks.

- ✓ Project sponsors can and should submit an erosion and sedimentation control plan for review and approval by the appropriate government agency. All work should incorporate all applicable BMPs for the construction industry, including BMPs for dust, erosion and water quality. The measures should include, but are not limited to, the following:
  - On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the street, gutters, storm drains.
  - In accordance with an approved erosion control plan, the project sponsor should implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent degradable erosion control fabric should be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas should be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.
  - Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.
  - Install filter materials acceptable to the appropriate agency at the storm drain inlets nearest to the project site prior to the start of the wet weather season; site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the storm drain system. Filter materials should be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.
  - Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into water courses, street gutters, or storm drains.
  - Direct and locate tool and equipment cleaning so that wash water does not discharge into the street, gutters, or storm drains.
  - Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the storm drain system by the wind or in the event of a material spill. No hazardous waste material should be stored on-site.
  - Gather all construction debris on a regular basis and place them in a dumpster or other container which is emptied or removed on a weekly (or other interval approved by the lead agency) basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.

- Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.
- As appropriate, broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt should be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the street, gutter, and/or storm drains.
- All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management should be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the RWQB.
- All erosion and sedimentation control measures should be monitored regularly by the project sponsor. If measures are insufficient to control sedimentation and erosion then the project sponsor should develop and implement additional and more effective measures immediately.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on existing drainage patterns, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact: 3.11.4 – Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

The Project could increase flooding hazards. Installation of impervious surfaces increases storm water runoff volumes and peak flow rates. This can create flooding hazards in local receiving waters and drainage systems. The Plan could also alter existing drainage patterns or substantially increase the rate or amount of surface runoff in a manner that would result in flooding or produce or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems.

Storm water runoff is influenced by rainfall intensity, ground surface permeability, watershed size and shape, and physical barriers. The introduction of impermeable surfaces greatly reduces natural infiltration, allowing for a greater volume of runoff. In addition, paved surfaces and drainage conduits can

accelerate the velocity of runoff, concentrating peak flows in downstream areas faster than under natural conditions. Significant increases to runoff and peak flow can overwhelm drainage systems and alter flood elevations in downstream locations. Increased runoff velocity can promote scouring of existing drainage facilities, reducing system reliability and safety.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Prior to construction, and when a potential drainage issue is known, a drainage study should be conducted by responsible agencies for new capacity-increasing projects and new land use developments, where applicable. Drainage systems should be designed to maximize the use of detention basins, vegetated areas, and velocity dissipaters to reduce peak flows where possible. Transportation and new development improvements will comply with federal, state and local regulations regarding storm water management. State-owned freeways must comply with Storm Water Discharge NPDES permit for Caltrans facilities.

- ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on existing drainage patterns, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact: 3.11.5 – Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff

The growth projected for Fresno County would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff between now and 2040, potentially generating additional runoff during storm events. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the non-point source discharge of pollutants in stormwater and non-stormwater in the plan area. Growth alone does not necessarily translate into exceedance of stormwater drainage capacity or polluted runoff. It is the siting and design of new development, in relation to existing development, that determines if adequate stormwater drainage exists or will exist, and if appropriate measures are taken to limit or reduce polluted runoff.

New development could add additional sources of runoff. However, in portions of Fresno County that are already built out, such increases would either be accommodated by existing infrastructure, or project proponents would be required, by local ordinances and state regulations, to make infrastructure improvements. In rural or less developed areas, new housing and employment developments could require additional stormwater drainage infrastructure and control measures to limit polluted runoff. However, local stormwater management plans and policies, and State Water Board requirements, which implement federal Clean Water Act requirements, will mitigate these potential impacts.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Project sponsors can and should ensure that new facilities include structural water quality control features such as drainage channels, detention basins, oil and grease traps, filter systems, and vegetated buffers to prevent pollution of adjacent water resources by polluted runoff where required by applicable urban storm water runoff discharge permits.

- ✓ Drainage of roadway runoff can and should comply with Caltrans' storm water discharge permit. Wherever possible, roadways can and should be designed to convey storm water through vegetated median strips that provide detention capacity and allow for infiltration before reaching culverts.

- ✓ Project sponsors can and should assure projects mitigate for changes to the volume of runoff, where any downstream receiving water body has not been designed and maintained to accommodate the

increase in flow velocity, rate, and volume without impacting the water's beneficial uses. Pre-project flow velocities, rates, and volumes must not be exceeded. This applies not only to increases in storm water runoff from the project site, but also to hydrologic changes induced by flood plain encroachment. Projects should not cause or contribute to conditions that degrade the physical integrity or ecological function of any downstream receiving waters.

- ✓ Impacts can and should be reduced to the extent possible by providing culverts and facilities that do not increase the flow velocity, rate, or volume and/or acquiring sufficient storm drain easements that accommodate an appropriately vegetated earthen drainage channel.

- ✓ Project sponsors of improvement projects on existing facilities can and should include upgrades to stormwater drainage facilities to accommodate any increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce flow velocities, including expansion and restoration of wetlands and riparian buffer areas. System designs can and should be completed to eliminate increases in peak flow rates from current levels.

- ✓ Local jurisdictions can and should encourage Low Impact Development and incorporation of natural spaces that reduce, treat, infiltrate and manage stormwater runoff flows in all new developments, where practical and feasible.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts related to the creation of, or contribution to, runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact: 3.11.6 – Otherwise substantially degrade water quality

The growth projected for Fresno County would increase impervious surfaces. Potential runoff contaminants include sediment, pesticides, herbicides, fertilizers, oil and grease, nutrients, metals, bacteria, and trash which could degrade the quality of receiving waters. During the dry season, these

contaminants can accumulate on impervious surfaces and then be transported into stormwater drainage systems after the first rainfall event.

New development could add additional sources of runoff. However, in portions of Fresno County that are already developed, such increases would either be accommodated by existing infrastructure or project proponents would be required, by local ordinances and state regulations, to make infrastructure improvements. In rural and less developed areas of the region, new housing and employment developments could require additional stormwater drainage infrastructure and control measures to limit polluted runoff. However, adherence to local and state regulations would ensure that development would not otherwise substantially degrade water quality. Therefore, the land use impacts associated with implementation of the 2014 RTP and SCS at a program-level are considered less than significant. No mitigation is required.

Transportation projects where Caltrans is the lead agency are covered by the Caltrans Stormwater Program. This permit regulates all stormwater discharges from Caltrans-owned conveyances, maintenance facilities and construction activities. Caltrans also has a Storm Water Management Plan that describes the procedures and practices used to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. Transportation projects where local agencies are the lead agency are subject to local and state regulations for construction and non-construction runoff prevention. Construction-related measures are described in the mitigation section below. Adherence to local and state regulations would ensure that development would not otherwise substantially degrade water quality.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Improvement projects along existing facilities and future land use developments will include upgrades to storm water drainage facilities to accommodate increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce velocity.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the potential to substantially degrade water quality, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact: 3.11.7 – Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map

Figure 3-14 depicts the amount (in acres) of new development associated with the Project by FEMA 100-year flood zone areas (Zones A, AD, AE, and AH). As can be seen, only 436 acres of new development is estimated to be located within FEMA Flood Zones by 2040. Most new development (2,810 acres) will be located outside FEMA 100-year flood zone areas or within areas that have a .2% or less chance of flooding on an annual basis.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Prior to construction, and when a potential drainage issue is known, a drainage study should be conducted by responsible agencies for new capacity-increasing projects and new land use developments, where applicable. Drainage systems should be designed to maximize the use of detention basins, vegetated areas, and velocity dissipaters to reduce peak flows where possible. Transportation and new development improvements will comply with federal, state and local regulations regarding storm water management. State-owned freeways must comply with Storm Water Discharge NPDES permit for Caltrans facilities.

- ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff.

- ✓ Letters of Map Revision (LOMR) will be prepared and submitted to FEMA (when applicable) by responsible agencies where construction would occur within 100-year floodplains. The LOMR will include revised local base flood elevations for projects constructed within flood-prone areas.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area.

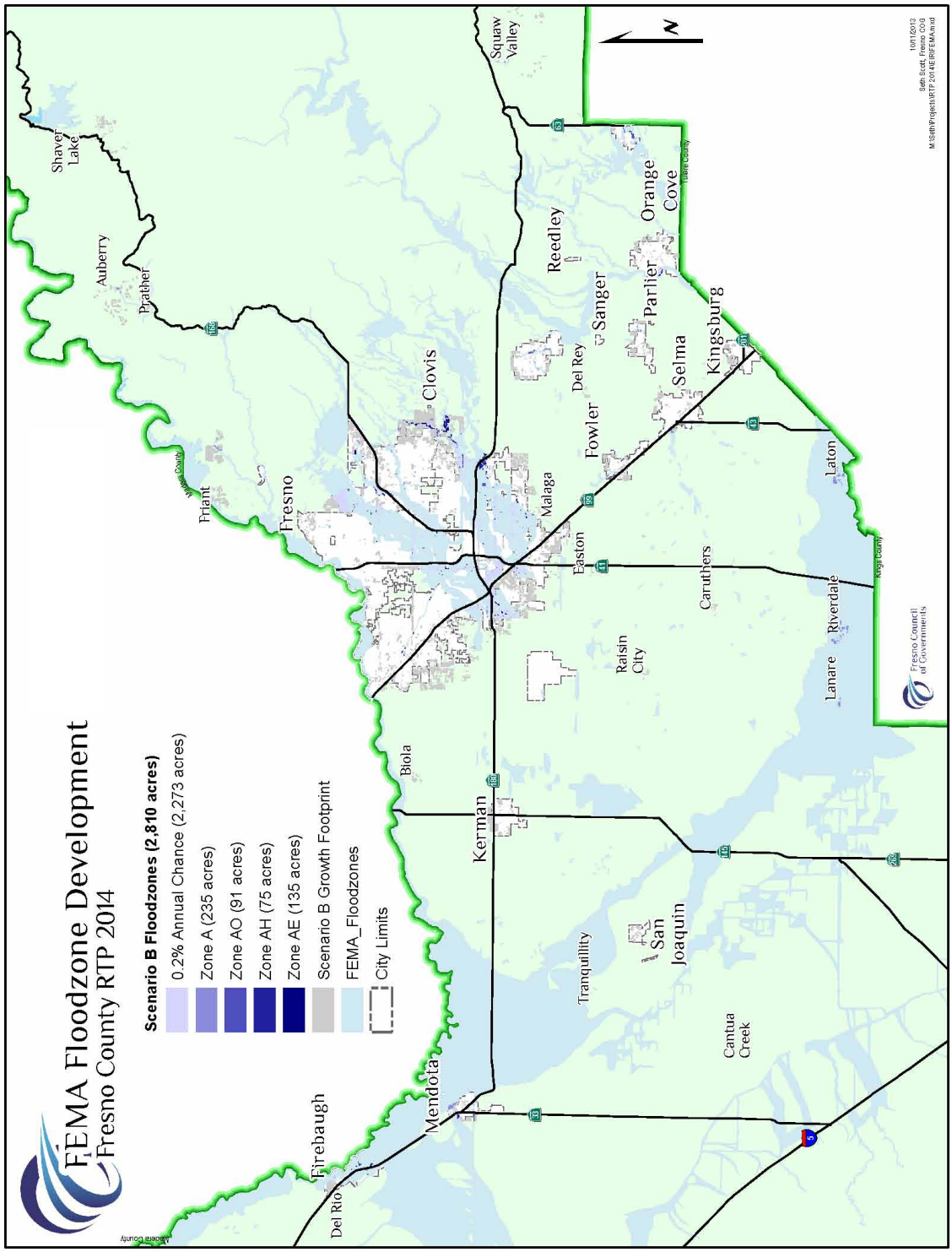
While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the placement of housing within a 100-year flood hazard area, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact: 3.11.8 – Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam

A portion of the transportation projects included in the 2014 RTP and SCS could occur within the 100-year flood hazard area, thus increasing the potential to obstruct or exacerbate floodwaters. The construction of projects involving support structures in the floodway could obstruct floodwaters at some locations.

Placement of structures within a floodplain can displace floodwaters and alter the base flood elevation level upstream and in neighboring areas. Likewise, floodwater can cause scour effects, resulting in erosion and sedimentation problems downstream from structures. Drainage areas could be altered by highway corridors, in which floodwaters could be detained by medians and along the roadside. Proposed bridge supports could block debris in waterways, creating obstructions and further elevating upstream flood levels. The 2014 RTP and SCS could alter existing drainage patterns or substantially increase the rate or amount of surface runoff in a manner that would result in flooding or produce or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems.

FIGURE 3-14
FEMA Flood Zone Development - Preferred Project



Mitigation Measure

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Fresno COG will encourage implementing and local agencies to conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with applicable federal, state, and local agency flood-control regulations. These studies should identify project design features or mitigation measures that reduce impacts to either floodplains or flood flows such that the project is consistent with federal, state, and local regulations and laws related to development in the floodplain.

- ✓ Fresno COG will encourage implementing and local agencies to, the extent feasible and appropriate, prevent development in flood hazard areas that do not have appropriate protections.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the exposure of people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact: 3.11.9 – Place within a 100-year flood hazard area structures which would impede or redirect flood flows

Natural desert conditions promote runoff that can cause flash flooding. In those areas of Fresno County where soils have naturally low permeability and are subject to quick saturation, high rain volumes remain on the surface as runoff. When impervious surfaces such as highways are placed within these areas of an existing flood plain the public is exposed to the hazards of flash flooding. Placing new structures within

an existing floodplain can impede flood waters, altering the flood risks both upstream and downstream. The flooding risks associated with projects located in flood zones can be modified with appropriate design and alignment considerations.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Fresno COG will encourage implementing and local agencies to conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with applicable federal, state, and local agency flood-control regulations. These studies should identify project design features or mitigation measures that reduce impacts to either floodplains or flood flows such that the project is consistent with federal, state, and local regulations and laws related to development in the floodplain.

- ✓ Fresno COG will encourage implementing and local agencies to, the extent feasible and appropriate, prevent development in flood hazard areas that do not have appropriate protections.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the placement structures within a 100-year flood hazard, which would impede or redirect flood flows, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact: 3.11.10 – Inundation by seiche, tsunami, or mudflow

Fresno County is outside of the areas of California at risk for tsunamis, as mapped by the California Department of Conservation, so impacts from tsunamis are not analyzed. The 2014 RTP and SCS would have no impact on inundation by tsunamis.

Large enclosed or partially enclosed water bodies are susceptible to seiche. Seiche can be caused by several factors including tsunami, earthquake, and wind. No state or federal regulations exist related to seiches. Given the absence of tsunamis and low level of earthquake risk in Fresno County, there is a low probability of seiche occurrence in the plan area. While the probability of seiches remain low, the impact of the 2014 RTP and SCS is less than significant.

Any development constructed adjacent to unstable slopes would be susceptible to mudflows. Current state and local design standards require slope stabilization that would reduce the possibility for mudflows. When water rapidly accumulates in the ground, during heavy rainfall or rapid snowmelt, mudflows can develop. No state or federal mapping of mudflows exists.

At the program-level, the 2014 RTP and SCS would not significantly increase the exposure of people and structures to seiche, tsunami or mudflow. Therefore, the land use and transportation impacts associated with implementation of the RTP and SCS at the regional level are considered less than significant. No mitigation is required.

Mitigation Measures

Not applicable.

Significance After Mitigation

Not applicable.

3.12 LAND USE & PLANNING

This section of the EIR contains an overview of land use regulations in Fresno County. It also discusses existing land uses and potential impacts that may result from implementation of the Project (2014 RTP and SCS). This section also discusses the potential impacts to existing neighborhood and regional parks or other recreational facilities. City and county governments provide the most direct regulation of land use and development in the County, but federal and state levels of government also participate in land use regulation and planning for the County. The following paragraphs provide definitions of relevant land use regulations.

Regulatory Setting

Federal Regulations

- ✓ **National Environmental Policy Act (NEPA) -** The National Environmental Policy Act (NEPA) provides general information on effects of federally funded projects. The act was implemented by regulations included in the Code of Federal Regulations (40CFR6). The code requires careful consideration concerning environmental impacts of federal actions or plans, including projects that receive federal funds. The regulations address impacts on land uses and conflicts with state, regional, or local plans and policies, among others. They also require that projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions, and also to restore and enhance environmental quality, as much as possible.

- ✓ **United States Department of Transportation Act of 1966, Section 4(f) -** Section 4(f) of the United States Department of Transportation Act requires a comprehensive evaluation of all environmental impacts resulting from federal-aid transportation projects administered by the Federal Highway Administration, Federal Transit Administration, and Federal Aviation Administration that involve the use—or interference with use—of several types of land: public park lands, recreation areas, and publicly or privately owned historic properties of federal, state, or local significance. The Section 4(f) evaluation must be sufficiently detailed to permit the U.S. Secretary of Transportation to determine that there is no feasible and prudent alternative to the use of such land, in which case the project must include all possible planning to minimize harm to any park, recreation, wildlife and waterfowl refuge, or historic site that would result from the use of such lands. If there is a feasible and prudent alternative, a proposed project using Section 4(f) lands cannot be approved by the Secretary. Detailed inventories of the locations and likely impacts on resources that fall into the Section 4(f) category are required in project-level environmental assessments.

- ✓ **Tribal Sovereignty -** There are several tribal sovereign lands in Fresno County including Big Sandy Rancheria - Mono Indians, Cold Springs Rancheria - Mono Indians, and Table Mountain Rancheria -

Kechiye Yokutch Indians. The federal government considers tribal nations as "domestic dependent nations" and therefore they possess limited sovereignty compared to foreign nations. The relationship between tribal nations and state governments vary by state. But in California, the State has limited criminal and civil judicial authority of activity in these lands. In general, development projects on tribal land are not subject to state and local environmental regulations. However, some development activities may be subject to CEQA environmental review.

Federal Agencies

- ✓ **U.S. Bureau of Land Management (BLM) -** The U.S. Bureau of Land Management (BLM) manages large rural land areas, including land that is environmentally sensitive. The BLM governs uses that are allowed on land that it manages, striving to balance environmental protection and conservation goals with other uses, such as recreation and grazing.

- ✓ **U.S. Forest Service (USFS) -** The U.S. Forest Service (USFS) is responsible for the management and conservation of large areas of National Forest land. National forests are primarily managed for outdoor recreation uses (such as camping, hiking, fishing, hunting, skiing, and nature interpretation, among others) and for resource preservation by the USFS.

- ✓ **U.S. Fish and Wildlife Service (USFWS) -** The U.S. Fish and Wildlife Service (USFWS) administer the Federal Endangered Species Act (FESA), which designates critical habitat for endangered species. This enables USFWS to carry out its mission to conserve, protect, and enhance the nation's fish and wildlife and their habitats for the continuing benefit of people. Critical habitat areas cannot be disturbed without permission from the USFWS and other federal agencies, depending on land ownership. The USFWS also manages a system of land and waters for the conservation of wildlife and associated ecosystems. These National Wildlife Refuges are primarily managed for the preservation and protection of unique or important resources and ecosystems.

- ✓ **U.S. Army Corps of Engineers (USACE) -** The U.S. Army Corps of Engineers (USACE) is responsible for administration of Section 404 of the Clean Water Act (CWA), which governs specified activities in waters of the United States, including wetlands. In this role, the USACE requires that permits be obtained for projects whose plans would place structures, including dredged or filled materials, within navigable waters or wetlands, or result in alteration of such areas.

- ✓ **U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) -** The Natural Resources Conservation Service (NRCS) maps soils and farmland uses to provide comprehensive information necessary for understanding, managing, conserving and sustaining the nation's limited soil resources. One of the NRCS' responsibilities is to manage the Farmland Protection Program, which provides funds to aid in the purchase of development rights to keep productive

farmland in agricultural uses. Working through existing programs, USDA joins with state, tribal, and local governments, as necessary, to acquire conservation easements or other interests from landowners.

- ✓ **United States Environmental Protection Agency (EPA) -** The EPA is the primary federal agency charged with protecting human health and with safeguarding the natural environment: air, water, and land. EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. EPA is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Since 1970, the EPA has enacted numerous environmental laws including the Resource Conservation and Recovery Act (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); and the Toxic Substances Control Act (TSCA).

State Regulations

- ✓ **California Environmental Quality Act (CEQA) -** CEQA defines a significant impact on the environment as a substantial, or potentially substantial, adverse change in the physical conditions within the area affected by the Project. Land use is a required impact assessment category under CEQA. CEQA documents generally evaluate land use in terms of compatibility with the existing land uses and consistency with local general plans and other local land use controls (zoning, specific plans, etc.).

- ✓ **California Land Conservation Act of 1965 (Williamson Act) -** The Williamson Act is the only established program that directly involves state government in an administrative or fiscal capacity. The Act creates an arrangement (contract) whereby private landowners voluntarily restrict their land to agricultural and compatible open space uses under a rolling ten-year contract. In return parcels are assessed for property tax purpose at a rate consistent with their actual use, rather than potential market value.

- ✓ **California Endangered Species Act (CESA) -** The California Endangered Species Act prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species populations and their essential habitats.

- ✓ **State Public Park Preservation Act of 1971 -** The primary instrument for protecting and preserving parkland is the State Public Park Preservation Act of 1971 (Pub. Resources Code, §§ 5400–5409). Under the Act, cities and counties may not acquire any real property that is in use as a public park for

any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

- ✓ **Quimby Act -** The Quimby Act was established by the California State Legislature in 1965 and codified as California Government Code Section 66477. The Quimby Act allows the legislative body of a city or county, by ordinance, to require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative tract map or parcel map. Under the Quimby Act, requirements for parkland dedications are not to exceed three acres of parkland per 1,000 persons residing within a subdivision, and in-lieu fee payments shall not exceed the proportionate amount necessary to provide three acres of parkland, unless the amount of existing neighborhood and community parkland exceeds that limit.

- ✓ **Senate Bill 375 -** SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. The California Air Resources Board (CARB), in consultation with MPO's, will provide each affected region with reduction targets (based on 2005 levels) for per-capita GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

  This law also extends the minimum time period for the regional housing needs allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

State Agencies

- ✓ **California Department of Transportation (Caltrans) -** Caltrans' jurisdiction includes the rights-of-way associated with state and interstate routes within California. Any work performed within a federal or state transportation corridor is subject to Caltrans regulations governing allowable actions and modifications to the right-of-way. Caltrans issues encroachment permits on land within their jurisdiction to ensure encroachment is compatible with the primary uses of the State Highway System,

to ensure safety, and to protect the State's investment in the highway facility. The encroachment permit requirement applies to persons, corporations, cities, counties, utilities, and other government agencies.

- ✓ **California Department of Forestry and Fire Protection (CDF) -** The California Department of Forestry and Fire Protection (CDF) reviews and approves plans for timber harvesting on private lands. In addition, the CDF plays a role in planning development in forested areas as a part of its responsibility for fighting wild land fires.

- ✓ **California Department of Parks and Recreation (CDPR) -** The principal mission of the California Department of Parks and Recreation (CDPR) is to provide sites for a variety of recreational and outdoor activities to California residents and tourists. Natural resource management and protection is also a part of the mission of CDPR. Different park designations dictate the extent to which natural resources are a management priority; natural preserves, state parks, state reserves and state wilderness designations are terms, which indicate that an area has outstanding natural features. The CDPR is a trustee agency that owns and operates all state parks and participates in land use planning affecting state parkland.

- ✓ **California Department of Conservation -** In 1975, the Natural Resources Conservation Service (NRCS) began production of agricultural resource maps based on soil quality and land use. In 1982, the State of California created the Farmland Mapping and Monitoring Program within the California Department of Conservation to carry on the mapping activity from the NRCS on a continuing basis. The California Department of Conservation also administers the Williamson Act for the conservation of farmland and other resource-oriented laws. The Williamson Act is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Williamson Act contracts, also known as agricultural preserves, offer tax incentives for agricultural land preservation by ensuring that land will be assessed for its agricultural productivity rather than its highest and best uses.

- ✓ **State Lands Commission -** According to the State Lands Commission (SLC), when California was admitted to the Union, it acquired approximately 4 million acres of sovereign land underlying the State's navigable waterways, including the waters and underlying beds of rivers, lakes, streams, and sloughs. The SLC holds the lands subject to the Public Trust for commerce, navigation, fisheries, and open space preservation. The SLC has developed a list of State-owned and State Public Trust lands in Fresno County. This list is incorporated by reference.

- ✓ **California Department of Fish and Wildlife (CDFW)**

  The California Department of Fish and Wildlife (CDFW) is mandated to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. In particular, CDFW is required under the California Endangered Species Act, the California Native Plant Protection Act, the California Environmental Quality Act and the Natural Community Conservation Planning Act to conserve species through listing, habitat acquisition and protection, review of local land use planning, multi-species conservation planning, stewardship, recovery, research, and education. The CDFW protects rare, threatened and endangered species by managing habitats in legally designated ecological preserves or wildlife areas.

Local Controls

- ✓ **Local Agency Formation Commissions -** Under state law, each county must have a local agency formation commission (LAFCO). A LAFCO is the agency that carries responsibility for creating orderly local government boundaries, with the goal of encouraging "planned, well-ordered, efficient urban development patterns," the preservation of open space lands, and the discouragement of urban sprawl. A LAFCO typically consists of two county supervisors, two representatives of the county's cities, and one member of the public. Many LAFCOs also include one special district representative. While LAFCOs have no land use power, their actions determine which local government will be responsible for planning new areas.

  LAFCOs address a wide range of boundary actions, including creation of spheres of influence for cities, adjustments to boundaries of special districts, annexations, incorporations, detachments of areas from cities, and dissolutions of cities. The definition of a city's sphere of influence is frequently an indication of the city's ultimate boundaries. Since 1992, state law requires that incorporation of a new city must not financially harm the county and must result in a positive cash flow for the new city, a requirement that has slowed the rate of new city incorporation.

- ✓ **Airport Land Use Compatibility Plans -** State law encourages public access airports to develop Airport Land Use Compatibility Plans to be adopted by the County's Airport Land Use Commission (ALUC). The ALUC of Fresno County adopted the Fresno Yosemite International Airport Compatibility Land Use Plan in June 2012. The Plan provides guidance for ALUC review of proposed new airports and heliports, expansion and modification to these existing airports, and development of surrounding land uses.

- ✓ **San Joaquin Valley Blueprint Vision -** The San Joaquin Valley Blueprint plans for future population growth within the region. It displays a coordinated vision of Smart Growth principles related to land use, transportation, and resource planning. The Blueprint contains a discussion of the values and

visions as developed in consultation with public feedback, goals, objectives, and performance measures based on the values and visions, and preferred and alternative growth scenarios.

- ✓ **Land Conservation Trust -** Land conservation trust is another type of organization devoted to protecting open space, agricultural lands, wildlife habitats, and natural resource lands. A land trust is a nonprofit organization that, as all or part of its mission, actively works to conserve land by undertaking or assisting in land or conservation easement acquisition, or by its stewardship of such land or easements. There are approximately 80 established trusts in California. Local and regional land trusts, organized as charitable organizations under federal tax laws, are directly involved in conserving land for its natural, recreational, scenic, historical and productive values.

- ✓ **Local Control Mechanisms -** *General Plans:* The most comprehensive land use planning for the County is provided by city and county general plans, which local governments are required by state law to prepare as a guide for future development. The general plan contains goals and policies concerning topics that are mandated by state law and others, which the jurisdiction may have chosen to include. Required topics are land use, circulation, housing, conservation, open space, noise, and safety. Local governments frequently choose to address other topics, including public facilities, parks and recreation, community design, and growth management, among others. City and county general plans must be consistent with each other and County general plans must cover areas not included by city general plans (e.g., unincorporated areas). The 2014 RTP SCS was prepared considering the existing adopted and proposed draft general plans for each of the local jurisdictions. Table 3-63 provides a listing of those general plans that were considered during development of the RTP and SCS (SCS Scenario B) and the status of those general plans.

  Specific and Master Plans: Specific or Master Plans are sometimes developed by a city or county to address smaller, more specific areas within its jurisdiction. These more localized plans provide for focused guidance for developing a specific area and contain development standards tailored to the area, as well as systematic implementation of the general plan.

  Zoning: The zoning code for a city or county is a set of detailed requirements that implement the general plan policies at the level of the individual parcel. The zoning code presents standards for different uses and identifies uses that are allowed in the various zoning districts of the jurisdiction. Since 1971, state law has required the city or county zoning code to be consistent with the jurisdiction's general plan.

  Recreation and Parks Master Plans: These plans outline projected needs and strategies for fulfilling those needs. The main purpose of the plans is to provide guidance for addressing preservation, use, development, and administration of recreation facilities. These policy and action documents ensure the preservation of the naturalistic environment, while providing developments to facilitate human

enjoyment of the parks and recreation areas. Plans can target goals and future actions for a specific park or be generalized to a collection of parks in a larger system.

Bicycle, Pedestrian, and Trails Master Plans: Bicycle, Pedestrian, and Trails Master Plans are planning documents used to guide future development of a jurisdictions bicycle and pedestrian facilities. At a minimum these plans usually contain an inventory of existing facilities, a discussion of the plan's goals, recommendations for new projects, and an implementation plan.

TABLE 3-63
Adopted and Proposed General Plans

Member Agency	Adopted General Plan	Draft General Plans
Clovis	1993 General Plan	2035 General Plan Update
Coalinga	2025 General Plan	
Firebaugh	2030 General Plan	
Fowler	2025 General Plan	
Fresno	2025 General Plan	2035 General Plan Update
Huron	2025 General Plan	
Kerman	2027 General Plan	
Kingsburg	2025 General Plan	
Mendota	2025 General Plan	
Orange Cove	2025 General Plan	
Parlier	2030 General Plan	
Reedley	2030 General Plan	
San Joaquin	1995 General Plan	2040 General Plan Update
Sanger	2025 General Plan	
Selma	2035 General Plan	
Fresno County	2000 General Plan	2025 General Plan Update

Environmental Setting

Existing Land Use Within the Region

Land uses throughout the region, as adopted by local cities and counties, are depicted in the various General Plan Land Use Maps prepared, adopted, and on file with the cities and the County and incorporated by reference.

- ✓ **Residential Land Use**

  Fresno County includes the Cities of Fresno and Clovis in addition to other smaller communities. As one moves away from urban centers, parcel sizes tend to become larger and more dependent upon livestock and agriculture. Urban residential zones are typically located within the incorporated cities and allow small lots and relatively higher densities.

- ✓ **Commercial Land Use**

  Commercial zoning categories also represent an important land use classification within the County. Commercial zoning is typically found in the urban centers and in suburban developments near large residential concentrations in order to allow for the provision of goods and services.

- ✓ **Industrial/Special Classifications**

  Industrial areas are important to economic development in the County. Most of the industry uses are located within the urban and rural communities throughout the Fresno region with a major industrial area found in southwest Fresno along SR 99.

- ✓ **Airports**

  Airport areas are scattered around the County and are primarily located near or with the urban and rural communities. Most are public use airports that provide general aviation services. The largest airport is Fresno Yosemite International (FAT), which is located centrally in the region in the eastern section of the City of Fresno.

- ✓ **Agricultural**

  Agricultural areas are found throughout the region and represent the largest existing land use type in the County.

- ✓ **Open Space**

  Open space areas are primarily found in the eastern portion of the County and are primarily under the jurisdiction of the State and federal government and represent the second largest existing land use in the County.

- ✓ **Unincorporated Areas**

  Unincorporated areas of the County contain a population of approximately 167,918 persons, or 17.6 percent of Fresno County's total population. In addition to large State and federally owned areas, a number of unincorporated communities are located in Fresno County. These communities, as well as other unincorporated areas are governed by the Fresno County General Plan adopted in 2000.

- ✓ **Recreation and Parks**

  The Fresno County Parks Unit operates and maintains 16 Park and recreational areas (lakes, camp grounds, etc.) throughout the County. The City of Fresno maintains approximately 49 parks including 3 regional parks. The City of Clovis oversees and maintains 285 acres of City parks and landscaping. There are additional park and recreational areas throughout Fresno County in the other neighboring smaller communities.

- ✓ **Bicycle and Pedestrian Trails**

  There is a total of 134 miles of existing bikeways within the City of Fresno and the City of Clovis has approximately 56.4 miles of existing bikeways. Existing bikeways in the City of Clovis connect to the regional bikeway network through the City and County of Fresno. Key connections to the City of Fresno include Class II bike lanes on Shepherd Avenue, Teague Avenue, Alluvial Avenue, Sierra Avenue, Barstow Avenue, Ashlan Avenue, and Fowler Avenue. Fresno County has implemented a Regional Bicycle & Recreational Trails Master Plan, which is intended to, among others, offer citizens of Fresno County opportunities to increase bicycle ridership through awareness and participation and encourage community members to commute to work and school on a bicycle or pedestrian trail instead of motor vehicles.

Land uses within each city and the County are governed by general plans, which designate appropriate land uses throughout the jurisdiction and define specific goals, policies and objectives. In general, most plans recognize existing land uses and determine acceptable uses for future development of land currently used for agriculture or open space.

General plans consist of a number of elements, including land use, circulation, housing, conservation, open space, noise, and safety. The general plan must be comprehensive and internally consistent. Of particular importance is the consistency between the circulation and land use elements. The general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other public utilities and facilities must be consistent with the general distribution and intensity of land for housing, business, industry, open space, education, public areas, waste disposal facilities, agriculture, and other public and private uses. Tables 3-64 and 3-65 provide Year 2008/Current land use acreage.

Airport Land Use Commission

In each county containing a public use airport, an Airport Land Use Commission (ALUC) is required to assist local agencies in ensuring compatible land uses in the vicinity of existing or proposed airports; to coordinate planning at state, regional and local levels; to prepare and adopt an airport land use plan as required by Public Resources Code Section 21675; to review plans, regulations or locations of agencies and airport operators; and to review and make recommendations regarding the land uses, building heights, and other issues relating to air navigation safety and promotion of air commerce.

Fresno COG is designated as the agency responsible for carrying out functions of the Fresno County Airport Land Use Commission. The Commission's Airport Land Use Policy Plan provides the criteria for evaluating land use compatibility between proposed development in the vicinity of the County's public-use, general aviation airport facilities. There are a total of nine airports within the Fresno County region, in the cities of Fresno, Firebaugh, Mendota, Coalinga, and Reedley; and at Harris Ranch.

TABLE 3-64
Existing Acreage by Land Use Type in Fresno County

Land Use Type	2008 / Current Developed Acres
Agriculture	653,740
Open Space	115,404
Residential	99,644
Commercial	46,296
Airports	56

Source: Fresno COG, 2014

TABLE 3-65
Existing Acreage by Community Type in Fresno County

Community Type	2008 / Current Developed Acres
Urban Incorporated	63,324
Rural Incorporated	14,918
Rural Unincorporated	87,577

Source: Fresno COG, 2014

Future Land Use

It is anticipated that the future pattern of land uses will remain relatively constant at a countywide level. While urbanized areas will continue to increase in size, the number of acres utilized for development to accommodate the projected population increase is comparatively small. Tables 3-66 and 3-67 provides the dwelling unit and employment growth from Year 2008 to Year 2040. Table 3-66 provides the growth in housing types between 2008 and 2040. The housing types include single family homes (a single on a lot), townhomes (a home usually attached to other townhomes with a small footprint on multiple floors), and multi-family housing (apartment style units usually in housing complex). The cities of Fresno and Clovis will remain the predominant urban centers in Fresno County, with the other communities in the County representing a second tier of urban land use. The County's basic land use policy encourages the concentration of urban development in existing cities and infill of vacant land in urban areas to protect agricultural land, consistent with the 2014 RTP and SCS. For purposes of the 2014 RTP and SCS, focus of future growth and development consistent with the general plans was placed on the Fresno-Clovis Metropolitan Area with in-fill and increased densities along major corridors and within activity centers. Table 3-68 depicts development types that were used in the preferred RTP and SCS scenario for the Fresno County region.

The SCS encourages changes to the urban form that improve accessibility to transit, and create more compact development, thereby yielding a number of transportation benefits to the region. These include reductions in travel time, vehicle miles traveled (VMT), vehicle hours traveled (VHT), and vehicle hours of delay. The SCS only shows how future growth and development would be allocated to planned growth areas consistent with the general plans of the cities and the County of Fresno.

TABLE 3-66
Housing Growth from Year 2008 to Year 2040

Dwelling Unit Type	Year 2008 to 2040 Housing Growth (Dwelling Units by Type)
Single-Family	86,064
Town Home	12,866
Multi-Family	50,690

Source: Fresno COG, 2014

TABLE 3-67
Employment Growth from Year 2008 to Year 2040

Employment Type	Year 2008 to 2040 Employment Growth (Employees by Type)
Retail	31,533
Office	57,204
Industrial	14,558

Source: Fresno COG, 2014

TABLE 3-68
Development Types for Proposed Project

Development Types	Vacant Gross Density		Redev Gross Density		Housing Mix					Employment Mix		
					Housing Unit Percent By Type					Employee Percent By Type		
	Housing Units / Gross acre	Jobs / Gross acre	Housing Units / Gross acre	Jobs / Gross acre	Multi-Family	Town Home	Single Family	Small Lot Single Family	Large Lot Single Family	Retail	Office	Industrial
Town Center	19.75	50.00	16.79	42.50	100.00%	-	-	-	-	27.32%	72.68%	-
Neighborhood Center	13.34	19.31	10.01	14.48	89.08%	10.92%	-	-	-	50.58%	49.42%	-
Town Neighborhood	11.69	2.42	5.85	1.21	55.64%	13.65%	30.72%	20.28%	10.44%	72.51%	27.49%	-
Mixed-Use Corridor	14.27	37.51	9.27	24.38	100.00%	-	-	-	-	29.28%	70.72%	-
Main Street	6.27	32.04	3.14	16.02	100.00%	-	-	-	-	57.81%	42.19%	-
Office Park	-	33.84	-	8.46	-	-	-	-	-	9.69%	80.93%	9.38%
Suburban Office	-	19.14	-	3.83	-	-	-	-	-	4.88%	79.49%	15.63%
Activity Center	-	19.05	-	4.76	-	-	-	-	-	58.12%	39.35%	2.53%
Arterial Commercial	-	12.94	-	1.94	-	-	-	-	-	100.00%	-	-
Regional Retail	-	10.56	-	2.11	-	-	-	-	-	100.00%	-	-
Educational	-	2.98	-	2.98	-	-	-	-	-	-	100.00%	-
Institutional	-	2.56	-	1.54	-	-	-	-	-	2.86%	97.14%	-
Urban Multi-family	38.99	9.53	-	2.38	100.00%	-	-	-	-	0.30%	21.08%	78.63%
Suburban Multi-family	22.48	-	11.24	-	100.00%	-	-	-	-	-	-	-
Compact Neighborhood Hi	14.00	-	3.50	-	46.27%	31.14%	22.60%	22.60%	-	-	-	-
Compact Neighborhood	8.60	-	3.01	-	-	15.86%	84.14%	76.52%	7.62%	-	-	-
Suburban Residential	3.86	-	-	-	-	-	100.00%	11.81%	88.19%	-	-	-
Large Lot Residential	2.08	-	-	-	-	-	100.00%	-	100.00%	-	-	-
Rural Residential	0.49	-	-	-	-	-	100.00%	-	100.00%	-	-	-

Source: Fresno COG, 2014

✓ **Town Center**

(Avg. Density: 16-19 HU/acre, 42-50 jobs/acre)

Town Centers are the highest-intensity development type used in the SCS for the Fresno County region. The best examples of this development type would be central Downtown Fresno. They are employment centric, though they also provide multi-family housing opportunities located very close to jobs and services. Buildings are typically 5 stories or less. Such communities are highly walkable and benefit from high-capacity transit and bus facilities.

✓ **Neighborhood Center**

(Avg. Density: 10-14 HU/acre, 14-20 jobs/acre)

Neighborhood Centers serve as a walkable center for small community or neighborhood services including retail and offices. Buildings are about two to three stories tall and can include mixed uses,

including live-work developments. This development type also includes residential development such as duplexes and townhouses.

- ✓ **Town Neighborhood**
  Avg. Density: 5-12 HU/acre, 1-3 jobs/acre)
  Downtown Neighborhoods include areas with apartments, condos, and townhouses. There may be some mixed use buildings with retail on the ground floor. Street connectivity is relatively favorable, allowing for a walkable environment and transit options.

- ✓ **Mixed Use Corridor**
  (Avg. Density: 9-15 HU/acre, 24-38 jobs/acre)
  Mixed Use Corridor refers to a mix of new and older development in a linear fashion along corridors that are often served by transit. They are usually pedestrian-oriented with a mix of housing, retail and office amenities.

- ✓ **Main Street**
  (Avg. Density: 3-7 HU/acre, 16-33 jobs/acre)
  Main Streets include a mix of uses and interconnected street network. Main Streets primarily function as service destinations rather than centers of employment. Buildings typically stand one to three stories tall and include townhouses or apartments above storefronts.

- ✓ **Office Park**
  (Avg. Density: 8-34 jobs/acre)
  Office Parks are comprised of low to medium density office buildings surrounded by surface parking. Generally located near highways for easy auto-access, transit and walking options are limited. Office parks lack residential or retail uses.

- ✓ **Suburban Office**
  (Avg. Density: 3-20 jobs/acre)
  Suburban Office complexes generally contain low-density, single-story office buildings, and can be found in suburban areas. The development type is on average about half the density of Office Park.

- ✓ **Activity Center**
  (Avg. Density: 4-20 jobs/acre)
  Activity centers include an agglomeration of large-scale retail buildings, office buildings and multifamily housing. Land uses are separated from each other by parking areas, freeways or arterials. Activity centers are usually positioned at intersections of highways or arterials, sometimes along major transit corridors.

- ✓ **Arterial Commercial**
  (Avg. Density: 1-13 jobs/acre)
  Arterial commercial development takes a linear form along both sides of a major road or highway. Connections in this development type consist mostly of highways and frontage roads.

- ✓ **Regional Retail**
  (Avg. Density: 2-11 jobs/acre)
  Regional Retail development is generally characterized by low-density commercial such as pharmacies, grocery stores, and large format retail. It lacks any residential use.

- ✓ **Educational**
  (Avg. Density: 2-3 jobs/acre)
  Educational development refers to schools, universities, and other learning institutions. Such campuses generally contain significant amounts of open space or parks for recreational use.

- ✓ **Institutional**
  (Avg. Density: 1-3 jobs/acre)
  The Institutional development type can contain a mix of government and quasi-government uses, such as museums, government facilities, and the like. Such campuses are often low-density office and educational.

- ✓ **Industrial**
  (Avg. Density: 2-10 jobs/acre)
  The Industrial development type is made up of a mix of low and medium density industrial buildings. This type often consists of industrial yards and campuses separate from other uses due to the nature of the industrial use. This development type is often near highways with large surface parking for autos and trucks.

- ✓ **Urban Multifamily**
  (Avg. Density: up to 39 HU/acre)
  Urban Multifamily is characterized by high-density apartment complexes located in central urbanized areas and city centers. Units are generally small, multifamily rental dwellings. Buildings are typically no more than 4 stories.

- ✓ **Suburban Multifamily**
  (Avg. Density: 11-23 HU/acre)
  Suburban Multifamily development refers to medium-high density apartment complexes located in suburban areas. Buildings can be multi-storied but are characterized by single story dwellings. Such

development can accommodate on average about half the number of units per acre as Urban Multifamily.

- ✓ **Compact Neighborhood High**
  (Avg. Density: 3-14 HU/acre)
  This development type can contain a mix of residential uses, including single-story multifamily rentals, attached single-family units such as duplexes and townhomes, and small-lot urban single-family units.

- ✓ **Compact Neighborhood**
  (Avg. Density: 3-9 HU/acre)
  Compact Neighborhoods are medium-density residential areas comprised of small lot single-family dwellings, townhomes and duplexes. Street connectivity is relatively favorable, allowing for a walkable environment and transit options.

- ✓ **Suburban Residential**
  (Avg. Density: less than 4 HU/acre)
  Suburban residential includes a mix of single-family, detached homes. Street networks include many cul-de-sacs, which is typical of post-World War II suburbs. Suburban residential areas are designed for automobile travel. Street connectivity and walkability are generally low.

- ✓ **Large-Lot Residential**
  (Avg. Density: less than 3 HU/acre)
  Large-lot residential subdivisions consist entirely of single-family, detached homes. Large-lot subdivisions are typically isolated or far from employment and retail services. With one acre lots and larger, this development type is characterized by very large residences without sidewalks. Travel to and from destinations is usually by automobile.

- ✓ **Rural Residential**
  (Avg. Density: less than 1 HU/acre)
  Such development consists of detached single-family dwellings on large, rural lots. Rural residential lots are on average four times the size of those in Large-Lot Residential, and can be several miles from the nearest town or community center.

Methodology

Those uses most likely to be affected by the construction and implementation of transportation and related projects are the focus of this land use analysis. Land use impacts are evaluated by identifying the particular type of land use that could be affected by the projects. Because of the comprehensive land use

planning information available in them, the general plans for cities and counties were used to identify projected land uses.

Information contained in the general plans of cities and counties were the basis of the evaluation of potential impacts to agricultural and open space areas within the region. In addition to these resources, information from the California Department of Conservation was used to identify potential impacts to agricultural areas.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Criteria for Significance

In order to determine potentially significant land use impacts resulting from the RTP, the following significance criteria were used. The RTP projects would produce significant adverse land use impacts if the following circumstances occurred:

- ✓ Physically divide an established community.
- ✓ Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- ✓ Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- ✓ Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact 3.12.1 – Physically divide a community

The 2014 RTP and SCS would have a potentially significant impact if it would physically divide an established community. For the purposes of this Draft EIR, established communities are defined as incorporated cities and unincorporated communities in Fresno County. Impacts resulting from the construction of alternative transportation routes or future land use developments may potentially occur, as well as impacts resulting from the designation of new areas of open space that would create a physical separation between established community areas and/or restrict access between such areas. The 2014 RTP and SCS focusses growth and development to the existing cities and communities within the County based upon the adopted or draft general, specific and community plans (reference Table 3-63). As such, the potential to physically divide a community is not expected and the RTP would not be in conflict with existing or draft general plan policies.

Mitigation Measures

The specific impacts on land use and planning will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Individual transportation and future land use development projects will be consistent with local transportation system and land use plans and policies that designate areas for urban land use and transportation improvements, as identified by the agency with jurisdiction over said land(s).

- ✓ Prior to final approval of each individual transportation improvement project and future land use development project, the implementing agency will conduct the appropriate transportation improvement project-specific and future land use development-specific environmental review, to address impacts from land use and transportation system projects that may physically divide a community.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts that may physically divide a community, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.12.2 – Land use impacts

The Project is in-line with current implementation agencies' adopted land use plans; however, should an agency make changes that reflect a differing development pattern, the Project could then have the potential to conflict with applicable adopted local land use plans and policies. Most of the improvement projects submitted for inclusion in the RTP, are developed through a local review process that involves local jurisdictions working with Fresno COG. In addition, the SCS scenario was developed considering the

existing and proposed general plans for each of the local jurisdictions within the County. Table 3-63 provides a listing of the general plans within Fresno County and their status. As shown, all but four of the general plans considered during development of the SCS were adopted. Fresno COG staff worked closely with the other four jurisdictions to develop the SCS to ensure consistency with draft general plan land use designations, transportation systems, and general plan update policies.

Strategies aimed at addressing the transportation needs and future growth patterns were considered during development of the proposed RTP and SCS. The document promotes alternatives to the automobile such as transit and other alternative modes of transportation such as bicycle facilities, trails, airport improvements, and others. In addition, the SCS includes a land use allocation process that provides for increased densities in support of alternative transportation systems. Implementation of strategies proposed in the RTP and SCS could result in positive changes to land uses. This would be considered a beneficial impact.

Implementation of transit improvements included in the Plan could influence land use patterns throughout the region as reflected in the SCS. Land use and transportation policies are emphasized in the RTP and SCS in order to address automobile traffic, and air quality and greenhouse gas emissions concerns. Growth patterns that promote alternatives to the automobile by creating mixed-use developments, which would include residences, shops, parks, and civic institutions, linked to pedestrian-and-bicycle friendly public transportation centers, are also discussed in the RTP and SCS. The program will establish transportation facilities in future land use developments to increase transit use and encourage higher density and mixed land use planning. Design features, such as improved street connectivity, public amenities, and a concentration of residences and jobs in proximity to transit routes could be incorporated into mixed-use developments; therefore, reducing automobile traffic and air quality concerns. Implementation of enhanced alternative modes as provided by the RTP could result in more balanced land use conditions throughout the region as reflected in the SCS, as the mixed-use developments would result in a concentration of jobs and residences in close proximity to one another thus reducing commuter-related VMT. The RTP encourages higher density and mixed-use developments, which in turn, creates a better job to housing ratio. As shown in Table 3-68 above, the Town Center land use is the highest-intensity development type used in the SCS for the Fresno County region. This type of land use is employment centric and provides jobs and services to the multi-family housing opportunities that are also incorporated within the land use.

While the RTP is likely to result in a positive outcome related to supportive land use conditions for alternative forms of transportation such as transit, other improvement projects and future land use developments in the RTP and SCS could have significant impacts on land use patterns, land use growth and development. This impact could be especially significant on recreational, open space, agricultural, and other land uses within the County.

Mitigation Measures

The specific impacts on land use and planning will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Individual transportation and future land use development projects will be consistent with local land use plans and policies that designate areas for urban and rural land use and preserve recreational, open space, and other lands.

- ✓ Prior to final approval of each individual improvement project and future land use development project, the implementing agency will conduct the appropriate transportation improvement project-specific and future land use development-specific environmental review, including consideration of potential land use impacts.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce land use impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.12.3 – Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated

Construction and implementation of projects and future land use developments would result in the loss of open space and community recreation areas. This would be considered a potentially significant impact. Pockets of open space vary in size and location throughout the County and within the cities. Open space land uses include agricultural areas, public parks, recreational facilities, and areas planned for such uses.

The Project includes highway, arterial, transit and future land use developments proposed to be located in or adjacent to areas designated for open space. The potential for significant impacts to natural habitats and community recreation exists, since these projects and future land use developments may be constructed in areas that have habitat and recreational value. Development of RTP and SCS-related projects and programs could result in the disturbance or loss of open space and recreational resources. Specifically, future improvement and land use development projects involving construction would be most likely to result in impacts to open space areas.

Mitigation Measures

The specific impacts on recreation will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Project and future land use development implementation agencies will ensure that projects and future land use developments are consistent with federal, state, and local plans that preserve open space and recreation.

- ✓ Project and future land use development implementation agencies should identify open space and recreation areas that could be preserved and will include mitigation measures (such as dedication or payment of in-lieu fees) for the loss of open space.

- ✓ Prior to final approval of each individual improvement and future land use development project, the implementing agency will conduct the appropriate improvement project- and land use development-specific environmental review, including consideration of loss of open space and recreation.
- ✓ For projects that require approval or funding by the U.S. Department of Transportation, project implementation agencies will comply with Section 4(f) of the U.S. Department of Transportation Act.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on existing neighborhood and regional parks or other recreational facilities, it is probable that such impacts could remain significant and unavoidable. As a

program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.12.4 – Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

Household size in Fresno County is projected to increase from approximately 3.1298 persons per household in 2008 to approximately 3.3515 in 2035. The projections indicate that population in the Fresno region is expected to grow by almost 400,000 people between 2010 and 2040. Total population in the Fresno region in 2040 is projected to be just under 1.4 million. The 2014 RTP/SCS includes approximately 209 bicycle and pedestrian projects, which represents approximately 14.2% of the Project's proposed by the RTP. Though the Project will create additional recreational facilities along the Fresno County bike and pedestrian network, the Project will increase population in areas without ample park space, thus resulting in increased use and deterioration of existing neighborhood and regional parks.

Mitigation Measures

The specific impacts on recreation will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Project and future transportation development implementation agencies should ensure that projects and future land use developments are consistent with federal, state, and local plans that preserve open space and recreation.

- ✓ Project and future transportation development implementation agencies should identify open space and recreation areas that could be preserved and should consider mitigation measures for the loss of open space.

- ✓ Prior to final approval of each individual transportation improvement and future land use development project, the implementing agency should conduct the appropriate improvement project- and land use development-specific environmental review, including consideration of loss of open space and recreation.

- ✓ Project and future transportation development implementation agencies should conduct the appropriate project-specific environmental review, including consideration of loss of open space. Potential significant impacts to open space should be mitigated, as feasible. The project sponsors or local jurisdiction can and should be responsible for ensuring adherence to the mitigation measures prior to construction.

- ✓ For projects that require approval or funding by the U.S. Department of Transportation, project implementation agencies will comply with Section 4(f) of the U.S. Department of Transportation Act.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on recreational facilities or require the construction or expansion of recreational facilities, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce impacts identified.

3.13 NOISE

This section provides information about the effects of noise from the Project (2014 RTP and SCS). The methodology and the criteria used to evaluate the significance of noise-related impacts as well as mitigation measures are discussed.

Regulatory Setting

In general, the federal government sets noise standards for transportation noise sources that are related to interstate commerce. These typically include aircraft, trains, and trucks. State governments establish noise standards for those sources not regulated by federal standards such as automobiles, light trucks, motor boats and motorcycles. Other noise sources associated with construction, as well as industrial, and commercial activities are usually regulated by noise ordinances and general plan policies, which are established by local jurisdictions.

Federal Regulations

The Federal Highway Administration (FHWA) has established noise abatement criteria that must be considered for the design of federal or federally funded highway projects. Federal regulations also set noise limits for medium and heavy trucks (over 4.5 gross tons). The federal standard for truck pass by noise at 15 meters (50 feet) is 80 dB. These standards are implemented through federal regulatory controls on truck manufacturers. Noise generated from aircraft operated in the United States is also subject to federal regulation, which is established by the Federal Aviation Administration (FAA). Aircraft manufacturers must comply with these regulations prior to certification of the aircraft. Similarly, locomotives are also subject to federal standards.

Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) provides procedures for conducting highway project noise studies and implementing noise abatement measures to help protect the public health and welfare, supply Noise Abatement Criteria (NAC), and establish requirements for information to be given to local officials for use in planning and designing highways. Under this regulation, noise abatement must be considered for a Type I project if the project is predicted to result in a traffic noise impact. A traffic noise impact is considered to occur when the project results in a substantial noise increase or when the predicted noise levels approach or exceed the NAC specified in the regulation.

Title 23, Part 772 of the Code of Federal Regulations does not specifically define what constitutes a substantial increase or the term approach; rather, it leaves interpretation of these terms to the states. In California, a noise level is considered to approach the NAC for a given activity category if it is within 1 dBA of the NAC. A substantial noise increase is considered to occur when the project's predicted worst-hour design-year noise level exceeds the existing worst-hour noise level exceeds the existing worst-hour noise level by 12 dBA or more. Before adoption of a final environmental document, Caltrans shall identify noise

abatement measures that are feasible and reasonable as well as noise impacts for which no apparent solution is available. Noise abatement measures that are feasible and reasonable are then incorporated into the project's plans and specifications to reduce or eliminate the noise impact on existing activities, developed lands, or undeveloped lands for which development is planned, designed, and programmed. Table 3-69 summarizes the NAC.

- ✓ **Federal Aviation Administration (FAA)**

  Aircraft operated in the U.S. are subject to certain federal requirements regarding noise emissions levels. These requirements are set forth in Title 14 CFR, Part 36. Part 36 establishes maximum acceptable noise levels for specific aircraft types, taking into account the model year, aircraft weight, and number of engines. Pursuant to the federal Airport Noise and Capacity Act of 1990, the FAA established a schedule for complete transition to Part 36 "Stage 3" standards by year 2000. This transition schedule applies to jet aircraft with a maximum takeoff weight in excess of 75,000 pounds, and thus applies to passenger and cargo airlines, but not to operators of business jets or other general aviation aircraft.

  Although the National Environmental Policy Act (NEPA) does not establish specific noise standards, the noise impacts of projects are routinely considered as one of the potential environmental consequences of federal actions subject to NEPA.

- ✓ **Federal Vibration Policies**

  The Federal Highway Administration (FHWA) is responsible for noise standards associated with federally funded highway projects and for establishing procedures to evaluate these noise impacts to determine whether the impacts warrant noise abatement actions. The noise abatement criteria is based on worst hourly Leq sound levels. The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. The FRA establishes noise standards for federally funded transit projects and the FTA establishes noise standards for federally funded rail projects. According to the FRA, fragile buildings can be exposed to groundborne vibration levels of 0.5 PPV without experiencing structural damage. The FTA has identified the human annoyance response to vibration levels as 80 VdB.

TABLE 3-69
Noise Abatement Criteria

Activity Category	Activity $L_{eq}[h]$[1]	Evaluation Location	Description of Activities
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an importatnt public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	Exterior	Residential.
C[2]	67	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meetings rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meetings rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F			Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G			Undeveloped lands that are not permitted.

1 The Leq[h] activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibles (dBA).
2 Includes undeveloped lands permitted for this activity category.
Source: 23CFR772

✓ U.S. Environmental Protection Agency

The Noise Pollution and Abatement Act of 1972 established a federal program for regulating noise pollution that could endanger the public health. The U.S. Environmental Protection Agency (U.S. EPA) was given the responsibility of over-seeing federal research and activities related to noise control as well as coordinating its programs with other federal agencies. The program lost its funding in 1981 and the regulation of noise pollution and standards has mainly become the responsibility of State and local agencies. However, the U.S. EPA is still responsible for coordinating the programs of all federal agencies and dealing with noise standards related to commerce.

✓ Department of Housing and Urban Development

The Department of Housing and Urban Development (HUD) seeks to create quality affordable housing for all Americans and uses their platform to improve the quality of life. To achieve their goals and

fulfill their mission, HUD has established its own exterior noise criteria for evaluating projects located in high noise areas (e.g. near an airport, road, or railroad).

HUD's exterior noise criterion states that 65 dBA DNL noise levels or less are satisfactory for residential land uses. HUD's criterion do not include standards for interior noise levels, but it is assumed that current construction/building code will provide sufficient attenuation such that, if the exterior noise level is 65 dBA DNL or less, the interior level will be 45 dBA DNL or less.

State Regulations

The State sets standards for light trucks (less than 4.5 gross tons), passenger cars, and other motor vehicles as identified in the California Motor Vehicle Code. The State of California has also established additional noise standards to regulate freeway noise affecting schools and classrooms. Furthermore, the State has adopted noise insulation standards for multi-family residential units, hotels, and motels that are in areas subject to high levels of transportation-related noise.

✓ **California's Airport Noise Standards**

The State of California has the authority to establish regulations requiring airports to address aircraft noise impacts on land uses in their vicinities. The State of California's Airport Noise Standards, found in Title 21 of the *California Code of Regulations*, identify a noise exposure level of CNEL 65 dB as the noise impact boundary around airports. Within the noise impact boundary, airport proprietors are required to ensure that all land uses are compatible with the aircraft noise environment or the airport proprietor must secure a variance from the California Department of Transportation.

✓ **California Department of Transportation (Caltrans)**

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State passby standard is consistent with the federal limit of 80 dB. The State passby standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline. For new roadway projects, Caltrans employs the Noise Abatement Criteria, discussed above in connection with FHWA.

✓ **State of California General Plan Guidelines**

The State of California General Plan Guidelines include recommended guidelines for noise elements of city and county general plans, and compliance is not required. However, many local agencies do base their noise elements on these guidelines which vary by land use type and are helpful when determining land use compatibility.

✓

✓ **California Noise Insulation Standards**

The California Noise Insulation Standards found in the California Code of Regulations, Title 24, set requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation-related noise. For exterior noise, the noise insulation standard is DNL 45 dB in any habitable room and requires an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB.

✓ **State Vibration Policies**

There are no adopted state policies or standards for ground-borne vibration. However, Caltrans recommends that extreme care be taken when sustained pile driving occurs within 7.5 meters (25 feet) of any building, and 15 to 30 meters (50 to 100 feet) of a historic building or a building in poor condition.

Local Regulations

The noise element and local noise ordinances are the two primary documents that local jurisdictions use to set noise standards in their community. A noise element is a required component of each jurisdiction's General Plan. The noise element is required to analyze the current and future noise levels associated with local noise sources, such as freeways and highways, major streets and arterials, rail operations, aviation activities and local industrial plants and develop noise contours for these sources using CNEL or Ldn.

The noise element also includes implementation measures and possible solutions for existing and potential noise problems. The noise elements of the cities and the County typically apply land use compatibility criteria of 60-65 dB Ldn as being normally acceptable for new residential developments affected by transportation noise sources. The intent of these standards is to provide an acceptable noise environment for outdoor activities. In addition, an interior noise level criterion of 45 dB Ldn is commonly applied to residential land uses. The intent of this standard is to provide a suitable environment for indoor communication and sleep. These criteria are consistent with the interior and exterior noise level standards applied by the Federal Department of Housing and Urban Development (HUD).

The above-described noise standards are commonly applied to new residential projects affected by transportation noise sources, rather than the increase in traffic noise levels resulting from regional growth, such as in this study. Nonetheless, the local noise criteria are included to provide a frame of reference by which the magnitude of existing and future traffic noise levels can be compared.

Major Noise Sources in Fresno County

Noise sources are commonly grouped into two major categories: transportation and non-transportation noise sources. Transportation noise sources include surface traffic on public roadways, railroad line operations, and aircraft in flight. Non-transportation (or fixed), noise sources, commonly consist of industrial activities, railroad yard activities, small mechanical devices (lawnmowers, leaf blowers, air conditioners, radios, etc.), and other sources not included in the traffic, railroad and aircraft category.

✓ Traffic Noise

The ambient noise environment in Fresno County is defined by a wide variety of noise sources. The most pervasive source of noise in the region is traffic noise. With thousands of miles of roadways in the County, it is difficult to escape the sound of traffic. Traffic noise exposure is mainly a function of the number of vehicles on a given roadway per day, the speed of those vehicles, the percentage of medium and heavy trucks in the traffic volume, and the receiver's proximity to the roadway. Every vehicle passage on every roadway in the region radiates noise.

Existing high noise levels along major streets and highways are generally caused by traffic and congestion. Potential impacts along these facilities are generally classified as follows:

- Low - L_{dn} 59 dB or below
- Moderate - L_{dn} 60 dB to 65 dB
- High - L_{dn} 66 dB or greater

The potential for adverse noise impacts is generally moderate to high along most segments of State highways, and is generally low to moderate along most segments of County streets and highways.

✓ Rail Noise

The region is also affected by freight and passenger railroad operations. While these operations generate significant noise levels in the immediate vicinity of the railroad tracks during train passages, these operations are intermittent and the tracks are widely dispersed throughout the region. For these reasons, the contribution of railroad noise to the overall ambient noise environment in the County is relatively small.

The two main line rail operations in Fresno County are the Union Pacific Transportation Company (UP) and the Burlington, Northern and Santa Fe (BNSF). Numerous freight train operations per day occur on the UP and BNSF lines that extend from their respective yards in Fresno to points north and south of the County. Seven (7) northbound and seven (7) southbound passenger rail operations occur each day on the BNSF lines.

High noise impacts can be expected within approximately 100 feet of the main line railroad tracks, moderate impacts from 100-700 feet, and low impacts at distances greater than about 700 feet. The above-noted impacts may be lesser or greater depending on site-specific factors such as soundwalls, grade crossings and topographic shielding. Insignificant noise impacts can be expected adjacent to the several branch lines in Fresno County.

✓ **Airport Noise**

Fresno County is home to many airports, including public, private and military airports. In addition to the numerous daily aircraft operations, which originate and terminate at these airports daily, over flights of the area by aircraft not utilizing the regional airports frequently, occur. All of these operations contribute in some degree to the overall ambient noise environment in the County. The intensity of aircraft noise exposure depends on one's proximity to the aircraft flight path, the type, speed, and altitude of airplane, as well as atmospheric conditions. The farther away the noise source is, the more the sound propagation from source to receiver is affected by weather.

There are nine (9) public use airport facilities in Fresno County. These include the Fresno-Yosemite International Airport, Fresno Chandler Downtown Airport, Coalinga Airport, Firebaugh Municipal Airport, Mendota Municipal Airport, Reedley Municipal Airport, Harris Ranch Airport, Selma Aerodrome, and Sierra Sky Park Airport. Airport noise contours have been established for all airport facilities in the County and are consistent with the Federal Aviation Administration (FAA) Integrated Noise Model. In addition, noise contours for existing and future conditions at each of the airports are contained in plans or studies, including: Airport Master Plans, Airport Land Use Compatibility Plan, Comprehensive Airport Land Use Plans, Airspace Plans, and Airport Layout Plans, which are all incorporated by reference. Each of these plans or studies includes implementation goals, objectives, and policies and/or recommendations to lessen noise impacts.

✓ **Land Use Development Noise Sources**

There is a wide variety of industrial and other non-transportation noise sources in the County, including heavy industrial or manufacturing operations, power plants, food packaging and processing facilities, lumber mills, aggregate mining and processing plants, race tracks, shooting ranges, amphitheaters, and car washes, to name a few. Noise generated by these sources varies significantly, but can provide a greater contribution to the local ambient noise environment than traffic, depending on the nature of the noise source. Although non-transportation noise sources can define the ambient noise environment within a given distance to the noise source, the regional ambient noise environment is, nonetheless, defined primarily by traffic.

Environmental Setting

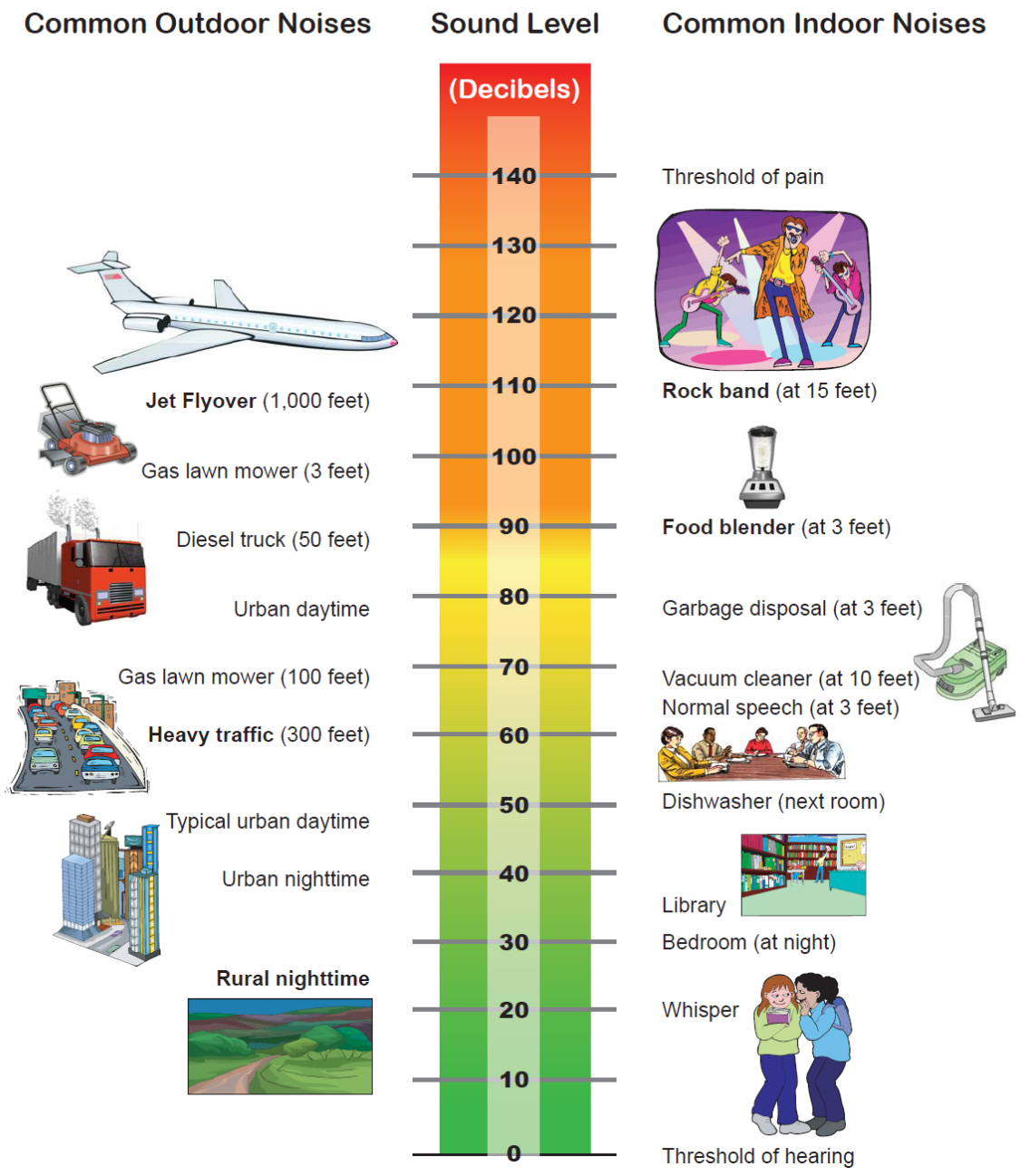
Noise is often described as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. Researchers have generally agreed that A-weighted sound pressure levels (sound levels) are well correlated with subjective reaction to noise. Variations in sound levels over time are represented by statistical descriptors, and by time-weighted composite noise metrics such as the Day/Night Average Level (Ldn). The unit of sound level measurement is the decibel (dB), sometimes expressed as dBA. Throughout this analysis, A-weighted sound pressure levels will be used to describe traffic and other noise sources. Typical indoor and outdoor noise levels are presented in Figure 3-15 (Common Environmental Sound Levels).

The following noise descriptors are used throughout section:

- ✓ Day-Night Average Noise Level (Ldn). Ldn is the average equivalent sound level during a 24-hour day, obtained after addition often decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
- ✓ Energy-Equivalent Noise Level (Leq). Leq is the sound level containing the same total energy as a time varying signal over a given sample period. Leq is typically computed over 1, 8 and 24-hour sample periods.
- ✓ Community Noise Equivalent Level (CNEL). CNEL is the average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7 p.m. to 10p.m. and ten decibels to sound levels in the night before 7 a.m. and after 10 p.m.
- ✓ Decibel (dBA). A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micro-newtons per square meter).

Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and hence, are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called hertz (Hz) by international agreement. The speed of sound in air is approximately 770 miles per hour, or 1,130 feet/second. Knowing the speed and frequency of a sound, one may calculate its wavelength; the physical distance in air from one compression of the atmosphere to the next. An understanding of wavelength is useful in evaluating the effectiveness of physical noise control devices such as mufflers and barriers, which depend upon either absorbing or blocking sound waves to reduce sound levels. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold of 20 micropascals as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range.

FIGURE 3-15
Common Environmental Sound Levels



The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighting the frequency response of a sound level measurement device (called a sound level meter) by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as sound levels in dB) and community response to noise. For this reason, the A-weighted sound pressure level has become the standard tool of environmental noise assessment.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment.

A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptors such as Ldn, and shows very good correlation with community response to noise.
The CNEL, like Ldn, is based upon the weighted average hourly Leq over a 24-hour day, except that an additional +4.8 decibel penalty is applied to evening (7:00 p.m. to 10:00 p.m.) hourly Leq values. The CNEL was developed for the California Airport Noise Regulations, and is applied specifically to airport/aircraft noise assessment. For this reason, the Ldn descriptor, rather than CNEL, is used for the assessment of traffic noise levels in the County.

Noise in the community has often been cited as being a health problem, not in terms of actual damage such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being are the bases for land use planning policies preventing exposure to excessive community noise levels.

To control noise from fixed sources, which have developed from processes other than zoning or land use planning, many jurisdictions have adopted community noise control ordinances. Such ordinances are intended to abate noise nuisances and to control noise from existing sources. They may also be used as performance standards to judge the creation of a potential nuisance, or potential encroachment of sensitive uses upon noise-producing facilities. Community noise control ordinances are generally designed to resolve noise problems on a short-term basis (usually by means of hourly noise level criteria), rather than on the basis of 24-hour or annual cumulative noise exposures.

Noise ordinance criteria are not applicable to traffic on public roadways. However, General Plan Noise Elements provide noise standards for new noise-sensitive land uses affected by transportation noise sources. General Plan Noise Elements frequently contain general noise mitigation measures for use in reducing the potential for adverse noise impacts associated with the development of new noise-sensitive or noise-producing land uses.

For new noise-sensitive land uses affected by transportation noise sources, many jurisdictions consider land use compatibility criteria of 60 to 65 dB Ldn as being “normally acceptable” for such uses. Typical options for mitigation of excessive traffic noise levels include the use of setbacks or buffer areas between the roadways and the proposed noise-sensitive land use, noise barriers, residential unit design and improvements to building facade construction. Because many rural residential areas experience very low noise levels, residents may express concern about the loss of "peace and quiet" due to the introduction of a sound, which was not audible previously. In very quiet environments, the introduction of virtually any change in local activities will cause an increase in noise levels. A change in noise level and the loss of "peace and quiet" is the inevitable result of land use or activity changes in such areas. Audibility of a new noise source or increases in noise levels within recognized acceptable limits are not usually considered to be significant noise impacts, but these concerns should be addressed and considered in the planning and environmental review processes.

Vibration Characteristics and Effects

Groundborne vibration is the oscillatory motion of the ground above some equilibrium condition that could be described in terms of displacement, velocity, or acceleration. Because sensitivity to vibration typically corresponds to the amplitude of vibrating velocity within the low-frequency range (e.g., 5 to 100 Hertz), velocity changes are the preferred measure for evaluating groundborne vibration.

The most common measure used to quantify vibration amplitude is the Peak Particle Velocity (PPV). PPV is typically used in monitoring blasting and other types of construction-generated vibration, since it is related to the stresses experienced by building components. Although PPV is appropriate for evaluating building damage, it is less suitable for evaluating human response, which is better related to the average vibration amplitude. Therefore, groundborne vibration from equipment (e.g., trains, subways, earthmovers, graders, and bull dozers) is usually characterized in terms of the smoothed root mean square (rms) vibration velocity level. This is expressed in velocity decibels (VdB). VdB values are expressed in inches per second. The VdB is used to avoid confusion with sound decibels.

Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. The most common exterior sources of ground vibration that can be noticeable to humans inside residences include constructions activities, train operations, and street traffic. Table 3-70 provides some common sources of ground vibration and the relationship to human

perception. This information comes from the Federal Transit Administration's "Basic Ground-Bourne Vibration Concepts."

Despite the perceptibility threshold of about 65 VdB, human reaction to vibration is not significant unless the vibration exceeds 75 VdB according to the United States Department of Transportation.

California Department of Transportation's (Caltrans) Transportation and Construction-Induced Vibration Guidance Manual (2004) identifies thresholds for disturbance due to vibration: 0.2 inches per second for continuous vibration sources such as processing and excavation activities, and 0.9 inches per second for transient vibration sources such as blasting.

TABLE 3-70
Typical Levels of Ground-Borne Vibration

Human/Structural Response	Velocity Level, VdB	Typical Events (50 ft. Setback)
Threshold, minor cosmetic damage fragile buildings	100	Blasting from construction projects
		Bulldozers and other heavy tracked construction equiment
Difficulty with tasks such as reading a video or computer screen	90	
		Commuter rail, upper range
Residential annoyance, infrequent events (e.g commuter rail)	80	Rapid transit, upper range
		Commuter rail, typical
Residential annoyance, infrequent events (e.g rapid transit)		Bus or truck over bump
	70	Rapid transit, typical
Limit for vibration sensitive equipment. Approx. threshold for human perception of vibration		Bus or truck, typical
	60	
		Typical background vibration
	50	

Source: Federal Transit Administration

Noise Barriers

Shielding by barriers can be obtained by placing walls, berms or other structures between the traffic or other noise source and the receiver. The effectiveness of a barrier depends upon blocking line-of-sight between the traffic and receiver, and is improved with increasing the distance the sound must travel to pass over the barrier as compared to a straight line from source to receiver. For a noise barrier to be effective, it must not only be sufficiently tall to intercept line of sight from noise source to receiver, but it must also be sufficiently long to reduce the potential for sound to flank around ends of the barrier. Barrier effectiveness depends upon the relative heights of the source, barrier and receiver. In general, barriers are most effective when placed close to either the receiver or the traffic or other noise source.

An intermediate barrier location yields a smaller path length difference for a given increase in barrier height than does a location closer to either source or receiver.

For maximum effectiveness, barriers must be continuous and relatively airtight along their length and height. To ensure that sound transmission through the barrier is insignificant, barrier mass should be about 4 lbs. /square foot, although a lesser mass may be acceptable if the barrier material provides sufficient transmission loss in the frequency range of concern. Satisfaction of the above criteria requires substantial and well-fitted barrier materials, placed to intercept line of sight to all significant traffic noise sources. Earth, in the form of berms or the face of a depressed area, is also an effective barrier material. There are practical limits to the noise reduction provided by barriers. For highway traffic noise, a 5 to 10 dB noise reduction may often be reasonably attained. A 15 dB noise reduction is sometimes possible, but a 20 dB noise reduction is extremely difficult to achieve. Barriers usually are provided in the form of walls, berms, or berm/wall combinations. The use of an earth berm in lieu of a solid wall will provide up to 3 dB additional attenuation over that attained by a solid wall alone, due to the absorption provided by the earth. Berm/wall combinations offer slightly better acoustical performance than solid walls, and are often preferred for aesthetic reasons.

Noise barriers currently exist or are planned in many areas of the County adjacent to the state highways or existing development to shield noise. In cases of new residential development adjacent to a major roadway in the County, the responsibility for noise mitigation is placed on the individual improvement project developer. In such cases, noise barriers are commonly constructed just inside the highway right of way. In other cases, local jurisdictions and Caltrans have built barriers as part of roadway improvement projects or barrier retrofit programs.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

The impacts of the Project were analyzed considering implementation of the proposed 2014 RTP, including changes to the transportation network and land uses, may impact the noise environment. This noise analysis evaluates the noise impacts of the Project by comparing predicted traffic noise levels for the proposed Project to the 2008 Base Year model scenario provided by Fresno COG.

Criteria for Significance

The following significance criteria were used to determine the level of significance of impacts of transportation improvement projects or land uses proposed by the Project. Significance criteria were developed based on Appendix G of the State CEQA Guidelines. In general, an individual improvement project and new development project contained within the RTP and SCS would result in a significant noise impact if it:

- ✓ Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- ✓ Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- ✓ A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- ✓ A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- ✓ For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.
- ✓ For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Generally, proposed projects are of the following two types:

- ✓ New Systems (new highway and transit facilities).
- ✓ Modifications to Existing Systems (widening roads, addition of carpool lanes, grade crossings, intelligent transportation systems, maintenance, and service alterations).

Methodology

Since noise is a highly localized impact, specific and detailed analyses are most appropriate at the individual improvement project and new development project level. Subsequent project-specific EIRs will be required to further analyze the transportation improvements or new development proposed by the Project to determine the magnitude of noise and vibration impacts, and to identify appropriate potential mitigations for each individual improvement or new land use development project.

Impact 3.13.1 - Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

Noise-sensitive land uses could be exposed to noise in excess of normally acceptable noise levels and/or could experience substantial increases in noise as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new highways, addition of highway lanes, roadways, ramps, and new transit facilities as well as increased use of existing transit facilities, etc.) and future noise generating land use developments.

At the regional scale, the noise impacts of new highways, highway widening, new HOV lanes, new transit corridors, increased frequency along existing transit corridors, and noise generating future land use developments such as heavy manufacturing plants and other uses are generally expected to exceed the significance criteria when they occur near sensitive receptors. For comparison purposes, noise levels along the busiest portions of the SR 99 and SR 41 corridor within Fresno County were evaluated. Existing traffic noise levels were gathered using an Extech Type 2 sound level meter datalogger during the PM peak hour. Noise monitoring was conducted during the PM peak hour because traffic counts in along SR 99 and SR 41 show a greater volume of traffic in the PM peak hour than the AM peak hour.

Existing traffic noise levels were then evaluated using the FHWA Traffic Noise Model (TNM 2.5). Traffic volumes collected from the model runs prepared for the 2014 RTP and posted vehicle speed limits along SR 99 and SR 41 were entered into the model to estimate noise levels at receptors adjacent to the corridors. As shown in Table 3-71, the noise levels determined in the field along SR 99 was 75.7 L_{eq}(h) dBA and 74.2 L_{eq}(h) dBA along SR 41.

The impacts of the 2014 RTP were analyzed considering the 2008 Base Year Model and the 2040 No Build and 2040 Plus Build (Scenario B) conditions. Table 3-71 shows the predicted noise levels at the noise receptors evaluated under existing conditions. Results of the analysis show that noise levels under the 2040 Plus Build (2014 RTP/SCS - Scenario B) are projected to increase by 0.6 dBA's and 0.7 dBA's along SR 99 and SR 41 when compared to the 2008 Base Year Model. When it comes to noise levels, the Ldn is determined to be within +/- 2 dBA of the peak hour Leq under normal traffic conditions based upon Caltrans' Traffic Analysis Noise Protocol. Typical noise standards for residential land uses for local jurisdictions have a maximum noise level of 60 to 65 Ldn/CNEL. Therefore, impacts may occur if residential land uses are determined to be within 200 feet of SR 99 or SR 41 and no noise abatement improvements currently exist to shield the residential land uses from traffic noise.

TABLE 3-71
SR 99 and SR 41 Noise Analysis

Receptor I.D. No.	Location	Existing Noise Level Leq(h) dBA	Existing Noise Level Modeled Leq(h) dBA	K - Factor (Measured - Modeled = K)	2008 Base Model Noise Level Leq(h) dBA	2040 Scenario B Noise Level Leq(h) dBA
1	South Sarah Steet - 150 feet from SR 99 Centerline	75.7	84.6	-8.9	75.6	76.2
2	East Cameron Avenue - 175 feet from SR 41 Centerline	74.2	78.5	-4.3	74.0	74.7

Source: VRPA

Mitigation Measures

The specific impacts on noise will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ As part of the implementing agency's appropriate environmental review of each project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented.

- ✓ Implementing agencies should employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses.

- ✓ Implementing agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.

- ✓ Implementing agencies should construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors.

- ✓ Implementing agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.

- ✓ Implementing agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.

- ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.13.2 – Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Construction activity, as described above, can result in ground vibration, depending upon the types of equipment used. Operation of construction equipment causes ground vibrations which spread through the ground and diminish in strength with distance from the source generating the vibration. Ground vibrations as a result of construction activities very rarely reach vibration levels that will damage structures, but can cause low rumbling sounds and feelable vibrations for buildings very close to the site. Construction activities that generally create the most severe vibrations are blasting and impact pile driving.

Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. The most common exterior sources of ground vibration that can be noticeable to humans inside residences include constructions activities, train operations, and street traffic. Table 3-71 above provides some common sources of ground vibration and the relationship to human perception. This information comes from the Federal Transit Administration's "Basic Ground-Bourne Vibration Concepts."

In order to estimate the impact of vibrations from construction activities as a result of the expanded or new transportation facilities or future land use development included in the 2014 RTP and SCS, the

following formula was applied to evaluate ground vibration at a distance of 150 feet from the construction site.

$$Lv(D) = Lv(25\ ft) - 20 \log (D/25)$$

Using the highest vibration level shown in Table 3-65 (Lv 87) from construction related activities and the formula shown above, the anticipated vibration level at 150 feet from the construction area is 71 VdB. Based on Table 3-70 above, vibration levels above 80 VdB would be considered excessive and would need to be mitigated. Therefore, at a distance of 150 feet from a construction area, the vibration levels would not be considered significant given the data provided in Table 3-72. The approximate vibration level at 50 feet from the construction area would generate vibration levels above 80 VdB based on the equipment listed in Table 3-72.

Mitigation Measures

- ✓ Mitigation measures identified to address Impact 3.13.1 shall be applied to address impacts associated with Impact 3.13.2.

TABLE 3-72
Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 ft (in/sec)	e L_v* at 25 ft
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

* RMS velocity in decibels (VdB) re 1 minch/second

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to

determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.13.3 – A substantial permanent increase in ambient noise levels

As shown in Table 3-72 above, the noise levels under the 2008 Base Year model is 75.6 L_{eq}(h) dBA along SR 99 and 74.0 L_{eq}(h) dBA along SR 41. The noise levels under the 2040 Scenario B conditions 76.2 L_{eq}(h) dBA along SR 99 and 74.7 L_{eq}(h) dBA along SR 41. When it comes to noise levels, the Ldn is determined to be within +/- 2 dBA of the peak hour Leq under normal traffic conditions based upon Caltrans' Traffic Analysis Noise Protocol. Typical noise standards for residential land uses for local jurisdictions have a maximum noise level of 60 to 65 Ldn/CNEL. Therefore, impacts may occur if residential land uses are determined to be within 200 feet of SR 99 or SR 41 and no noise abatement improvements currently exist to shield the residential land uses from traffic noise.

Mitigation Measures

- ✓ As part of the implementing agency's appropriate environmental review of each transportation or land use development project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented.

- ✓ Implementing agencies shall employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating uses.

- ✓ Implementing agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and future noise generating land uses.

- ✓ Implementing agencies should construct sound reducing barriers between noise sources and noise-sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors.

- ✓ Implementing agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise.

- ✓ Implementing agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts.

- ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.13.4 – A substantial temporary or periodic increase in ambient noise levels

Grading and construction activities associated with the proposed highway, arterial, and transit projects and future land use development projects would intermittently and temporarily generate noise levels above ambient background levels. Noise levels in the immediate vicinity of the construction sites would increase substantially sometimes for extended durations. This would be considered a potentially significant impact.

Construction activities associated with the 2014 RTP and SCS would result in temporary noise increases at nearby sensitive receptors. Impacts to sensitive receptors resulting from these proposed transportation projects and future land use developments would depend on several factors such as the type of individual transportation improvement project or future land use development proposed for the given area, land use of the given area, and duration of proposed construction activities. Additionally, construction noise levels would fluctuate depending on construction phase, equipment type, and duration of use; distance between noise source and receptor; and presence or absence of barriers between noise source and receptor. In general, sensitive receptors would be significantly impacted by transportation and future land use projects involving new systems or new developments (new structures or facilities, truck lanes, rail corridors, interchanges, underground rail lines, etc.). Specifically, sensitive receptors located in the vicinity of these projects or development sites would be significantly impacted by construction of the proposed transportation improvement projects or future land use development. Additionally, modification projects would result in short-term construction impacts to sensitive receptors.

Mitigation Measures

The specific impacts on noise will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances.

- ✓ Implementing agencies will limit the hours of construction to between 6:00 a.m. and 8:00 p.m. on Monday through Friday and between 7:00 a.m. and 8:00 p.m. on weekends.

- ✓ Equipment and trucks used for construction will utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.

- ✓ Impact equipment (e.g., jackhammers, pavement breakers, and rock drills) used for individual improvement project or land use development construction will be hydraulically or electrical powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves will be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used such as drilling rather than impact equipment whenever feasible.

- ✓ Implementing agencies will ensure that stationary noise sources will be located as far from sensitive receptors as possible. If they must be located near existing receptors, they will be adequately muffled.

- ✓ Implementing agencies will designate a complaint coordinator responsible for responding to noise complaints received during the construction phase. The name and phone number of the complaint coordinator will be conspicuously posted at construction areas and on all advanced notifications. This person will be responsible for taking steps required to resolve complaints, including periodic noise monitoring, if necessary.

- ✓ Noise generated from any rock-crushing or screening operations performed within 3,000 feet of any occupied residence will be mitigated by the individual improvement project proponent by strategic placement of material stockpiles between the operation and the affected dwelling or by other means approved by the local jurisdiction.

- ✓ Implementing agencies will direct contractors to implement appropriate additional noise mitigation measures including, but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources to comply with local noise control requirements.

- ✓ Implementing agencies will implement use of portable barriers during construction of subsurface barriers, debris basins, and storm water drainage facilities.

- ✓ No pile-driving or blasting operations will be performed within 3,000 feet of an occupied residence on Sundays, legal holidays, or between the hours of 8:00 p.m. and 8:00 a.m. on other days. Any variance from this condition will be obtained from the individual improvement project or new land use development proponent and must be approved by the local jurisdiction.

- ✓ Wherever possible, sonic or vibratory pile drivers will be used instead of impact pile drivers, (sonic pile drivers are only effective in some soils). If sonic or vibratory pile drivers are not feasible, acoustical enclosures will be provided as necessary to ensure that pile-driving noise does not exceed speech interference criterion at the closest sensitive receptor.

- ✓ In residential areas, pile driving will be limited to daytime working hours.

- ✓ Engine and pneumatic exhaust controls on pile drivers will be required as necessary to ensure that exhaust noise from pile driver engines are minimized to the extent feasible.

- ✓ Where feasible, pile holes will be pre-drilled to reduce potential noise and vibration impacts.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the

implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.13.5 – For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

Fresno County has a total of nine (9) public use airports with the Fresno Yosemite International (FYI) being the primary passenger airport facility in the region. The Fresno Yosemite International is the largest and busiest airport in the San Joaquin Valley. During 2013, 1.4 million passengers flew in and out of FYI. The number of passengers and the amount of enplaned cargo has also increased in recent years. The upward trend in the amount of enplaned cargo is expected to continue over the next twenty-five years, while the number of enplaned passengers is expected to once again meet and exceed its historic highs.

Total operations at FYI were approximately 135,000 per year for the year ending February 12, 2012, the most recent period for which data is available. This includes air carrier/commuter/charter, general aviation, and military operations but not including airfreight operations, which are separately estimated to be over 1,000 operations per year. FYI's four fixed base operators (FBOs) offer a wide range of services including fueling, aircraft maintenance, repair, storage, charter services, flight instruction, an aircraft mechanic school, advertising, surveying, air taxi, patrol, rentals and sales. FYI is designated a Primary Commercial Service Hub Airport in the California Aviation System Plan.

Generally, proposed projects are of the following two types:

- ✓ New Systems (new highway and transit facilities).
- ✓ Modifications to Existing Systems (widening roads, addition of carpool lanes, grade crossings, intelligent transportation systems, maintenance, and service alterations).

During the construction of new highway and transit facilities or the modification of an existing system near one of the airports in Fresno County, it is possible that construction workers will be temporarily exposed to excessive noise levels. Though construction activities are intermittent and temporary, there is the potential for workers to be subject to excessive noise levels if any construction activities are near or adjacent to any of the airports within Fresno County.

Mitigation Measures

The specific impacts on noise will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not

have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Compliance with Occupational Safety and Health Administration's (OSHA) hearing conservation amendment. The Permissible Exposure Level (PEL) is defined as an 8-hour time-weighted average sound level of 90 dBA integrating all sound levels from at least 90 dBA to at least 140 dBA. Project implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.13.6 – For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Fresno County has a total of nine (9) public use airports with the Fresno Yosemite International (FYI) being the primary passenger airport facility in the region. The Fresno Yosemite International is the largest and busiest airport in the San Joaquin Valley. During 2013, 1.4 million passengers flew in and out of FYI. The number of passengers and the amount of enplaned cargo has also increased in recent years. The upward trend in the amount of enplaned cargo is expected to continue over the next twenty-five years, while the number of enplaned passengers is expected to once again meet and exceed its historic highs.

Total operations at FYI were approximately 135,000 per year for the year ending February 12, 2012, the most recent period for which data is available. This includes air carrier/commuter/charter, general aviation, and military operations but not including airfreight operations, which are separately estimated to be over 1,000 operations per year. FYI's four fixed base operators (FBOs) offer a wide range of services including fueling, aircraft maintenance, repair, storage, charter services, flight instruction, an aircraft mechanic school, advertising, surveying, air taxi, patrol, rentals and sales. FYI is designated a Primary Commercial Service Hub Airport in the California Aviation System Plan.

Generally, proposed projects are of the following two types:

- ✓ New Systems (new highway and transit facilities).
- ✓ Modifications to Existing Systems (widening roads, addition of carpool lanes, grade crossings, intelligent transportation systems, maintenance, and service alterations).

During the construction of new highway and transit facilities or the modification of an existing system near one of the airports in Fresno County, it is possible that construction workers will be temporarily exposed to excessive noise levels. Though construction activities are intermittent and temporary, there is the potential for workers to be subject to excessive noise levels if any construction activities are near or adjacent to any of the airports within Fresno County.

Mitigation Measures

The specific impacts on noise will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Compliance with Occupational Safety and Health Administration's (OSHA) hearing conservation amendment. The Permissible Exposure Level (PEL) is defined as an 8-hour time-weighted average sound level of 90 dBA integrating all sound levels from at least 90 dBA to at least 140 dBA. Project implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.14 POPULATION, HOUSING & EMPLOYMENT

This section provides information about population, housing, and employment in the Fresno region. CEQA defines population impacts to include changes to the location, distribution, density, or growth rate of the human population, while housing impacts relate to alterations in existing housing or the creation of demand for additional housing. The environmental setting and methodology used to evaluate the potential impacts of projects and future land use development associated with implementation of the Project are described. The criteria used to evaluate the significance of those impacts, potential impacts resulting from those projects, and mitigation measures are discussed.

Regulatory Setting

Federal Regulations

- ✓ **The Civil Rights Act of 1964**

  The Civil Rights Act of 1964, Title VI prohibits discrimination based on race or national origin by government agencies that receive federal funds. The power to enforce the legislation was relatively weak at the time of its enactment, and was later strengthened in subsequent legislation.

- ✓ **The Civil Rights Act of 1968**

  The Civil Rights Act of 1968, Title VIII is commonly referred to as the Fair Housing Act and expanded on the previous Civil Rights Acts by prohibiting discrimination in the sale, rental, and financing of housing based on race, religion, national origin, gender, familial status, and disability.

- ✓ **The Architectural Barriers Act of 1968**

  The Architectural Barriers Act (ABA) of 1968 requires that facilities designed, constructed, altered, or leased using federal funds must be accessible to the public, including those with disabilities. Facilities constructed prior to this legislation are exempt, however, alterations or leases pursued post-legislation may be required to comply.

- ✓ **Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970**

  The Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA) of 1970 was enacted to ensure fair treatment of individuals displaced by federally-funded or federally-assisted programs. This Act has been amended several times, but it provides for rules regarding the compensation for federal eminent domain.

- ✓ **The Education Amendments Act of 1972**

  The Education Amendments Act of 1972, Title IX prohibits discrimination based on sex for any education program receiving federal financial assistance.

- ✓ **The Rehabilitation Act of 1973**

  The Rehabilitation Act of 1973 prohibits discrimination based on disability for all programs conducted by federal agencies, programs receiving federal financial assistance, federal employment, and employment practices of federal contractors.

- ✓ **The Housing and Community Development Act of 1974**

  The Housing and Community Development Act of 1974 prohibits discrimination based on race, national origin, gender, and religion for programs receiving financial assistance from HUD's Community and Development Block Program. It amended the Housing Act of 1937, which established Section 8 housing.

- ✓ **Age Discrimination Act of 1975**

  The Age Discrimination Act of 1975 prohibits discrimination based on age for all programs receiving federal financial assistance.

- ✓ **The Americans with Disabilities Act of 1990**

  The Americans with Disabilities Act (ADA) of 1990 is similar to the Civil Rights Act of 1964 in that it provides similar protections against discrimination. The ADA prohibits discrimination on the basis of disabilities under certain circumstances. Disabilities are determined on a case-by-case basis. Title II of the ADA prohibits discrimination based on disability and applies to all public agencies at the local and State level, public transportation provided by public agencies, and local and State public housing.

- ✓ **The Native American Housing Assistance and Self Determination Act of 1996**

  The Native American Housing Assistance and Self Determination Act (NAHASDA) of 1996 was enacted to improve the condition of infrastructure on Native American lands by creating a new HUD block grant program responsible for tribal housing.

- ✓ **Native American Housing Enhancement Act of 2005**

  The Native American Housing Enhancement Act of 2005 amends the Native American Housing Assistance and Self Determination Act of 1996 and the Cranston-Gonzalez National Affordable Housing Act of 1990 to improve housing programs for tribes.

- ✓ **Title 23 CFR 450.322(e)**

  The Code of Federal Regulations, Title 23 CFR 450.322(e) requires that the metropolitan planning organization (MPO) update the regional transportation plan using current available forecasts and assumptions for population, land use, employment, and other trends.

- ✓ **Indian Veterans Housing Opportunity Act of 2010**

  The Indian Veterans Housing Opportunity Act of 2010 amended the Native American Housing Assistance and Self Determination Act of 1996 to exclude from consideration as income funds received by a family from the Department of Veteran Affairs for service-related disabilities.

- ✓ **Executive Orders**

  Executive Orders 11063, 11246, 12892, 12898, 13166, and 13217 further prohibit discrimination based on a variety of criteria.

State Regulations

- ✓ **Fair Employment and Housing Act of 1959**

  The Fair Employment and Housing Act of 1959 prohibits discrimination in housing based on race, religion, sexual orientation, marital status, national origin, ancestry, disability, or source of income.

- ✓ **The Unruh Civil Rights Act of 1959**

  The Unruh Civil Rights Act of 1959 prohibits discrimination based on sex, race, religion, ancestry, national origin, disability, medical condition, marital status, or sexual orientation and applies to all businesses.

✓ **California Government Code, Section 65008**

California Government Code, Section 65008 prohibits any government agency from denying an individual the enjoyment of residence, landownership, tenancy, or any other land use. It also prohibits the discrimination against residential development or emergency shelters if the intended population is low income.

✓ **California Constitution, Article 34, Public Housing Project Law**

Article 34 of the California Constitution, the Public Housing Project Law, states that a low rent housing project cannot be developed, constructed, or acquired by any public agency unless it passes a majority vote of the electorate.

✓ **California Building Standards Code**

The California Building Standards Code is Title 24 of the California Code of Regulations (CCR) and is a compilation of building criteria from three (3) different sources maintained by the California Building Standards Commission (BSC). The sources consist of national codes adopted by State agencies without change, national codes that have been modified and adapted to meet State conditions, and additional codes (not covered by national codes) that address specific State concerns. Since 1989, the BSC has published Title 24 every three (3) years, called the triennial editions. The last triennial edition was published in 2010.

✓ **California Transportation Commission Regional Transportation Plan Guidelines**

Assembly Bill (AB) 69 was passed in 1972 and required the State to establish Regional Transportation Planning Agencies (RTPA) throughout the State to prepare Regional Transportation Plans (RTP). The Fresno Council of Governments (Fresno COG) is the designated RTPA for Fresno County. Fresno COG is required to submit an updated RTP to the California Transportation Commission (CTC) and Caltrans every 4 years. The CTC has established guidelines to assist RTPAs in preparing the RTPs. These guidelines recommend that RTP projections be based on available data and forecasting methodologies while being consistent with Department of Finance (DOF) projections. The guidelines were updated in 2010 to include requirements of Senate Bill (SB) 375.

✓ **California Relocation Assistance Act**

The California Relocation Assistance Act of 1971 is similar to the Uniform Relocation Assistance Act of 1970 (federal). However, it applies to State and local programs and projects that receive State funding, regardless of whether they receive federal funding.

- ✓ **Homeowners and Private Property Protection Act of 2008**

  Proposition 99, the Homeowners and Private Property Protection Act, was approved by voters in 2008. Proposition 99 amended the State Constitution and prohibits local agencies from using eminent domain to acquire owner-occupied residences and transferring it to private entities.

- ✓ **California Government Code, Sections 65580 and 65589**

  California Government Code, Sections 65580 and 65589 specify the State Housing Element requirements. The Housing Element is one of the State-mandated elements of the General Plan and is updated every eight (8) years. The legislation requires agencies to prepare and adopt the Housing Element and the State Department of Housing and Community Development (HCD) is responsible for reviewing Housing Elements to ensure compliance with State law.

- ✓ **Senate Bill 375 – The Sustainable Communities and Climate Protection Act of 2008**

  Senate Bill (SB) 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets established under Assembly Bill (AB) 32 (California Global Warming Solutions Act), and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. The California Air Resources Board (CARB), in consultation with MPOs, will provide each affected region with reduction targets (based upon 2005 levels) for per-capita GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

  This law also extends the minimum time period for the regional housing needs allocation cycle from five (5) years to eight (8) years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

Local Regulations

✓ **Local Housing Elements**

Housing Elements are included in the General Plan Updates prepared by the County of Fresno and its incorporated cities and are required based on California Government Code. Housing Elements are intended to present the area's housing needs and the goals, policies, and programs to meet those needs. At a minimum, the Housing Element should include a housing needs assessment, a sites inventory and analysis, constraints on housing, housing programs, and estimated quantified objectives to be achieved.

Environmental Setting

New Patterns of Development and Travel

The Fresno region has evolved into a different kind of place since the 1970s, when downtown Fresno was by far the largest job center. Today, north Fresno, Clovis and other employment centers have developed to where they have as many or more jobs as downtown Fresno. The trend of multiple job centers seems secure, given that the region has enough unused land already zoned for employment to serve triple the current population, or to last thirty years or more at present growth rates.

Housing, jobs, shopping, and recreational opportunities tend to develop in separate locations. Offices seek proximity, for ease of interaction. Manufacturing and warehousing seek separation from residential neighborhoods, to reduce impacts. Big-box stores tend to locate on large parcels at the urban edge. New housing is being built around the urban edge and in many of the smaller cities near or adjacent to the FCMA or the SR 99 corridor. As a result of the separated development of jobs and housing, the urban area has grown in a way that forces people to travel from one area to another. Some of the edge communities show a better balance between jobs and housing, but about half of the region's jurisdictions do not have a mix of housing affordable to all those who work there.

Population and Employment Estimates and Projections

Every two to three years, Fresno COG updates its growth forecasts for housing, population, and employment. The current set of Fresno COG population and employment projections are provided in Tables 3-73 and 3-74. Employment projections are available for the Year 2040. These projections reflect a consensus of local government agencies on anticipated development of the region over the next 26-year period. The projections are used for transportation and air quality planning purposes, particularly for the development of the RTP and SCS.

TABLE 3-73
Population of Fresno County 1970 - 2040

Date	Fresno County		California		Fresno County Share of California Population
1970	413,053	1	19,053,100	1	2.2%
1980	514,621	1	23,667,900	1	2.2%
1990	667,490	1	29,760,000	1	2.2%
2000	799,407	1	33,871,648	1	2.4%
2005	866,058	2	35,869,173	2	2.4%
2010	930,450	1	37,253,956	1	2.5%
2015	1,010,080	3	38,801,063	4	2.6%
2020	1,082,097	3	40,643,643	4	2.7%
2025	1,154,741	3	42,451,760	4	2.7%
2030	1,227,649	3	44,279,354	4	2.8%
2035	1,300,597	3	46,083,482	4	2.8%
2040	1,373,679	3	47,690,186	4	2.9%

Sources [1] U.S. Bureau of the Census
[2] State of California Department of Finance
[3] The Planning Center
[4] California State Department of Finance, final Projection released January 2013

TABLE 3-74
Population Estimates - Fresno County Jurisdictions 1970 - 2013

Jurisdiction	1970		1980		1990		2000		2010		2013	
	Population	Percent Share of County	Population	Percent Share of County	Population	Percent Share of County	Population	Percent Share of County	Population	Percent Share of County	Population	Percent Share of County
Clovis	13,856	3.4%	33,021	6.4%	50,323	7.5%	68,516	8.6%	95,631	10.3%	99,983	10.5%
Coalinga	6,161	1.5%	6,593	1.3%	8,212	1.2%	15,798	2.0%	19,032	2.0%	16,729	1.8%
Firebaugh	2,517	0.6%	3,740	0.7%	4,429	0.7%	5,743	0.7%	7,549	0.8%	7,777	0.8%
Fowler	2,239	0.5%	2,496	0.5%	3,394	0.5%	4,046	0.5%	5,570	0.6%	5,801	0.6%
Fresno	165,972	40.2%	217,346	42.2%	354,091	53.0%	427,652	53.5%	494,665	53.2%	508,453	53.4%
Huron	1,525	0.4%	2,768	0.5%	4,766	0.7%	6,310	0.8%	6,754	0.7%	6,790	0.7%
Kerman	2,667	0.6%	4,002	0.8%	5,448	0.8%	8,548	1.1%	13,544	1.5%	14,225	1.5%
Kingsburg	3,843	0.9%	5,115	1.0%	7,245	1.1%	9,231	1.2%	11,382	1.2%	11,590	1.2%
Mendota	2,705	0.7%	5,038	1.0%	6,821	1.0%	7,890	1.0%	11,014	1.2%	11,178	1.2%
Orange Cove	3,392	0.8%	4,026	0.8%	5,604	0.8%	7,722	1.0%	9,078	1.0%	9,353	1.0%
Parlier	1,993	0.5%	2,902	0.6%	7,938	1.2%	11,145	1.4%	14,494	1.6%	14,873	1.6%
Reedley	8,131	2.0%	11,071	2.2%	15,791	2.4%	20,756	2.6%	24,194	2.6%	24,965	2.6%
Sanger	10,088	2.4%	12,542	2.4%	16,839	2.5%	18,931	2.4%	24,270	2.6%	24,703	2.6%
San Joaquin	1,506	0.4%	1,930	0.4%	2,311	0.3%	3,270	0.4%	4,001	0.4%	4,029	0.4%
Selma	7,459	1.8%	10,942	2.1%	14,757	2.2%	19,444	2.4%	23,219	2.5%	23,799	2.5%
Unincorporated Fresno County	179,275	43.4%	191,089	37.1%	159,521	23.9%	164,405	20.6%	166,053	17.8%	167,918	17.6%
Fresno County	413,329	100.0%	514,621	100.0%	667,490	100.0%	799,407	100.0%	930,450	100.0%	952,166	100.0%

Source: 1970, 1980, 1990, 2000, and 2010 U.S. Censuses. 2013 California State Dept. of Finance

Household size in Fresno County is projected to increase from approximately 3.13 persons per household in 2008 to approximately 3.33 in 2040. Table 3-75 shows the number of housing units for Fresno County between 2005 and 2040. The median household income in Fresno County is $41,627 and home ownership rates for Fresno County is 54.2%. The current unemployment rate of 15.7% exceeds the National and State averages.

TABLE 3-75
Fresno County Population, Housing and Employment Forecasts 2005 – 2040

Year	Population	Housing Units	Employment
2005	872,569	294,156	335,159
2008	912,521	310,579	345,816
2012	948,790	325,662	350,214
2020	1,082,097	363,142	363,581
2035	1,300,597	434,519	427,727
2040	1,373,679	458,330	449,111

Growth Areas

The projections indicate that population in the Fresno region is expected to grow by 424,889 people between 2012 and 2040. Total population in the Fresno region in 2040 is projected to be just under 1.4 million. The Cities of Fresno and Clovis are expected to capture the most growth.

Jobs-Housing Ratio

The study of jobs-housing balance continues in urban and urbanizing regions across the country as a land-use strategy with the potential to improve regional air quality and mobility. The premise assumes that land-use policy can create a balanced mix of housing and employment opportunities, which in turn can reduce commuting distances and associated air pollution.

The primary objective for many jurisdictions is to improve mobility by reducing total vehicle miles traveled (VMT), both work and non-work related. Therefore, improving or worsening jobs-housing balance would not result in a beneficial or adverse impact in and of itself, but the resultant effects on mobility, congestion, and air quality may comprise significant secondary impacts. A jurisdiction is considered housing rich if the ratio is less than 1.10 and job rich if the ratio is above 1.30.

Methodology

To identify and evaluate impacts associated with the Project (RTP and SCS), improvements were reviewed to identify the projects that might affect population or housing. The evaluation of impacts is based on general descriptions of improvement projects and future land use development and is regional in nature. The evaluation is not project-specific, and is intended to serve as a resource to jurisdictions and Caltrans for conducting site-specific environmental review for specific projects and future land use development.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Criteria For Significance

Four criteria were used to determine significant impacts of the Project on population and the disruption of existing residential or commercial neighborhoods. The Project is considered to have a significant impact if it:

- ✓ Contributes to unplanned/dispersion of population or employment growth. Implementation of the Project would have a potentially significant impact if the transportation improvements lead to substantial, unanticipated increases in population beyond those currently projected, including areas currently zoned for agriculture and open space.

- ✓ Causes community displacement. Implementation of the Project would have a potentially significant impact if new construction or right-of-way acquisition associated with the Project results in residential or business displacement.
- ✓ Causes community disruption. Implementation of the Project would have a potentially significant impact if it results in permanent alterations to the characteristics and qualities of an existing neighborhood or community, particularly in cases where access to a neighborhood or commercial district is restricted. A significant impact would also result if residences are separated from community facilities and services, or community amenities are lost. Finally, a significant impact would occur if the Project results in temporary disruption to or restriction of access within neighborhoods or commercial areas during construction. It is assumed that most projects have the potential for short-term construction impacts at some level, with the exception of minor operational improvements. In general, the implementing agencies must identify areas of such concern, and work towards mitigation of such effects.

Impact 3.14.1 – Impacts on regional growth and dispersion

The Project could affect overall population, housing and employment growth and dispersion into agricultural and open space lands in the region from the predicted regional assumptions. Implementation of the proposed mitigation measures is expected to reduce this to a less-than-significant impact. The Project is a specific set of transportation improvements together with the long-range transportation plan (RTP) and land use allocation described in the SCS designed to meet, among other goals, the long-term socioeconomic conditions of the region. The SCS is based upon the adopted or draft general plans of the jurisdictions within Fresno County. One of the strategic issues is growth. The recent growth trends in housing, population, and jobs within the region are expected to continue.

Given the location of the region, its mild climate and existing population trends, growth in the region is seen as inevitable. The Project provides for the anticipated transportation and future land use needs of projected growth. The Project is based on a projected population in the Fresno region in 2040 of 1.37 million people and associated employment. Fresno COG's projected population is within 2% of the Department of Finance (DOF) regional forecast in each year between now and 2050, and is acceptable under State law.

The transportation network included in the Project was not the sole determinant that affected the distribution of growth during development of the SCS preferred scenario. Transportation is just one factor that can affect growth. Other factors included to prepare the SCS included the cost of and type housing, the location of jobs, and the economy. A majority of the street and highway projects anticipated under the RTP and SCS would be for the purpose of alleviating congestion within major residential and/or commercial centers in the Fresno region and are intended to increase connectivity between towns or cities in the region.

Factors that account for population growth include natural increase and net migration. The average annual birth rate for California is expected to be 20 births per 1,000 population, compared to 10 births per 1,000 population in West Virginia, the state with the 6lowest projected birth rate. Additionally, California is expected to attract more than one third of the country's immigrants.

There is some debate as to whether the Project is a response to growth, whether it facilitates growth or in fact induces growth. Infrastructure of any type can be argued to do any one of these. In the case of the Project, the RTP and SCS are considered to be, overall, a response to growth; however, individual transportation or future development projects may facilitate or even induce growth. If existing transportation deficiencies are not addressed and future projected travel needs are not accommodated, then some localized areas of the region expected to receive new jobs and/or housing may become undesirable, causing the regional growth total to change or growth to be redistributed.

New or improved transportation facilities provide access to areas of new development, thereby allowing more people and jobs to locate in growth areas. Without these facilities, the lack of access could force development into areas with existing transportation infrastructure, thereby shifting population and employment growth from one area of the region to another. From this standpoint, the inclusion of new or upgraded transportation facilities in the Project could be considered growth inducing in some localities.

Mitigation Measures

The specific impacts on regional growth and dispersion will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect projects included in the 2014 RTP and future land use allocations reflected in the SCS.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on Regional Growth and Dispersion, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-

specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.14.2 – Impacts on community displacement

The Project could potentially displace or relocate residences and businesses through acquisition of land and buildings necessary for highway, arterial, and transit improvements, as well as future land use development. This would be considered a potentially significant impact.

The proposed transportation improvements and future land use development could result in significant impacts related to the displacement or relocation of homes and businesses. In some cases, buildings on residential, commercial, and industrial land may have to be removed in order to make way for new or expanded transportation facilities or other future land uses or development. In other cases, certain transportation improvements or future land use development could permanently alter the characteristics and qualities of a neighborhood. In any case, the potential for displacement and disruption are major considerations in the final design of individual transportation improvements and future development and are addressed in the design and development of mitigation programs. From the regional perspective, it is assumed that some residential and commercial displacement and disruption will occur.

Many of the improvement projects proposed by the Project that focus on maintaining and operating the existing regional system will occur on existing roadways and will not require the acquisition of land. This is true of most of the proposed carpool lanes, bus lines, transportation demand management projects, intelligent transportation systems, and road maintenance projects and programs. These transportation projects will generally not require the displacement of residences or businesses as the right-of-way has already been acquired.

Other proposed projects, new or expanded highway interchanges, arterial improvements, and future land use development consistent with the SCS have the potential to impact residential units and businesses. Depending on the alignments selected, they have the potential to impact residential or commercial areas and construction of these projects may require acquisition of new rights-of-way or development sites. Depending on the location and scope of these projects, potential impacts could be as major as removal of several homes or businesses or as minor has extending into existing right-of-way.

Mitigation Measures

The specific impacts on community displacement will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect projects included in the 2014 RTP and future land use allocations reflected in the SCS.

- ✓ For projects with the potential to displace homes or businesses, project and future development implementation agencies will evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses. An iterative design and impact analysis would help where impacts to persons or businesses are involved. Potential impacts will be minimized to the extent feasible.

- ✓ Project implementation agencies should identify businesses and residences to be displaced. As required by law, relocation and assistance will be provided to displaced residents and businesses, in accordance with the federal Uniform Relocation and Real Property Acquisition Policies Act of 1970 and the State of California Relocation Assistance Act, as well as any applicable City and County policies.

- ✓ Project implementation agencies will develop a construction schedule that minimizes potential neighborhood deterioration from protracted waiting periods.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on community displacement, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.14.3 – Disrupt or divide communities

The Project has the potential to disrupt or divide a community by separating community facilities, restricting community access and eliminating community amenities. This is a potentially significant impact. New transportation facilities or expansion of existing facilities could contribute to changes to community character in some areas of the region. The widening of a roadway could be perceived as too great a distance to cross by a pedestrian and thus divide a community. An elevated grade crossing may create a physical barrier in some locations. New transportation corridors may traverse community open space thus eliminating a community amenity. Each of the jurisdictions includes improvements to arterial roadways. Arterial roadways generally serve the local network of streets and provide access to community amenities and public facilities. Changes to these arterial roadways, such as roadway widening that impede pedestrian crossing could create a real or perceived barrier to community amenities such as parks, schools, and other public facilities located across the arterial.

Mitigation Measures

The specific impacts on disrupting or dividing communities will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Project implementation agencies will design new transportation facilities that protect access to existing community facilities. During the design phase of the individual improvement project, community amenities and facilities should be identified and access to them considered in the design of the individual improvement project.

- ✓ Project implementation agencies will design roadway improvements, in a manner that minimizes barriers to pedestrians and bicyclists. During the design phase, pedestrian and bicycle routes will be determined that permit easy connections to community facilities nearby in order not to divide the communities.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework

and direction to avoid or reduce impacts that could potentially disrupt or divide communities, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

3.15 PUBLIC UTILITIES, OTHER UTILITIES & SERVICES SYSTEMS

This section identifies the existing public services and utilities in Fresno County, describes the potential impacts of the 2014 RTP and SCS on public services (police protection, fire protection, emergency services, social services, schools, and libraries) and utilities, and identifies mitigation measures for the impacts. Even though they often share right-of-way or are built and maintained in easements adjacent to transportation facilities or future land use developments, public utilities in the region are operated and maintained by various agencies separately from the transportation system or most local jurisdictions. Also included are the public utilities, other utilities and services systems that come into contact with, on a regular basis, agencies responsible for transportation system or future land use development construction and maintenance.

Regulatory Setting

The regulatory setting describes the federal, state, and local agencies that have jurisdiction over public services and utilities. The regulations pertinent to public services and utilities that each of these agencies enforce are also described.

Federal Regulations

- ✓ **Federal Safe Drinking Water Act -** Enacted in 1974 and implemented by the EPA, the Federal Safe Drinking Water Act imposes water quality and infrastructure standards for potable water delivery systems nationwide. The primary standards are health-based thresholds established for numerous toxic substances. Secondary standards are recommended thresholds for taste and mineral content.

- ✓ **U.S. Environmental Protection Agency (EPA) -** The EPA is responsible for establishment of primary drinking water standards in the Clean Water Act, Section 304. States are required to ensure that potable water retailed to the public meets these standards. Standards for a total of 81 individual constituents have been established under the Safe Drinking Water Act, as amended in 1986. The U.S. EPA may choose to add further constituents in the future. State primary and secondary drinking water standards are promulgated in CCR Title 22 Section 64431-64501. Secondary drinking water standards incorporate non-health risk factors including taste, odor, and appearance.

- ✓ **Clean Water Act (CWA) -** Enacted in 1972, The Clean Air Act is federal legislation to completely revise the pre-existing Water Pollution Control Act. Section 402 of the CWA authorized the U.S. Environmental Protection Agency (EPA) to regulate point source pollutants, particularly municipal sewage and industrial discharges, to waters of the United States through the National Pollution Discharge Elimination System (NPDES) permitting program. In California, the EPA has delegated

responsibility for managing the NPDES program to the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs). In addition, to establish a framework for regulating water quality, the CWA authorized a multi-million dollar Clean Water Grant Program, which together with the California Clean Water Bond funding, assisted communities in constructing municipal wastewater treatment facilities.

These financing measures made higher levels of wastewater treatment possible for both large and small communities throughout California, significantly improving the quality of receiving waters Statewide. Wastewater treatment and water pollution control laws in the State of California are codified in the California Water Code and the California Code of Regulations (CCR) Titles 22 and 23. In 1967, the SWRCB was assigned responsibility for implementing and enforcing water quality regulations by California State Legislature. In 1969, the California Porter-Cologne Water Quality Control Act was passed which introduced major new water pollution control measures and established the nine RWQCBs, as they exist today.

- ✓ **Other Federal Agencies and Regulations -** 40 CFR, Part 258 Subtitle D of the Resource Conservation and Recovery Act (RCRA) establishes minimum location standards for siting municipal solid waste landfills. Because California laws and regulations governing the approval of solid waste landfills meet the requirements of Subtitle D, the U.S. Environmental Protection Agency has delegated the enforcement responsibility to the State of California.

California Regulations

- ✓ **California Integrated Waste Management Act -** As many of the landfills in the state are approaching capacity and the siting of new landfills becomes increasingly difficult, the need for source reduction, recycling, and composting has become readily apparent. In response to this increasing solid waste problem, in September 1989 the state Assembly passed Assembly Bill (AB) 939, known as the California Integrated Waste Management Act. The Act requires every City and County in the state to prepare a Source Reduction and Recycling Element (SRRE) with its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by the year 1995 and 50 percent by the year 2000. Senate Bill 2202 mandates that jurisdictions continue 50 percent diversion on and after January 1, 2000. The purpose of AB 939 is to facilitate the reduction, recycling, and re-use of solid waste to the greatest extent possible. Noncompliance with the goals and timelines set forth within AB 939 can be severe, since the bill imposes fines of up to $10,000 per day on cities and counties not meeting these recycling and planning goals.

- ✓ **California Integrated Waste Management Board (CIWMB) -** The CIWMB has numerous responsibilities in implementing the federal and state regulations summarized above. The CIWMB is

the state agency responsible for permitting, enforcing and monitoring solid waste landfills, transfer stations, material recovery facilities (MRFs), and composting facilities within California. Permitted facilities are issued Solid Waste Facility Permits (SWFPs) by the CIWMB. The CIWMB also certifies and appoints Local Enforcement Agencies (LEAs), county or city agencies which monitor and enforce compliance with the provisions of SWFPs. The CIWMB is also responsible for monitoring implementation of AB 939 by the cities and counties. In addition to these responsibilities, CIWMB also manages the Recycled-Content.

Materials Marketing Program to increase the understanding of and commitment to using specific recycled-content products in road applications, public works projects and landscaping. These products include recycled aggregate, tire-derived aggregate (TDA), rubberized asphalt concrete (RAC), and organic materials. As discussed above AB 939 requires that each County in the state of California prepare a Countywide Integrated Waste Management Plan (CIWMP). The CIWMP is a countywide planning document that describes the programs to be implemented in unincorporated and incorporated areas of the county that will effectively manage solid waste, and promote and implement the hierarchy of the Integrated Waste Management Act. The CIWMPs consists of a Summary Plan (SP), a Source Reduction and Recycling Element (SRRE), a Household Hazardous Waste Element (HHWE), a Non-Disposal Facility Element (NDFE), and a Countywide Siting Element (CSE).

- **Summary Plan (SP) -** A Summary Plan is a solid waste planning document required by Public Resources Code Section 41751, in which counties or regional agencies provide an overview of significant waste management problems faced by the jurisdiction, along with specific steps to be taken, independently and in concert with cities within their boundaries.

- **Source Reduction and Recycling Element (SRRE) -** The SRRE consists of the following components: waste characterization, source reduction, recycling, composting, solid waste facility capacity, education and public information, funding, special waste and integration. Each city and county is required to prepare, adopt, and submit to the Board an SRRE, which includes a program for management of solid waste generated within the respective local jurisdiction. The SRREs must include an implementation schedule for the proposed implementation of source reduction, recycling, and composting programs. In addition, the plan identifies the amount of landfill and transformation capacity that will be needed for solid waste which cannot be reduced, recycled, or composted.

- **Household Hazardous Waste Element (HHWE) -** Each city and county is required to prepare, adopt and submit to the Board, a HHWE which identifies a program for the safe collection, recycling, treatment, and disposal of hazardous wastes that are generated by households. The HHWE specifies how household hazardous wastes generated by households within the jurisdiction must be collected,

treated, and disposed. An adequate HHWE contains the following components: Evaluation of Alternatives, program selection, funding, implementation schedule and education and public information.

- ✓ **Non-Disposal Facility Element (NDFE) -** Each city and county is required to prepare, adopt and submit to the Board, an NDFE which includes a description of new facilities and expansion of existing facilities, and all solid waste facility expansions (except disposal and transformation facilities) that recover for reuse at least five percent of the total volume. The NDFE are to be consistent with the implementation of a local jurisdiction's SRRE. Each jurisdiction must also describe transfer stations located within and outside of the jurisdiction, which recover less than five percent of the material received.

- ✓ **Countywide Siting Element (CSE) -**Counties are required to prepare a CSE that describes areas that may be used for developing new disposal facilities. The element also provides an estimate of the total permitted disposal capacity needed for a 15-year period if counties determine that their existing disposal capacity will be exhausted within 15 years or if additional capacity is desired (PRC Sections 41700-41721.5).

- ✓ **California Safe Drinking Water Act -** The California Safe Drinking Water Act was enacted in 1976, the California Safe Drinking Water Act and codified in Title 22 of the California Code of Regulations (CCR). Potable water supply is managed through local agencies and water districts, the State Department of Water Resources (DWR), the Department of Health Services (DHS), the SWRCB, the EPA, and the U.S. Bureau of Reclamation. Water right applications are processed through the SWRCB for properties claiming riparian rights or requesting irrigation water from State or federal distribution facilities. The DWR manages the State Water Project (SWP) and compiles planning information on supply and demand within the State.

- ✓ **Water Recycling Act -** The Water Recycling Act was enacted in 1991 and established water recycling as a priority in California. The Act encourages municipal wastewater treatment districts to implement recycling programs to reduce local water demands.

- ✓ **California Water Code (Section 13240) -** The California Water Code directs to SWRCB and RWQCBs to prepare Water Quality Control Plans (Basin Plans), establishing water quality objectives and beneficial uses for each body of water within the regional boundaries including groundwater basins. NPDES permits are required for wastewater treatment facilities discharging to surface waters of the United States. The permits establish effluent quantity and quality limitations as well as provide monitoring provisions to evaluate compliance. For point source discharges (e.g., wastewater treatment facilities), the RWQCBs prepare specific effluent limitations for constituents of concern such as toxic substances, total suspended solids (TSS), bio-chemical oxygen demand (BOD), and organic compounds. The

limitations are based on the Basin Plan objectives and are tailored to the specific receiving waters, allowing some discharges more flexibility with certain constituents due to the ability of the receiving waters to accommodate the effluent without significant impact.

The RWQCB issues waste discharge requirements (WDRs) for discharges of privately or publicly treated domestic wastewater to locations other than surface water. These WDRs are usually designed to protect beneficial uses of groundwater basins but can be issued to protect surface waters in areas where groundwater is known to infiltrate into surface waters. Many municipal wastewater treatment facilities do not have NPDES permits, but rather are issued WDRs for discharges to surface impoundments and percolation ponds. The RWQCB also issues waste reclamation requirements (WRRs) for treated wastewater used exclusively for reclamation projects such as irrigation and groundwater recharge. Title 22 of the California Code of Regulations lists allowable reclamation uses including landscape irrigation, recreational impoundments, and groundwater recharge.

In addition to federal and state restrictions on wastewater discharges, most incorporated cities in California have adopted local ordinances for wastewater treatment facilities. Local ordinances generally require treatment system designs to be reviewed and approved by the City prior to construction. Larger urban areas with elaborate infrastructure in place would generally prefer new developments to hook into the existing system, rather than construct new discharges. Other communities promote individual septic systems to avoid construction of potentially growth-accommodating treatment facilities. The RWQCBs generally delegate management responsibilities of septic systems to local jurisdictions.

Environmental Setting

Police Protection Services

Police protection within the unincorporated areas of the County is provided by the Fresno County Sheriff's Department. In addition, a few incorporated cities contract with the County Sheriff to protect their city. Typically, newly incorporated municipalities are assisted by the County Sheriff's department in an effort to serve their citizens by offering an established police force to protect the jurisdiction as it grows. City police departments are found mostly in the older and larger cities within the County. The California Highway Patrol (CHP) service area is located along the State Route (SR) and Interstate highway system that dissects through the region. The CHP cooperates with both County and city police departments when the need arises.

Fire Protection Services

Fire prevention/suppression, rescue and emergency medical services are provided by the County Fire Department to the unincorporated areas of the County as well as those municipalities that contract with the County for fire protection. For the most part, private companies are contracted for ambulance services. As is the case with police services, it is more common to find City Fire Departments among older and/or larger municipalities. Cal Fire and the U.S. Forest Service provide fire protection services in the remote areas of the County and within the State and National Parks and forest lands.

Emergency Services

The Fresno County Office of Emergency Services coordinates planning and preparedness, response and recover efforts for disasters occurring within the unincorporated area of the County. Fresno County has suffered many disaster magnitude emergencies over the last thirty years including wild land fires, flooding, multi-casualty weather related vehicle accidents, and weather related agricultural economic disasters. Each of the fifteen incorporated cities within the County maintains on Office of Emergency Services.

Providing access to healthcare and emergency medical services is a goal of every community. Most hospitals are private non-profit or for-profit organizations that operate independently from cities or counties. Hospital facilities are sized and sited in compliance with federal and state requirements and local jurisdictions may not be involved in the sizing and siting coordination.

Social Services

Social services are a range of public services provided by government agencies, private not-for-profit organizations and private for-profit organizations for it residents including such things as health care, public housing and social security. Services include: alcohol, drug and mental health services; adult education and job training; child support services; civic buildings and community centers; courts and parole offices; health and disabled services; homeless and housing assistance; human assistance; and Veteran affairs.

Schools

Public education facilities and services are provided to the residents of Fresno County. There are 340 school sites in Fresno County including elementary schools, middle schools, high schools, adult/alternative/continuation, special education, court schools and preschools.

Gas and Electric

Pacific Gas and Electric (PG&E) and Southern California Edison operate in Fresno County, as well as numerous solar power equipment providers.

Telephone and Cellular Phone Service

Local and long distance phone service is provided primarily by AT&T, as well as a number of independent telephone companies also operate within the County. Throughout much of the County, cellular telephone service is provided by AT&T, Verizon Wireless and others.

Cable Television and Internet Services

Internet services are provided by AT&T, Earthlink Fresno, Windstream, Hughes, Centurylink, Netzero, and Time Warner Fresno., in addition to satellite and other providers. Cable television is primarily provided by Comcast Fresno, AT&T, and Charter Fresno.

Cable fibers are generally co-located and installed concurrently with other utility infrastructure. This infrastructure is installed underground within new development in order to reduce visual and aesthetic impacts and any potential safety hazards.

Water Supply Systems

Water supply systems obtain water from several sources including groundwater, surface water (lakes and rivers), and conservation. In most cases, the water is then purified, disinfected through chlorination, and sometimes fluoridated. Treated water then either flows by gravity or is pumped to reservoirs, which can be elevated (water towers) or on the ground. Once water is used, wastewater is typically discharged in a sewer system and treated in a wastewater treatment plant before being discharged into a body of water or reused for landscaping, irrigation, or industrial use.

Potable water supply comes from *surface water* and *groundwater* sources. In most urban parts of the region, surface water makes up a majority of the water supply. In more rural areas of the region, where agricultural water demand is higher, groundwater and rainfall/snowmelt make up a larger percentage of water supply, though the amount of groundwater available largely depends on the geological makeup of the area. Water demand for non-potable uses, such as landscape irrigation, can take advantage of *recycled water*, in addition to the other sources mentioned above.

Sewer Disposal and Treatment

A number of sanitation districts and wastewater collection and treatment facilities are located throughout the County. Primary treatment refers to the physical chemical treatment of wastewater; secondary treatment involves continuing the process with biological decomposers to rid the effluent of living organisms.

Environmental Impacts, Mitigation Measures, and Significance after Mitigation

Methodology

This public services and utilities analysis evaluates those public services and utilities most likely to be affected by the construction and implementation of the various types of transportation improvement projects and future land use development projects included in the 2014 RTP and SCS.

Criteria for Significance

The following significance criteria were used to determine potentially significant impacts to public services and utilities resulting from implementation of proposed improvement projects and future land use development. Significance criteria were developed based on State CEQA guidelines. Public services and utilities would experience significant adverse impacts if improvement projects and future land use development would:

- ✓ Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, and other public facilities.
- ✓ Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- ✓ Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- ✓ Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- ✓ Have sufficient water supplies available to serve the project from existing entitlements and resources, or the need for new or expanded entitlements.
- ✓ Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

- ✓ Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- ✓ Comply with federal, state, and local statutes and regulations related to solid waste.

<u>Impact 3.15.1</u> – Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, and other public facilities

Construction and implementation of improvement and future land use development projects could affect the level of police, fire and medical services in the County. With mitigation, this would be a less-than-significant impact. It is possible that with RTP and SCS improvements there may be a reduction in congestion and slowing allowing for improved emergency responder response times.

Numerous agencies within multiple jurisdictions in the County provide fire protection, emergency medical services, and police services. Depending upon the timing, location, and duration of construction activities, proposed transportation improvement projects and land use development projects could delay emergency response times or otherwise disrupt delivery of emergency services. Emergency routes would be impaired if one or more lanes of a roadway in Fresno County were closed off due to transportation or land use development construction activities. Traffic delays and prevention of access to calls for service could potentially result.

While these impacts would be short-term in nature, they could be potentially significant. Each individual improvement or land use development project will be analyzed to determine the degree of impact to emergency services, as part of project-specific environmental review. Adherence to road encroachment permits by the implementing agency could reduce individual improvement project construction-related impacts to emergency vehicle access and response times. As part of the construction mitigation strategy, a traffic control plan should be prepared to further reduce impacts on traffic and emergency response vehicles. Additionally, there is the potential need for increased police, fire, and medical services at the construction sites of projects for safety purposes. The impact of the construction sites themselves on police, fire, and emergency medical services is anticipated to be short-term in nature and less-than-significant.

The Project includes several types of improvement and future land use development projects that, upon completion, would require different levels of police, fire, and medical services. Projects involving new roadways are anticipated to require police, fire, and emergency medical services for safety purposes. In many cases, transit-related projects would involve the construction of transit stations. Upon completion,

these transit stations would require police, fire, and emergency medical services. In some cases, the governing transit authority provides security. Additionally, the increased use of transit modes of transportation, such as buses and trains, would involve an increased need for police, fire, and emergency medical services for protection and rescue services. Finally, various future land use development, such as residential and commercial uses increase the need for emergency services.

Rail projects, other than transit stations and other types of future land use development, such as many industrial and office facilities, are anticipated to require minimal amounts of additional fire, police, and emergency medical services for safety purposes. The improvement of and the use of non-motorized transportation methods, such as bike routes, are anticipated to require minimal amounts of additional police, fire, and emergency medical services. If restrooms or drinking fountains were incorporated into non-motorized transportation projects, these uses would require a minimal amount of police, fire, and emergency medical for security and safety.

Public service and utility providers have historically accommodated increases in demand throughout the County. For the most part, improvement projects and future land use developments would not generate a substantial need for additional police, fire, and emergency medical services, except in the case where new facilities and developments are constructed. Local jurisdictions are expected to be equipped to handle any increased demands for fire and medical services generated by facilities and developments, like transit stations and major government facilities. If any new transit police staff or facility is deemed necessary (by the individual improvement project level CEQA documentation), it will need to be funded by the appropriate transit authority. The total projected demand for each of these types of projects is not anticipated to be significant, based on the demand for public service and utility for similar projects and on the current capacities of existing fire, police, and medical services.

As discussed in the Section 3.14 of this PEIR (Population and Housing), population in the County will increase significantly over the next 26 years, with or without the Project. In general, Fresno COG does not anticipate that the Project will substantially affect population distribution on a regional basis. However, transportation projects and future land use developments in the less developed areas of the region could experience a corresponding increase in demand because of the RTP and SCS. Depending on the amount of increase in population, the increase in the demand for these services has the potential to be a significant impact in those specific areas. However, any construction resulting from the Project within the County will be subject to further environmental review. With the following mitigation measures, this impact would be reduced to a level of insignificance.

It is possible that underground utility lines (sewer, gas, electricity, telephone and water) could be uncovered and potentially severed because of construction of transportation projects or future land use

development. Above ground power, phone and cell towers could also be effected due to the construction of projects.

The potential to encounter underground utility lines, and potentially sever those lines, is a possibility with any groundbreaking in the Fresno region. However, prior to construction, the implementing agency would be required to incorporate the locations of existing utility lines into the construction schedule.

Mitigation Measures

The specific impacts on public services and utilities will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Prior to construction, the project implementation agency will ensure that all necessary local and state permits are obtained. The project implementation agency also will comply with all applicable conditions of approval. As deemed necessary by the governing jurisdiction, road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans should include the following requirements:

    - Identify all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow.
    - Develop circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone.
    - Schedule truck trips outside of peak morning and evening commute hours.
    - Limit lane closures during peak hours to the extent possible.
    - Use haul routes, minimizing truck traffic on local roadways, to the extent possible.
    - Include detours for bicycles and pedestrians in all areas potentially affected by individual improvement project construction.
    - Install traffic control devices as specified in the Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones.
    - Develop and implement access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. Access plans will be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions will be asked to identify detours for emergency vehicles, which will then be posted by the contractor.

The facility owner or operator will be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures.

- Store construction materials only in designated areas.
- Coordinate with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary.

- ✓ Transportation and future land use development projects requiring police protection, fire service, and emergency medical service will coordinate with the local fire department and police department to ensure that the existing public services and utilities would be able to handle the increase in demand for their services. If the current levels of service at the individual improvement project or future land use development site are found to be inadequate, infrastructure improvements and personnel requirements for the appropriate public service will be identified in each individual improvement project's CEQA documentation.

- ✓ The growth inducing potential of individual transportation and future land use development projects will be carefully evaluated so that the full implications of the 2014 RTP and SCS are understood. Individual environmental documents will quantify indirect impacts (growth that could be facilitated or induced) on public services and utilities. Lead and responsible agencies should then make any necessary adjustments to the applicable general plan.

- ✓ As part of transportation project-specific or future land use development project-specific environmental review, implementing agencies will evaluate the impacts resulting from the potential for severing underground utility lines during construction activities. Appropriate mitigation measures will be identified for all impacts. The implementing agencies will be responsible for ensuring adherence to mitigation measures. Fresno COG will be provided with documentation indicating compliance with mitigation measures.

- ✓ Prior to construction, the implementing agency or contractor will identify the locations of existing utility lines. All known utility lines will be avoided during construction.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts on public services, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific

circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.15.2 – Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board

Wastewater treatment facilities and collection systems must have adequate capacity to prevent overflows, spills, or a release of untreated or partially treated wastewater, which has the potential to pollute surface and ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and enjoyment of surface waters. Untreated wastewater often contains high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease, and an overflow could result in the closure of beaches and other recreational areas, inundate properties, and pollute rivers and streams.

Forecast growth and land use changes expected to occur as part of the 2014 RTP and SCS would be primarily focused in previously developed urban areas that are served by existing wastewater treatment facilities and collection systems. Increases in population and housing density would result in a corresponding increase in the volume of wastewater compared to existing conditions and could require the expansion of treatment facilities and collection systems to ensure sufficient capacity. In rural areas, new development could require construction of on-site wastewater treatment systems.

Impacts to wastewater treatment requirements are typically controllable and can be mitigated below a level of significance through actions of the implementing agency, including adherence to existing regulations, such as those issued and enforced through the State Water Resources Control Board (SWRCB), Regional Water Quality Control Board (RWQCB), and Best Management Practices (BMPs).

Mitigation Measures

The specific impacts on wastewater treatment facilities will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ During the CEQA review process for individual facilities, implementing agencies should apply necessary mitigation measures to reduce significant environmental impacts associated with the

construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified impacts on wastewater treatment, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.15.3 – Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

Demand for solid waste, wastewater, and potable water services in the County could be affected by construction and implementation of transportation improvement projects and future land use developments.

Transportation and future land use and development projects have the potential to generate a significant amount of solid waste during construction through grading and excavation activities. Any increases in demand for wastewater and potable water services resulting from the 2014 RTP and SCS are expected to be minimal during construction. Construction debris would be recycled or transported to the nearest landfill site and disposed of appropriately. Currently, several landfills in the region function at or below their permitted capacity. Therefore, the projects proposed are not anticipated to generate a significant impact on solid waste facilities during construction. Nevertheless, the amount of debris generated during individual improvement project or future land use development project construction would need to be evaluated prior to construction on a project-by-project basis.

It is assumed that, upon completion, projects will require additional public services and utilities to handle increased demand for wastewater and solid waste services, increased demand for potable water, and, in some cases, increased demand for reclaimed water for landscaping purposes. These increases would

need to be evaluated on a project-by-project basis. Projects involving roadway construction and future land use development are anticipated to require potable or reclaimed water for landscaping purposes. These increases would need to be evaluated on a project-by-project basis.

Transit-related projects would involve the construction of transit stations in many cases. Incremental amounts of potable water would be generated at these transit stations for restrooms, public drinking water, and landscaping. Additionally, a minimal increase in the demand for potable water, wastewater service, and solid waste collection would be created by increased use of transit methods, such as buses and trains.

With the exception of transit-related rail, unless rail projects involve the construction of additional railways or facilities, they are not anticipated to require additional wastewater, solid waste, or potable water service. The improvement of and increased usage of non-motorized transportation methods, like bike routes, are not anticipated to require additional levels of solid waste, waste water, and potable water service, other than drinking fountains. If restrooms are incorporated into non-motorized transportation projects, these uses would also require minimal amounts of solid waste (for trash receptacles), wastewater (for toilets, water fountains, and faucets), and potable water (for faucets, drinking fountains, and landscaping) services.

Public service and utility providers have accounted for increases in the public needs throughout the County. In most cases, wastewater and potable water infrastructures function well below their capacities. In addition, solid waste facilities, including transfer stations and landfills, commonly accept levels of solid waste well below their maximum capacities. Based on the demand for public services and utilities for similar projects, and on the current capacities of existing public services and utilities, the local projected demand for each of these types of projects is not anticipated to be significant but will need to be analyzed on a project-by-project basis.

Mitigation Measures

The specific impacts on public services and utilities will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Projects requiring wastewater service, solid waste collection, or potable water service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle

the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation.

- ✓ Reclaimed water will be used for landscaping purposes instead of potable water wherever feasible.

- ✓ Recently, the Governor declared an emergency drought declaration for the State. Long-term water supply documents anticipate that drought (including severe single-year drought) are regular occurrences within the State. Because the 2014 RTP and SCS do not propose or approve development of any water demand projects, the Governor's drought declaration does not indicate that there is a significant water supply impact associated with the RTP and SCS.

- ✓ Each of the proposed transportation improvement projects or future land use developments will comply with applicable regulations related to solid waste disposal.

- ✓ The construction contractor will work with Recycling Coordinators to ensure that source reduction techniques and recycling measures are incorporated into individual transportation improvement or future land use development project construction.

- ✓ The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal sites will be identified and utilized.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts to solid waste, wastewater, and potable water services, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.15.4 – Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

Storm water drainage facilities are necessary to drain excess water from paved streets, parking lots, sidewalks, and roofs to prevent flooding after rain events. Ensuring adequate capacity and design of storm water drainage facilities allows for the safe management of large volumes of water and conveyance of runoff to a point of disposal.

Growth and development and transportation improvements expected to occur as part of the 2014 RTP and SCS would be primarily focused in previously developed urban areas. Urban areas have limited amounts of vacant land where rainwater and urban runoff can percolate into the soil, and new infill development in urban areas would not result in a substantial increase in impervious surfaces. In addition, development in urban areas would be served by existing storm drain collection systems. A limited number of new developments in urban areas would convert undeveloped land to impermeable surfaces, resulting in an increase in storm water runoff, which could potentially exceed the capacity of existing storm water drainage facilities.

Development in rural areas would convert undeveloped land to impermeable surfaces from the development of rooftops, parking lots, roads, and driveways, and would result in an increase in storm water runoff. In these areas, there are not typically storm water drainage systems, and increases in the amount of impermeable surfaces could result in volumes of runoff requiring the construction of new or expansion of existing facilities. The local projected demand for stormwater facilities is not anticipated to be significant but will need to be analyzed on a project-by-project basis.

In addition, the transportation of construction materials to and from the sites during individual transportation improvement project or future land use development project construction could cause accumulation of soil on roadways surrounding the construction sites. Hauling trucks could track soil from the construction site onto adjacent streets during construction of projects, particularly those involving excavation. Since street cleaning activities typically occur only once a month or less in a particular area, increased soil on local streets would increase the demand for street cleaning.

Mitigation Measures

The specific impacts on public services and utilities will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ During the CEQA review process for individual RTP and SCS projects, implementing agencies with responsibility for the construction of new storm water drainage facilities or the expansion of existing facilities to adequately meet projected capacity needs should apply necessary mitigation measures, including actions set forth in regional watershed management plans, to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities.

- ✓ As part of transportation project-specific and future land use development project-specific environmental review, implementing agencies will evaluate the impacts resulting from soil accumulation during construction of the transportation projects and future land use developments. Appropriate mitigation measures will be identified for all impacts. The implementing agencies will be responsible for ensuring adherence to the mitigation measures. Fresno COG will be provided with documentation indicating compliance with mitigation measures.

- ✓ Implementing agencies should implement appropriate measures, such as the washing of construction vehicles undercarriages before leaving the construction site or increasing the use of street cleaning machines, to reduce the amount of soil on local roadways as a result of construction.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.15.5 – Have sufficient water supplies available to serve the project from existing entitlements and resources, or the need for new or expanded entitlements

Demand for potable water services in the County could be affected by construction and implementation of transportation improvement projects and future land use developments. Any increases in demand for potable water services resulting from the 2014 RTP and SCS are expected to be minimal during construction.

It is assumed that, upon completion, projects will require additional public services and utilities to handle increased demand for potable water, and, in some cases, increased demand for reclaimed water for landscaping purposes. These increases would need to be evaluated on a project-by-project basis. Projects involving roadway construction and future land use development are anticipated to require potable or reclaimed water for landscaping purposes. These increases would need to be evaluated on a project-by-project basis.

Transit-related projects would involve the construction of transit stations in many cases. Incremental amounts of potable water would be generated at these transit stations for restrooms, public drinking water, and landscaping. Additionally, a minimal increase in the demand for potable water would be created by increased use of transit methods, such as buses and trains.

With the exception of transit-related rail, unless rail projects involve the construction of additional railways or facilities, they are not anticipated to require additional potable water service. The improvement of and increased usage of non-motorized transportation methods, like bike routes, are not anticipated to require additional levels of potable water service, other than drinking fountains. If restrooms are incorporated into non-motorized transportation projects, these uses would also require minimal amounts of potable water (for faucets, drinking fountains, and landscaping) services.

Public service and utility providers have accounted for increases in the public needs throughout the County. In most cases, potable water infrastructures function well below their capacities. Based on the demand for public services and utilities for similar projects, and on the current capacities of existing public services and utilities, the local projected demand for potable water is not anticipated to be significant but will need to be analyzed on a project-by-project basis.

Mitigation Measures

The specific impacts on public services and utilities will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be

responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Projects requiring potable water service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation.

- ✓ Reclaimed water will be used for landscaping purposes instead of potable water wherever feasible.

- ✓ Recently, the Governor declared an emergency drought declaration for the State. Long-term water supply documents anticipate that drought (including severe single-year drought) are regular occurrences within the State. Because the 2014 RTP and SCS do not propose or approve any development of any water demand projects, the Governor's drought declaration does not indicate that there is a significant water supply impact associated with the RTP and SCS.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts to potable water services, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.15.6 – Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments

Demand for wastewater services in the County could be affected by construction and implementation of transportation improvement projects and future land use developments. Any increases in demand for wastewater services resulting from the 2014 RTP and SCS are expected to be minimal during construction.

It is assumed that, upon completion, projects will require additional public services and utilities to handle increased demand for wastewater. These increases would need to be evaluated on a project-by-project basis.

Transit-related projects would involve the construction of transit stations in many cases. A minimal increase in the demand for wastewater service would be created by increased use of transit methods, such as buses and trains.

With the exception of transit-related rail, unless rail projects involve the construction of additional railways or facilities, they are not anticipated to require additional wastewater service. The improvement of and increased usage of non-motorized transportation methods, like bike routes, are not anticipated to require additional levels of wastewater services. If restrooms are incorporated into non-motorized transportation projects, these uses would also require minimal amounts of wastewater (for toilets, water fountains, and faucets) services.

Public service and utility providers have accounted for increases in the public needs throughout the County. In most cases, wastewater infrastructures function well below their capacities. Based on the demand for public services and utilities for similar projects, and on the current capacities of existing public services and utilities, the local projected demand for each of these types of projects is not anticipated to be significant but will need to be analyzed on a project-by-project basis.

Mitigation Measures

The specific impacts on public services and utilities will be evaluated as part of the implantation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Projects requiring wastewater service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts on wastewater services, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.15.7 – Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs

Demand for solid waste services in the County could be affected by construction and implementation of transportation improvement projects and future land use developments. Transportation and future land use and development projects have the potential to generate a significant amount of solid waste during construction through grading and excavation activities. Construction debris would be recycled or transported to the nearest landfill site and disposed of appropriately. Currently, several landfills in the region function at or below their permitted capacity. Therefore, the projects proposed are not anticipated to generate a significant impact on solid waste facilities during construction. Nevertheless, the amount of debris generated during individual improvement project or future land use development project construction would need to be evaluated prior to construction on a project-by-project basis.

It is assumed that, upon completion, projects will require additional public services and utilities to handle increased demand for solid waste services. These increases would need to be evaluated on a project-by-project basis.

Transit-related projects would involve the construction of transit stations in many cases. A minimal increase in the demand for solid waste collection would be created by increased use of transit methods, such as buses and trains.

With the exception of transit-related rail, unless rail projects involve the construction of additional railways or facilities, they are not anticipated to require additional solid waste service. The improvement of and increased usage of non-motorized transportation methods, like bike routes, are not anticipated to require additional levels of solid waste. If restrooms are incorporated into non-motorized transportation projects, these uses would also require minimal amounts of solid waste (for trash receptacles) services.

Public service and utility providers have accounted for increases in the public needs throughout the County. In most cases, solid waste facilities, including transfer stations and landfills, commonly accept levels of solid waste well below their maximum capacities. Based on the demand for public services and utilities for similar projects, and on the current capacities of existing public services and utilities, the local projected demand for solid waste services is not anticipated to be significant but will need to be analyzed on a project-by-project basis.

Mitigation Measures

The specific impacts on public services and utilities will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ Projects requiring solid waste collection will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation.

- ✓ Each of the proposed transportation improvement projects or future land use developments will comply with applicable regulations related to solid waste disposal.

- ✓ The construction contractor will work with Recycling Coordinators to ensure that source reduction techniques and recycling measures are incorporated into individual transportation improvement or future land use development project construction.

- ✓ The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal sites will be identified and utilized.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project

area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the impacts to solid waste services, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impact 3.15.8 – Comply with federal, state, and local statutes and regulations related to solid waste

Forecast growth and land use changes expected to occur as part of the 2014 RTP and SCS would be primarily focused in previously developed urban areas that are served by existing solid waste collection systems. Increases in population and housing density would result in a corresponding increase in the volume of solid waste compared to existing conditions and could require the expansion of collection systems to ensure sufficient capacity.

Impacts to solid waste can be mitigated below a level of significance through actions of the implementing agency, including adherence to existing federal, state, and local statutes and regulations.

Mitigation Measures

The specific impacts on solid waste collection systems will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- ✓ During the CEQA review process for individual facilities, implementing agencies should apply necessary mitigation measures to reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project

area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce the identified impacts on solid waste, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

3.16 SOCIAL & ECONOMIC EFFECTS

This section explores the issue of social environment in Fresno County by providing a description of the demographic and income profile. The analysis includes information on the minority and low- and moderate-income populations and the potential impact of the Project (2014 RTP and SCS) on areas with high concentrations of minority, low-income or moderate-income populations.

According to CEQA Guidelines Section 15358(b), impacts to be analyzed in the EIR must be "related to physical changes" in the environment, not in economic or social conditions. In fact, CEQA Guidelines Section 15131(a) does not require an analysis of a project's social or economic effects because such impacts are not, in and of themselves, considered significant effects on the environment. Section 15131(a) states:

> *"Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes."*

The CEQA Guidelines also provide that physical effects on the environment related to changes in land use, population, and growth rate induced by a project may be indirect or secondary impacts of the project and should be analyzed in the EIR only if the physical effects would be significant (CEQA Guidelines Section 15358(a)(2)). Indeed, "evidence of economic and social impacts that do not contribute to or are not caused by physical changes in the environment is not substantial evidence that the project may have a significant effect on the environment" (CEQA Guidelines, § 15064(f)(6)). The California Supreme Court has explained that "[a]n EIR is to disclose and analyze the direct and the reasonably foreseeable indirect environmental impacts of a proposed project if they are significant…. Economic and social impacts of proposed projects, therefore, are outside CEQA's purview" (Anderson First Coalition v. City of Anderson [2005] 130 Cal.App.4th 1173, 1182 [citing CEQA Guidelines, §§ 15126.2, 15064(d)(3)] [emphasis in original]). Accordingly, it is only "[w]hen there is evidence … that economic and social effects caused by a project … could result in a reasonably foreseeable indirect environmental impact, such as urban decay or deterioration, then the CEQA lead agency is obligated to assess this indirect environmental impact" (Ibid).

"Environmental Justice" is a term often used to describe the types of social effects that are outside the realm of CEQA. Specifically, Environmental Justice is the concept that environmental laws, policies, and impacts should be applied such that projects do not result in the disproportionate infliction of environmental impacts on populations comprising ethnic minorities and/or underprivileged groups. An

analysis of Environmental Justice, however, is a required element of environmental review under the National Environmental Policy Act (NEPA), not CEQA (see United States Code, title 42, §§ 4331(a), 4342, 4344). Under CEQA, and as set forth above, a lead agency has an obligation to analyze impacts on the physical environment, not social or economic impacts. Accordingly, an Environmental Justice analysis is not required.

Regardless, on February 11, 1994, President Clinton issued an "Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (Executive Order 12898, 1994). This Order is designed to focus federal attention on environmental and human health conditions in minority communities and low-income communities. The Order is further intended to promote non-discrimination in federal programs substantially affecting human health and the environment and to provide for information access and public participation relating to such matters.

Even though not required by CEQA, the Environmental Justice analysis provided below is intended to achieve compliance with the letter and spirit of Executive Order 12898 and other federal requirements by addressing the question of whether and how the impacts of the Proposed Project and alternatives may disproportionately affect minority and low-income populations.

Regulatory Setting

Environmental Justice is concerned with ensuring that adverse human health or environmental effects of governmental activities do not disproportionately fall on minority and low-income populations. For transportation, environmental justice means assessing the nature, extent, and incidence of probable impacts, both negative and positive, from any transportation-related activity. The transportation activities include the transportation planning process through implementation of individual transportation projects.

On February 11, 1994, former President Clinton signed Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The Executive Order directs every Federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on under-represented groups and low-income populations. Minority populations are currently protected from discrimination under Title VI of the Civil Rights Act of 1964. However, the new order, Executive Order 12898, specifically calls attention to the protection of minority populations and to low-income populations. Title VI states that "No person…shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title VI establishes the need for transportation agencies to disclose to the public the benefits and burdens of proposed projects on minority populations. The understanding of civil rights has expanded to include gender,

religion, and disability. Title VI was further amended in 1987 to extend non-discrimination requirements for recipients of federal aid to all of their programs and activities, not just those funded with federal funds.

The United States Department of Transportation (DOT) recognizes that transportation programs and policies may disproportionately burden low-income and minority communities. Hence, the U.S. DOT has issued its own order, 5680.2, to clarify and reinforce environmental justice policies for minorities and low-income populations. The Federal Highway Administration (FHWA), a branch of the DOT, has begun to carry out the order and require environmental justice analyses in its transportation programs and activities. FHWA has set policies for integrating environmental justice principles into existing operations, preventing disproportionately high and adverse effects and actions to address disproportionately high and adverse effects on low-income and minority populations. All federally funded transportation planning and decisions must involve an environmental justice assessment process that explicitly considers adverse effects or the potential of adverse effects on the populations.

FHWA wants to ensure that social, economic, and environmental impacts are addressed up front, from early on in the planning process through individual improvement project implementation. As a federally designated metropolitan transportation planning organization, Fresno COG is required to comply with rules and policies set forth by FHWA. Fresno COG's planning and programming activities have the potential to disproportionately affect human health or the environment, especially for minority and low-income populations. Metropolitan Planning Organizations (MPOs) and other related agencies will include explicit consideration of the effects of transportation activities on minority and low-income populations. This could include establishing procedures or providing meaningful opportunities for public involvement by members of minority populations and low-income populations during the planning and development of programs. Agencies should also provide public access to public information concerning the human health or environmental impacts of programs, policies, and activities. There are three main elements to FHWA's environmental justice policy:

- ✓ Avoid, minimize, or mitigate disproportionate high and adverse human health or environmental effects, including social and economic effects on minority populations, and low-income populations.
- ✓ Ensure full and fair participation by all potentially affected communities in the transportation decision-making process.
- ✓ Prevent denial of reduction in or significant delay in the receipt of benefits by minority populations and low-income groups.

Minority Populations: Minority groups, as defined by Executive Order 12898, include:

- ✓ Hispanics (persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race).

- ✓ Blacks (persons having origins in any of the black racial groups of Africa).
- ✓ Asian Americans (persons having origins in any of the original peoples of the Far East, Southeast Asia, and the Indian Subcontinent, or the Pacific Islands).
- ✓ American Indians (persons having origins in any of the original people of North America and who maintain cultural identification through tribal affiliation or community recognition).

Low-Income Populations: Low-income populations include households earning a combined income at or below the U.S. Department of Health and Human Services poverty guidelines.

Environmental Setting

The Population and Housing section of this PEIR includes current and projected future population and employment growth in Fresno County. Between 2010 and 2040, population is expected to increase from approximately 930,450 to 1,373,679 million. The Environmental Justice (EJ) analysis starts with understanding the demographics of many communities within Fresno County. Fresno County has high percentages of both minority and low-income populations as shown in Tables 3-76 through 3-77. Referencing Table 3-77, the total minority population within Fresno County is 66 percent. Table 3-78 indicates that Fresno County's Hispanic population is growing while the White population is decreasing.

TABLE 3-76
Population Demographics

Total population[1]	908,830	Percentage
White	308,759	34.0%
Hispanic or Latino	446,727	49.2%
Black or African American alone	43,673	4.8%
American Indian and Alaska Native alone	4,844	0.5%
Asian alone	83,715	9.2%
Native Hawaiian and Other Pacific Islander alone	1,093	0.1%
Some Other Race alone	2,470	0.3%
Two or More Races	17,549	1.9%
Population for whom poverty status was determined[1]	**890,694**	**Percentage**
Individuals below 150% of Poverty Line	311,613	35.0%
Non Low-Income	579,081	65.0%

(1) American Community Survey 2006-2010

TABLE 3-77
Low-Income Population Demographics

Comparison[1]	Income 150% of the Poverty Line	Minority Population
Fresno County	35.0%	66.0%
California	23.6%	58.8%
United States	22.9%	35.3%

(1) American Community Survey 2006-2010

TABLE 3-78
Fresno County Population Trends and Projections

Demographics Changes from 2000 to 2010 to 2040	2000[1]	2010[2]	2040[3]
White	36.2%	34.0%	25.0%
Hispanic or Latino	44.0%	49.2%	58.4%
Black or African American	5.3%	4.8%	4.2%
American Indian and Alaska Native	1.6%	0.5%	0.5%
Asian	8.1%	9.2%	9.7%
Native Hawaiian and Other Pacific Islander	0.1%	0.1%	0.1%
Some Other Race	4.7%	2.2%	2.1%

(1) 2000 Census Data

(2) 2006-2010 American Community Survey

(3) Population projections from the California Department of Finance

Fresno COG used the U.S. Census Bureau's definitions of racial and ethnic populations to determine minority status. Minority persons are those who identify as Black or African American, American Indian or Alaskan Native, Asian, Native Hawaiian or Other Pacific Islander, some other race or multiple races, or Hispanic/Latino of any race. The Non-Environmental Justice population includes those persons who identify as white and not Hispanic or Latino. The largest ethnic group in the Fresno County region is Hispanic (49.2%), followed by White (34.0%) as indicated in Table 3-78.

Environmental Justice Task Force Criteria

Of the 1,963 Traffic Analysis Zones (TAZs) in Fresno County, 788 make up the areas labeled as Environmental Justice Areas as defined by the EJ Taskforce. A total of 136 TAZs meet the low-income

criteria alone, 181 meet the minority criteria alone, and 163 meet both the low-income and minority criteria. Together these 480 TAZs account for 61% of the EJ area. The other 39% or 308 TAZs meet the Vulnerable Communities threshold criteria. Within these EJ TAZs, the minority population is 84.4% and the low-income population is 55.9%. Figure 3-16 shows the EJ areas considering the Task Force criteria.

Environmental Justice FHWA Criteria

Of the 1,963 TAZs in Fresno County, 692 make up the areas labeled as Environmental Justice Areas as defined by the FHWA. A total of 170 TAZs meet the low-income criteria alone, 156 meet the minority criteria alone, and 366 meet both the low-income and minority criteria. Within these EJ TAZs, the minority population is 89.0% and the low-income population is 58.3%. Figure 3-17 shows the EJ areas considering the FHWA criteria.

Consistency of the Project with Local Economic Development Goals

As part of their general plans, local jurisdictions in Fresno County have developed economic development goals or statements. In general, local agencies encourage economic development that is consistent with the character and scale of existing development within their respective jurisdiction.

Concentrations of Low-Income and Minority Groups

Fresno County has high percentages of both low-income and minority populations with 35% of the total population being low-income and 66% being minority. As of the 2012 5-year American Community Survey, approximately 24.8% of Fresno County's population was living below the poverty line. Low-income populations in the region are generally concentrated in the following areas (in order of highest percentage to lowest): San Joaquin, Orange Cove, Huron, Mendota, and Parlier. In these communities, thirty-one (31) to forty-nine (49) percent of the population lives below the poverty level.

Concentrations of minority populations are generally concentrated in the following areas (in order of highest percentage to lowest): Huron, Mendota, San Joaquin, Parlier, and Orange Cove. In these communities, ninety-six (96) to ninety-nine (99) percent of the population is comprised of minority populations. The primary minority groups in Fresno County include Hispanic / Latino and Asian populations.

In many situations, minority and low-income populations do not have the same geographical boundaries. (For example, a low-income community can be identified that is not necessarily a minority population. There are locations in the region where this does hold true.)

FIGURE 3-16

Environmental Justice Areas – Task Force

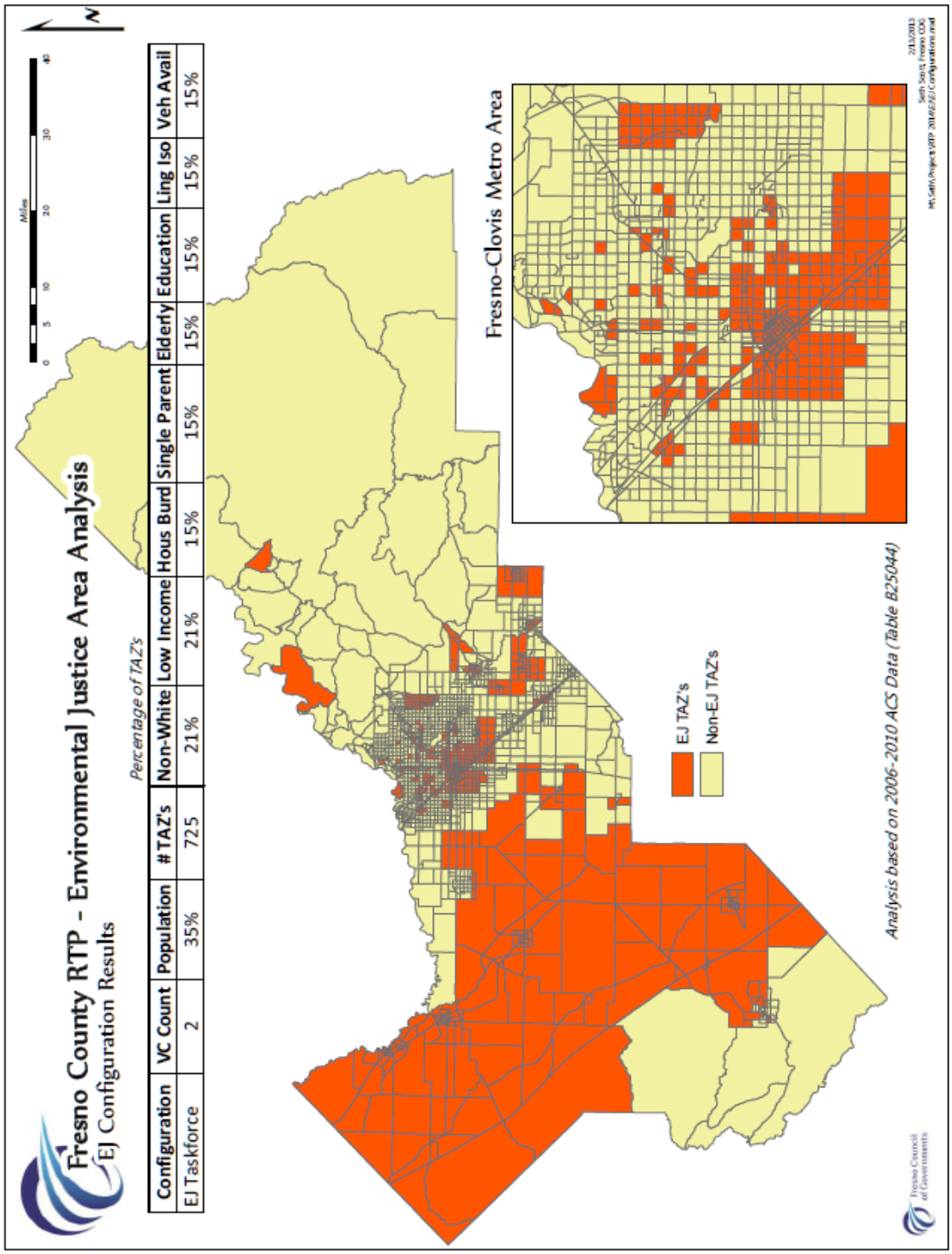
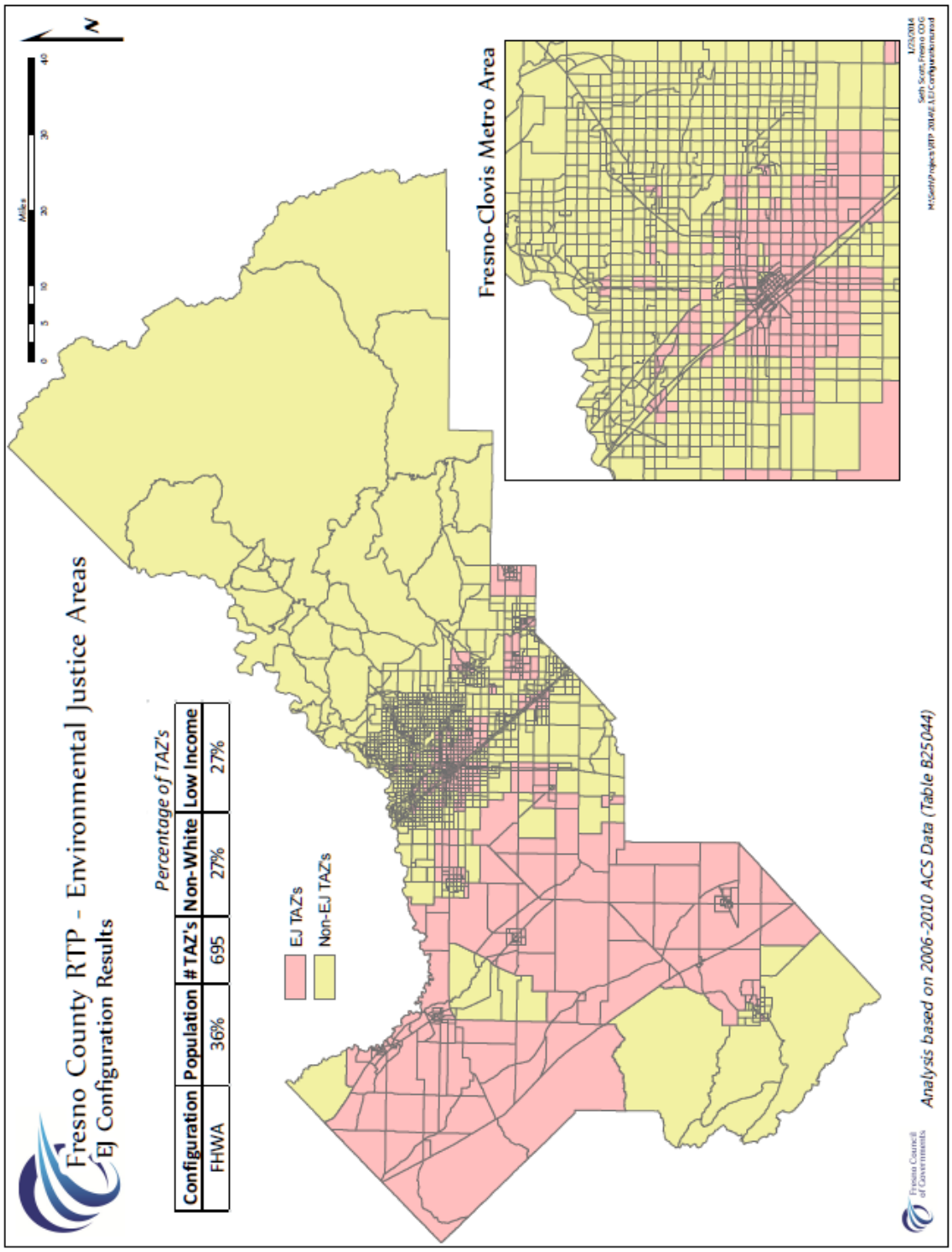


FIGURE 3-17
Environmental Justice Areas – FHWA



Travel Patterns of Minority and Low-Income Populations

It is much easier to identify travel patterns of low-income populations than travel patterns of minority populations. Typically, the difficulty lies in identifying the location of a community; however, once a minority community is identified, the travel patterns of that community can be analyzed.

Low-income populations typically make most trips by private automobile. Generally, low-income households make fewer total trips and their travel distances are much shorter per trip than non-low-income households. It is also more common for these populations to travel by walking and biking, as opposed to households whose incomes are moderate and more affluent. Where transit is concerned, low-income households tend to utilize the bus instead of the train. Higher income households that take transit generally opt in favor of the train.

It is typical that low-income populations tend to live near the urban centers and in first-ring cities (an encircled city that has little or no expansion potential) and typically they do not own as many automobiles. A majority of employment growth has been in the suburban areas, and as such, most of the entry-level positions have been located in the growing suburban businesses. This is a large transportation issue for low-income individuals, since transportation readily serves the urban centers and is less accessible in the suburban communities.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Major transportation projects are proposed in areas in which significant minority and low-income populations, and future land use development is also planned to accommodate future demand for housing, jobs, and services. It is possible that improvement projects and future growth and development consistent with the SCS could have adverse environmental impacts that could disproportionately affect people in these areas; however, it is not possible to determine specific impacts to minority and low-income populations near these facilities until project-specific environmental and engineering work is completed. For example, fewer adverse impacts may be created by transportation projects completed within existing rights-of-way than projects that will require the acquisition of additional land where homes and businesses may be located or where environmental resources could be affected. Potential adverse environmental impacts that could disproportionately affect minority or low-income populations can be better defined at the later stage of environmental review, when precise individual improvement and future land use development project locations, size, and design are defined.

Improvement projects that add new, or improve existing, transit service would provide greater mobility for these groups, since minority and low-income populations tend to be more reliant upon transit service than other segments of the population. It is also more likely for minority and low-income households to

be without an automobile than other socioeconomic groups. These households would also benefit from the provision of new or improved transit service. These are considered significant beneficial impacts.

It is important that the minority and low-income households (Environmental Justice zones) throughout the county have average trip times lesser than or comparable to non-Environmental Justice households. In general under all conditions, the Environmental Justice areas have average travel times to areas of interest equal to or shorter than the travel times from non-Environmental Justice areas for all modes of travel (drive alone, carpool and transit) in the Fresno-Clovis SOI, the remainder of the county, as well as countywide. The exception is transit in rural county, where the Environmental Justice travel times are higher than the non-Environmental Justice travel times. This is probably to be expected because of the large, low populated Environmental Justice areas in the far western part of the county.

The criterion is measured by calculating average travel times during the base year 2008, in 2035 Build and 2040 Build, when all RTP projects are completed, and in a 2035 No Build and 2040 No Build scenarios where none of the RTP projects are completed. A comparison of accessibility to various desired destinations is provided in Tables 3-79 through 3-82.

TABLE 3-79
Accessibility to Major Job Centers

Mode	2008	2035 No Build	2035 Build	2040 No Build	2040 Build
Fresno-Clovis SOI					
Drive Alone	13 (13)	14 (14)	14 (13)	14 (14)	14 (13)
Shared-Ride	15 (14)	16 (15)	15 (15)	16 (15)	16 (15)
Transit	32 (32)	32 (31)	29 (27)	32 (31)	29 (27)
Remainder of County					
Drive Alone	42 (22)	39 (21)	40 (21)	40 (21)	41 (21)
Shared-Ride	31 (26)	30 (27)	29 (27)	30 (27)	30 (27)
Transit	**46 (52)**	**47 (53)**	**45 (52)**	**47 (53)**	**45 (52)**
Countywide					
Drive Alone	20 (15)	19 (15)	19 (15)	20 (16)	20 (15)
Shared-Ride	18 (18)	18 (18)	18 (18)	19 (19)	19 (18)
Transit	33 (33)	33 (33)	30 (29)	33 (33)	30 (29)

Values represent travel time in minutes designated as Non-EJ TAZs (EJ TAZs).

Bold designates where EJ travel times are higher than non-EJ travel times

Source: Fresno COG, 2014

TABLE 3-80
Accessibility to Parks

Mode	2008	2035 No Build	2035 Build	2040 No Build	2040 Build
Fresno-Clovis SOI					
Drive Alone	13 (13)	14 (13)	14 (13)	14 (13)	14 (13)
Shared-Ride	14 (13)	15 (14)	15 (14)	15 (14)	15 (14)
Transit	34 (32)	34 (32)	31 (28)	34 (32)	31 (28)
Remainder of County					
Drive Alone	42 (27)	41 (26)	41 (26)	41 (26)	42 (26)
Shared-Ride	31 (30)	30 (30)	30 (30)	30 (30)	30 (30)
Transit	**53 (67)**	**53 (68)**	**52 (67)**	**53 (69)**	**53 (67)**
Countywide					
Drive Alone	19 (16)	19 (16)	19 (15)	19 (16)	19 (15)
Shared-Ride	17 (17)	18 (18)	18 (18)	18 (18)	18 (18)
Transit	35 (33)	35 (33)	32 (29)	35 (33)	32 (29)

Values represent travel time in minutes designated as Non-EJ TAZs (EJ TAZs).

Bold designates where EJ travel times are higher than non-EJ travel times

Source: Fresno COG, 2014

TABLE 3-81
Accessibility to Schools

Mode	2008	2035 No Build	2035 Build	2040 No Build	2040 Build
Fresno-Clovis SOI					
Drive Alone	15 (14)	16 (15)	16 (15)	16 (15)	14 (13)
Shared-Ride	18 (17)	19 (18)	19 (18)	19 (18)	15 (14)
Transit	36 (35)	36 (35)	33 (31)	36 (35)	31 (28)
Remainder of County					
Drive Alone	39 (22)	38 (21)	37 (20)	38 (21)	42 (26)
Shared-Ride	30 (28)	29 (28)	29 (28)	30 (28)	30 (30)
Transit	**44 (48)**	**45 (48)**	**43 (48)**	**45 (49)**	**53 (67)**
Countywide					
Drive Alone	22 (17)	22 (17)	22 (17)	22 (17)	19 (15)
Shared-Ride	21 (21)	22 (21)	21 (21)	22 (22)	18 (18)
Transit	37 (36)	37 (36)	34 (33)	37 (36)	32 (29)

Values represent travel time in minutes designated as Non-EJ TAZs (EJ TAZs).

Bold designates where EJ travel times are higher than non-EJ travel times

Source: Fresno COG, 2014

TABLE 3-82
Accessibility to Medical Facilities

Mode	2008	2035 No Build	2035 Build	2040 No Build	2040 Build
Fresno-Clovis SOI					
Drive Alone	13 (13)	14 (14)	14 (14)	14 (14)	14 (14)
Shared-Ride	14 (14)	15 (15)	15 (15)	16 (15)	15 (15)
Transit	32 (31)	32 (31)	28 (27)	32 (31)	28 (27)
Remainder of County					
Drive Alone	42 (22)	38 (20)	39 (20)	39 (20)	40 (20)
Shared-Ride	30 (25)	29 (24)	29 (24)	29 (24)	29 (24)
Transit	**45 (46)**	**45 (46)**	**44 (46)**	**45 (46)**	**44 (47)**
Countywide					
Drive Alone	19 (15)	19 (15)	19 (15)	19 (15)	19 (15)
Shared-Ride	17 (17)	18 (18)	18 (17)	18 (18)	18 (17)
Transit	33 (32)	33 (32)	29 (29)	33 (32)	29 (29)

Values represent travel time in minutes designated as Non-EJ TAZs (EJ TAZs).

Bold designates where EJ travel times are higher than non-EJ travel times

Source: Fresno COG, 2014

Potential Environmental Effects Resulting from Social and Economic Changes

As a whole, the Project proposes economic and social changes (in the form of new forecasts in population and employment growth) that will create physical changes to the environment. To the degree that these economic and social changes will create changes in land uses and transportation systems, and their resultant changes to the environment, these changes have been addressed in the environmental documents for local general plans. General plan amendments and rezoning applications are addressed by local agencies, and undergo additional CEQA review at the local level to determine their consistency with existing plans (including regional plans such as the RTP) and to identify any additional resultant environmental effects. To the degree that economic and social changes require changes to the transportation system, the potential environmental effects of these changes are evaluated in both the environmental documentation for local general plans and in the environmental documentation for the RTP. Given the programmatic nature of this EIR, the physical changes to the environment that may result from implementation of transportation projects and programs are evaluated to the degree possible. Future project-specific environmental documentation will evaluate the specific physical changes to the environment that may result from implementation of specific projects once the precise location, size, and design of these projects is determined.

The general concern within the region is not so much that the Project would result in physical impacts or bisected communities. The concern is more of a question of whether or not the individual improvement and future land use development projects provide adequate access and services to minority or low-income communities.

Criteria for Significance

The Project will have a significant impact if the short-term construction and/or long-term operations of the proposed improvement and future land use development projects will result in disproportionately high and adverse human health or environmental effects on a minority and/or low-income population.

As defined by the "Final Guidance for Incorporating Environmental Justice Concerns," contained in the Guidance Document of the United States Environmental Protection Agency's NEPA Compliance Analysis (EPA 1998), minority (people of color) and low-income populations are identified where either:

- The minority or low-income population of the affected area is greater than 50 percent of the affected area's general population; or
- The minority or low-income population percentage of the affected area is meaningfully greater (50 percent or greater per EPA Guidance Document) than the minority population percentage in the general population of the jurisdiction or other appropriate unit of geographic analysis (i.e., County or Native American Reservation) where the affected area is located.

In 1997, the President's Council on Environmental Quality issued Environmental Justice Guidance (CEQ 1997, available at http://ceq.hss.doe.gov/nepa/regs/ej/justice.pdf) that defines minority and low-income populations as follows:

- "Minorities" are individuals who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black not of Hispanic origin; or Hispanic (without double-counting non-white Hispanics falling into the Black/African-American, Asian/Pacific Islander, and Native American categories)
- "Low-income populations" are identified as populations with mean annual incomes below the annual statistical poverty level.

Impact 3.16.1 – Construction impacts on minority and low-income populations

Construction of some improvement projects will be located in areas of minority and low-income populations.

The improvement and future land use development projects may have direct, short-term impacts on surrounding communities related to construction, including noise, air quality, and traffic. However, none of these projects are expected to have a disproportionate impact on minority or low-income communities. The Project is designed to serve the entire population of the County, and the transportation and future land use development projects are dispersed throughout the region.

While many of the transportation and future land use development projects are located in urban areas where a higher proportion of low-income and minority communities are, more existing transportation routes and facilities are located in those areas. Since more of the existing facilities are located in those areas, more major improvements to address existing deficiencies and accommodate projected population growth are also needed in those areas.

Furthermore, Fresno COG works with cities, counties, and other implementing agencies to encourage improvement projects that serve those communities with the greatest transit needs, such as low-income or minority communities in urban core areas. The location, design, and alignment of transportation facilities and routes are planned to reduce potential impacts to the extent feasible, and to ensure that if impacts occur, these impacts do not disproportionately affect low-income or minority populations.

Numerous construction sites of individual improvement and future land use development projects throughout the region may experience short-term noise, air quality, and traffic impacts. Mitigation measures have been identified in Sections 3.4, 3.12, and 3.14 to minimize potential impacts and protect the sensitive uses that may be located near the individual improvement and future land use development project sites, including low-income and minority communities. It is not anticipated that minority and low-income communities would be disproportionately and adversely affected. As a result, short-term impacts are considered less-than-significant.

The Population and Housing section identified potential construction impacts resulting from implementation of the Project that would remain significant and unavoidable after mitigation due to the potential displacement or relocation of homes and businesses. This section also found that some of the transportation and future land use development projects have the potential to disrupt or divide a community by separating community facilities, restricting community access and eliminating community amenities. In addition, the Land Use section identified potential impacts to sensitive receptors including residences, educational facilities, medical facilities, and places of worship that would remain significant and unavoidable after mitigation.

It is not anticipated that minority and low-income communities would be disproportionately and adversely affected, as compared to other communities. As a result, long-term impacts are considered less-than-significant.

Mitigation Measures

Impact is considered less-than-significant; no mitigation is required.

Significance After Mitigation

Not applicable.

Impact 3.16.2 – Operational impacts on low-income and minority populations

The operation of some of the improvement and future land use development projects will occur in areas of low-income and minority populations.

The improvement and future land use development projects are designed specifically to improve transit accessibility, address existing deficiencies including congestion, and accommodate projected population growth to the extent feasible within the existing funding constraints. As discussed previously, the improvement projects are located throughout the region and are not disproportionately concentrated in low-income or minority areas. (There are more transportation improvements and future land use development projects are planned for urban areas). This is because more transportation facilities and services are located in those areas serving large concentrations of people. As a result, these facilities need improvements and maintenance to continue serving the rapidly growing urban populations.

The Project will improve the transportation system through a variety of projects. These improvements are intended to improve traffic flow and reduce congestion, and to address existing deficiencies associated with the projected population increases. A beneficial impact that will result from the Project is greater transit accessibility for low-income and minority residents. These improvements are particularly important for low-income and minority communities, as these groups typically rely on public transit to a much greater extent than communities with higher incomes. Improvements will also allow more people in the region to reduce their dependence on automobiles and will provide enhanced connections to employment and housing.

It is anticipated that the improvement projects will increase accessibility and address existing problems with the transportation network. The projects are not expected to disproportionately affect low-income communities in an adverse way, since these projects are dispersed throughout the region, and are designed to improve transportation facilities where they are needed most. As a result, this impact is considered less-than-significant.

Mitigation Measures

Impact is considered less-than-significant; no mitigation is required.

Significance After Mitigation

Not applicable.

3.17 TRANSPORTATION/TRAFFIC

Implementation of the Project will result in improvements to existing regional transportation and circulation systems. Proposed improvements are intended to fulfill required regional transportation needs. Proposed street and highway programs are aimed at reducing existing traffic and other transportation/circulation conflicts and resulting accident hazards. Implementation of planned improvements to the street and highway network, improvement of County airports, provision of mass transportation services and facilities, identification of additional bikeways and pedestrian improvements, and improved transportation systems that accommodate goods movement will have beneficial effects on a region wide basis to address 2014 RTP and SCS objectives.

Regulatory Setting

Federal Regulations

- ✓ **National Environmental Policy Act (NEPA) -** The National Environmental Policy Act (NEPA) provides general information on effects of federally funded projects. The act was implemented by regulations included in the Code of Federal Regulations (40CFR6). The code requires careful consideration concerning environmental impacts of federal actions or plans, including projects that receive federal funds. The regulations address impacts on land uses and conflicts with state, regional, or local plans and policies, among others. They also require that projects requiring NEPA review seek to avoid or minimize adverse effects of proposed actions, and also to restore and enhance environmental quality as much as possible.

- ✓ **Moving Ahead for Progress in the 21st Century (MAP-21) -** The Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law in July 2012 and reauthorized the federal highway and public transportation programs for fiscal years 2013 and 2014 for a total of $105 billion, holding funding flat relative to prior years. However, the bill marks a notable departure from prior surface transportation acts in several respects, most notably its short duration, elimination of earmarks, consolidation of programs, and introduction of performance measures into the federal transportation policy framework. While the bill retains many of the larger highway and transit programs of its predecessor—the Safe Accountable, Flexible, Efficient Transportation Equity Act, A Legacy for Users known as SAFETEA—LU, eliminates almost 100 smaller programs and distributes a much larger share of funds by formula (93 percent compared to 83 percent under SAFETEA-LU).

- ✓ **Metropolitan Planning General Requirements -** Under MAP-21, the U.S. Department of Transportation (USDOT) requires that metropolitan planning organizations, such as Fresno COG, prepare long-range transportation plans (RTPs) and update them every four years if they are in areas designated as "nonattainment" or "maintenance" for federal air quality standards. Prior to enactment

of MAP-21, the primary federal requirements regarding RTPs were included in the metropolitan transportation planning rules—Title 23 CFR Part 450 and 49 CFR Part 613. MAP-21 makes a number of changes to the statutes that underpin these regulations, and revisions to the regulations are expected to be made in early 2013. Key federal requirements for long range plans include the following:

- RTPs must be developed through an open and inclusive process that ensures public input; seeks out and considers the needs of those traditionally under served by existing transportation systems; and consults with resource agencies to ensure potential problems are discovered early in the RTP planning process;
- RTPs must have a financially constrained element, transportation revenue assumptions must be reasonable, and the long range financial estimate must take into account construction-related inflation costs;
- RTPs must include a description of the performance measures and performance targets used in assessing the performance of the transportation system;
- RTPs must include a system performance report evaluating the condition and performance of the system with respect to performance targets adopted by the state that detail progress over time;
- RTPs may include multiple scenarios for consideration and evaluation relative to the state performance targets as well as locally-developed measures.
- RTPs must conform to the applicable federal air quality plan, called the State Implementation Plan (SIP), for ozone and other pollutants for which an area is not in attainment; and
- RTPs must consider planning factors and strategies in the local context.

State Regulations

- ✓ **California Environmental Quality Act (CEQA) -** CEQA defines a significant impact on the environment as a substantial, or potentially substantial, adverse change in the physical conditions within the area affected by the individual improvement project. Land use is a required impact assessment category under CEQA. CEQA documents generally evaluate land use in terms of compatibility with the existing land uses and consistency with local general plans and other local land use controls (zoning, specific plans, etc.).

- ✓ **Senate Bill 743 (SB 743) -** On September 27, 2013, Governor Brown signed Senate Bill 743 (Steinberg, 2013). Among other things, SB 743 creates a process to change analysis of transportation impacts under CEQA. Currently, environmental review of transportation impacts focuses on the delay that vehicles experience at intersections and on roadway segments. That delay is measured using a metric known as "level of service," or LOS. Mitigation for increased delay often involves increasing capacity (i.e. the width of a roadway or size of an intersection), which may increase auto use and emissions and discourage alternative forms of transportation. Under SB 743, the focus of transportation analysis

will shift from driver delay to reduction of greenhouse gas emissions, creation of multimodal networks and promotion of a mix of land uses.

Specifically, SB 743 requires the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines (Title 14 of the California Code of Regulations sections and following) to provide an alternative to LOS for evaluating transportation impacts. Particularly within areas served by transit, those alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses". Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated". OPR also has discretion to develop alternative criteria for areas that are not served by transit, if appropriate.

SB 743 is not expected to take effect until early 2015 and it is therefore not directly applicable to this EIR. Transportation analyses conducted for future RTP EIR's may change due to the implementation of SB 743 and the changes will be dependent on the outcome of the upcoming CEQA guidelines.

- ✓ **California Transportation Commission Regional Transportation Plan Guidelines -** The CTC publishes and periodically updates guidelines for the development of long range transportation plans. Pursuant to Government Code Section 65080(d), each regional transportation planning agency (RTPA) is required to adopt and submit an updated regional transportation plan (RTP) to the California Transportation Commission (CTC) and the Department of Transportation (Caltrans) every four years.

  Under Government Code Section 14522, the CTC is authorized to prepare guidelines to assist in the preparation of RTPs. The CTC's RTP guidelines suggest that projections used in the development of an RTP should be based upon available data (such as from the Bureau of the Census), use acceptable forecasting methodologies, and be consistent with the Department of Finance baseline projections for the region. The guidelines further state that the RTP should identify and discuss any differences between the agency projections and those of the Department of Finance.

  The most recent update to the RTP guidelines were published in 2010, and includes new provisions for complying with Senate Bill 375 (see below), as well as new guidelines for regional travel demand modeling. The regional travel demand model guidelines are "scaled" to different sizes of MPO's.

- ✓ **Senate Bill 375 -** Sen. Bill No. 375 (Stats. 2008, Ch. 728) (SB 375) requires MPOs to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its greenhouse gas (GHG) reduction targets through integrated land use, housing and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions from automobiles and light

trucks in accordance with targets set by the California Air Resources Board. Sections 3-4 and 3-6 in this Chapter include more in-depth discussions of SB 375 and its implications for the proposed RTP.

Regional and Local Statutes

- ✓ **Local Agency General Plans -** State law requires cities and counties to adopt general plans, which must include a transportation element. The transportation element describes the acceptable operating standards, levels of service, classifications, and transportation related goals of a given city or county; it is typically a multimodal section that addresses roads, public transit, bicycle facilities, and pedestrian facilities. This EIR does not explicitly identify localized traffic issues that might be the focus of a city's general plan; rather, it will deal with issues of overall system performance from a regional perspective.

Environmental Setting

The existing conditions section for the transportation and circulation systems within Fresno County have been broken down into six subsections, and are generally described below. Further detail regarding the existing systems, system needs, and system actions is provided in Chapter 2 of this EIR.

Multi-modal Transportation System

The planned transportation/circulation system provides the basic network used for the movement of goods and people in the region. Regional streets and highways are used by nearly all travel modes including automobiles, ridesharing vehicles, public and common carrier transit, the intra- and inter-regional trucking industry, bicyclists, pedestrians, and other non-motorized modes of transportation. These systems must operate efficiently in order to reduce traffic congestion, improve air quality, and move people and goods safely.

The RTP systems are composed of the regional streets and roads that include federal interstate and State highways, regional arterials, and other regional street and road facilities. The RTP also addresses future transportation/circulation system's needs, including mass transportation, aviation, non-motorized, and goods movement. A list of planned improvement projects along each of these systems is provided in the RTP and the list of improvement projects and programs contained in the RTP are provided in Section 2 of this Draft EIR. These planned projects are considered to be "financially constrained"; therefore, the likelihood for implementation over the next twenty-five (25) years is assumed. The impact analysis of each mode on the planned transportation/circulation system is provided below. The analysis was developed with the assumption that only financially constrained projects would be implemented during the life of the Project.

The sprawling pattern commonly associated with California transportation networks provides fewer modal options to commuters. Multimodal efforts in Fresno County are focused on enhancing existing conditions and creating environmentally favorable patterns of travel. Based upon information provided in the RTP, transportation planning has relied heavily in the past upon the analysis of separate and discrete transportation modes. However, as the County tries to deal with congestion and the problems of air pollution, there is a growing awareness that solutions must be evaluated within the context of an integrated system, rather than by individual mode only. This systematic look at the County's capabilities encourages analysis and planning, which look at transportation systems that can be brought to the resolution of a need for travel or movement of goods. This approach is helped by looking at the characteristics of our County, which may affect travel demands, including but not limited to those, which follow:

- ✓ Fresno is the major population center for the Valley.
- ✓ Fresno County contains Sequoia National Park and two national forests.
- ✓ Route 41 north out of the Fresno-Clovis Metropolitan Area (FCMA) is the primary corridor to Yosemite, one of the two most visited national parks in the nation.
- ✓ As the largest producer of farm commodities in the world, Fresno County has a strong "farm to market" travel demand affecting local roads and the state highway system. Movement of goods occurs throughout the County, as farm and other commodities are brought to market and to interregional routes.
- ✓ The County is crossed by two north-south corridors, State Route 99 and Interstate 5. Each of them is key to the statewide network.
- ✓ Recreational trips are served by several state highways: Routes 33, 41, 168, 180, 99, and 5.
- ✓ Fresno is served by Amtrak, which has experienced increasing ridership, even though continuous rail service to northern California is limited and to southern California is yet to be developed.
- ✓ While the distances between destinations and generally low densities have encouraged automobile usage, there is a large rural and urban population in need of public transit service.
- ✓ The systems that are in place are in need of more stable financing.
- ✓ Fresno-Yosemite International provides a hub airport service to its service area of six counties.
- ✓ The climate and terrain are compatible with the use of cycling for short commutes and recreational trips.
- ✓ Existing rail lines offer potential for an expanding share of commodity movement.

Achievement of some ultimate state of multimodal transportation service would be a system in which a traveler could make a "seamless" journey with connections between modes, taking minimum effort and involving little delay. Currently, such an ideal state can be reached only in the country's largest and most advanced cities. In these areas, land use densities and developed systems of commuter rail lines, subways, transit buses, trolleys, airport shuttles, and taxis offer a variety of choice and scheduling flexibility that make travel times and accessibility reliable. In these areas, one can walk to the subway line, travel on the

subway, resurface to a waiting bus, travel to a commuter train or airport terminal complete with shuttle, and so on.

This trip has been likened to the multi-modalism of our mail system. In the Central Valley, where cities have received much of their growth since the invention of the automobile, residential densities tend to be comparatively low, with streets and land uses designed to facilitate the use and storage of the personal automobile. During the hot summer days when upper temperatures can remain around the 100-degree mark, the attractiveness of the air-conditioned car is strong. It will require even stronger commitment to the goals of air quality and the quality of life in this County to make the changes needed to implement the "seamless" multimodal system. It involves people making conscious choices to use alternative transportation modes, and the provision of those alternate systems in a manner, which encourages their use. To succeed, those efforts would have to focus on long-term changes:

- ✓ Increasing land use intensity and residential densities, particularly along corridors used for transit or planned for future light rail systems.
- ✓ Facilitating the development of mixed land use districts, which promote living, working, shopping and recreation accessible by foot or bicycle, and which are served by centrally located transit routes (the Tower District in Fresno, Clovis' Old Town, and many of the County's small cities serve as examples built more than 40 years ago).
- ✓ Expanding transit systems and the frequency of services.
- ✓ Developing connecting bikeway systems and facilitating and encouraging their use.
- ✓ Improving connectivity between transit and rail, transit and air travel, cycling and transit, etc.
- ✓ Reservation of future "park and ride" opportunities.
- ✓ An organized public education effort.
- ✓ Appropriate financing, including both operations and capital investment.

Details regarding the multi-modal transportation system in Fresno County are provided in Chapter 2 of this EIR.

Highways, Streets and Roads

- ✓ **Regionally Significant Road System**

  Fresno County's Regionally Significant Roads System is served by one Interstate, and 12 State Routes. Interstate 5 and State Route 99 are major routes that generally run in a north-south direction. State Routes 33, 41, 43, 63, 145, and 245 also provide north-south access, while Routes 168, 180, 198, and 201 generally run in an east-west direction. In addition, many city and County roads are used for commute, agricultural, recreational and scenic purposes. With urbanization taking place in the County, commuter and business trips are increasing.

Fresno COG, in conjunction with its member agencies and Caltrans, has developed the "Regionally Significant Road System" for transportation modeling purposes based on the Federal Highways Administration (FHWA) Functional Classifications System of Streets and Highways. In general, the classification systems used by local agencies coincide with the FHWA Functional Classification System; however, when it comes to design standards or geometrics of a particular street or road within a local jurisdiction, each of the local agencies has their own specific design criteria.

There is a significant distinction between the Regionally Significant Roads System and the Countywide Network. Regionally significant projects are statutorily required to be treated separately for air quality reasons. Figures 2-4 and 2-5 in Chapter 2 of this PEIR depicts the regionally significant road system in Fresno County and provides further details regarding this mode of transportation.

✓ **Functional Classification System**

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the type of service they are intended to provide. Fundamental to this process is the recognition that individual streets and roads do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classifications define the channelization process by defining the area that a particular road or street should service through a highway network. Table 3-83 defines the functional classes in urban areas and Table 3-84 defines functional classes in rural areas.

✓ **Level of Service (LOS) Analysis**

Level of Service (LOS) standards are used by Fresno COG to quantitatively assess the Regionally Significant System's performance. To determine the type and number of transportation projects that may be necessary to accommodate Fresno County's expected growth, the level of service (LOS) was assessed along the existing Regionally Significant Roads System.

According to the Highway Capacity Manual (HCM), LOS is categorized by two parameters of traffic, uninterrupted and interrupted flow. Uninterrupted flow facilities do not have fixed elements such as traffic signals that cause interruptions in traffic flow. Interrupted flow facilities have fixed elements that cause an interruption in the flow of traffic such as stop signs, signalized intersections, and arterial roads[1]. Table 3-74 provides a definition of segment LOS.

1 Transportation Research Board, 2010 (available for review at Fresno COG)

TABLE 3-83
Urban Functional Classification System-Definitions

Classification	Primary Function	Direct Land Access	Speed Limit	Parking
Fwy/Exprwy	Traffic Movement	None	45-65	Prohibited
Primary Arterial	Traffic Movement/ Land Access	Limited	35-45	Prohibited
Secondary Arterial	Traffic Movement/ Land Access	Restricted	30-35	Generally Prohibited
Collector	Distribute Traffic Between Local Streets & Arterials	Safety Controls, Limited Regulation	25-30	Limited
Local	Land Access	Safety Controls Only	25	Permitted

TABLE 3-84
Rural Functional Classification System-Definitions

Classification	Primary Function	Direct Land Access*	Speed Limit**	Parking***
Fwy/Exprwy	Traffic Movement	Safety Controls	55-70	Prohibited
Arterial	Traffic Movement/ Land Access	Safety Controls	55	Permitted
Collector	Distribute Traffic Between Local Streets & Arterials	Safety Controls	55	Permitted
Local	Land Access	Safety Controls	55	Permitted

* Access to arterials is generally limited or restricted if it provides access to a land subdivision or an industrial, commercial or multi-family use. Access is granted on a controlled basis to parcels fronting on expressways where there is not a frontage road or access to another road.

** All County roads have a 55 mph operating speed unless otherwise indicated.

*** Parking is permitted on all County roads unless otherwise indicated.

TABLE 3-85
Segment Level of Service Definitions (Highway Capacity Manual)

Level of Service	Definition
A	Represents free flow. Individual vehicles are virtually unaffected by the presence of others in the traffic stream.
B	Is in the range of stable flow, but the presence of other vehicles in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
C	Is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual vehicles becomes significantly affected by interactions with other vehicles in the traffic stream.
D	Is a crowded segment of roadway with a large number of vehicles restricting mobility and a stable flow? Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
E	Represents operating conditions at or near the level capacity. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
F	Is used to define forced or breakdown flow (stop-and-go gridlock). This condition exists when the amount of traffic approaches a point that exceeds the amount that can travel to a destination. Operations within the queues are characterized by stop and go waves, and they are extremely unstable.

The goal is to maintain acceptable levels of service along the highways, streets, and roads network. For purposes of this environmental analysis, the minimum levels of services reflected in the 2009 Congestion Management Program (CMP) of LOS "D" in the FCMA and LOS “C” in the remainder of the County are used as the acceptable performance level along the Regionally Significant Roads System consistent with most local General Plan Circulation Elements. CMP levels of service for 2007 (CMP base year) and for 2030 (CMP future year) are provided in the RTP Appendices. Year 2008 LOS is also displayed in Figures 3-18 and 3-19 (FCMA) and Figures 3-20 and 3-21 (Rural Area).

FIGURE 3-18
Year 2008 – FCMA
AM Peak Hour - Level of Service

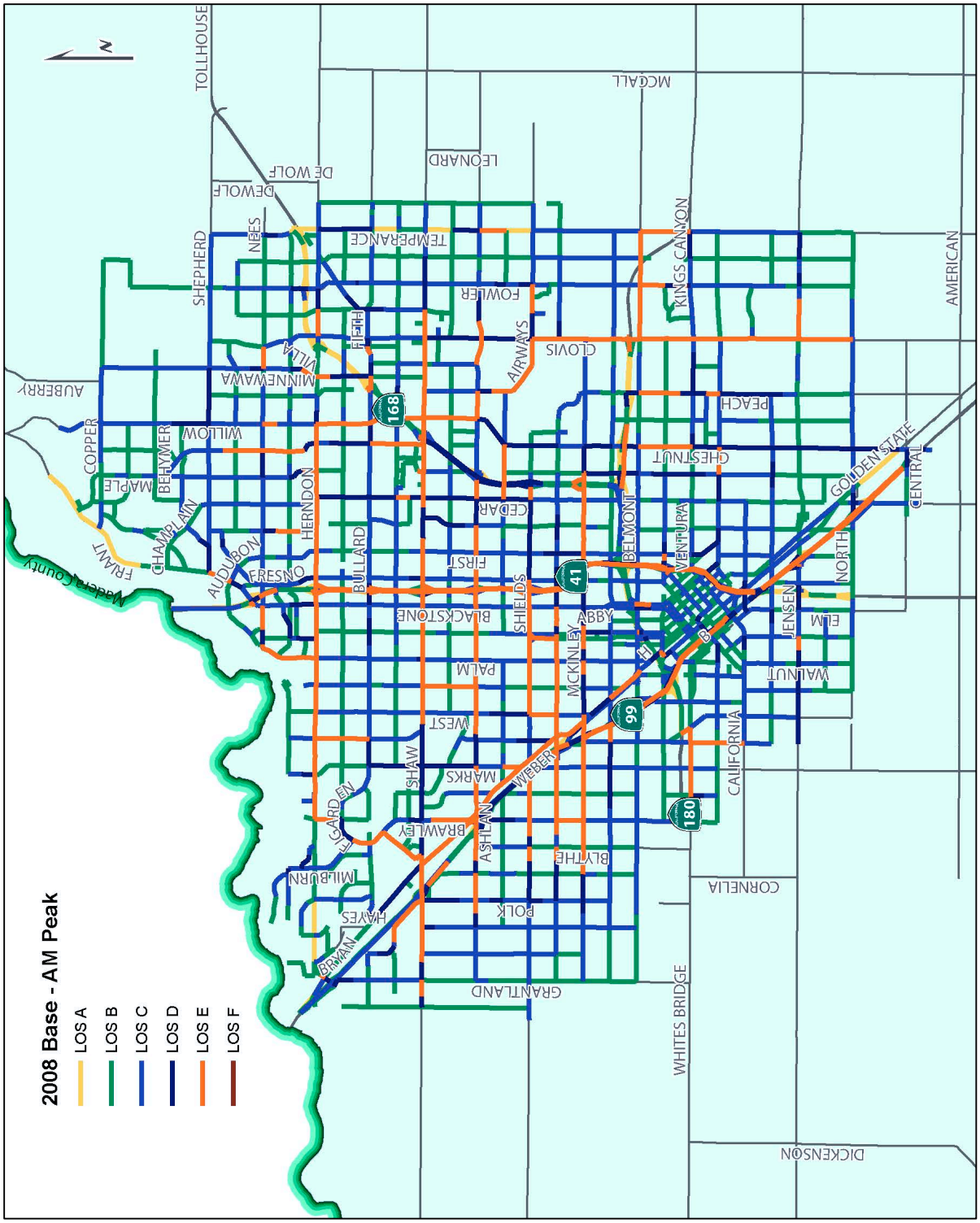


FIGURE 3-19
Year 2008 – FCMA
PM Peak Hour - Level of Service

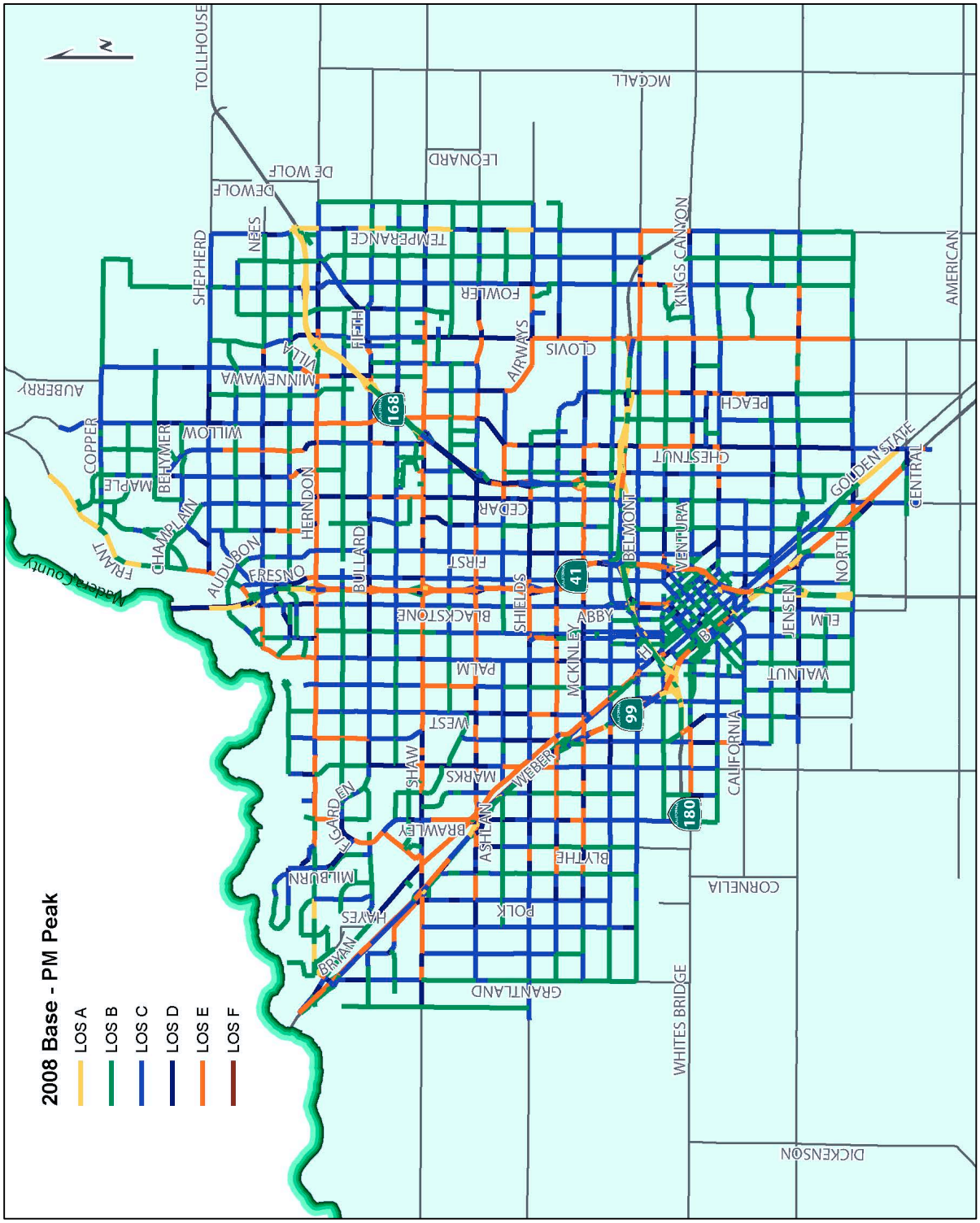


FIGURE 3-20
Year 2008 – Rural Area
AM Peak Hour - Level of Service

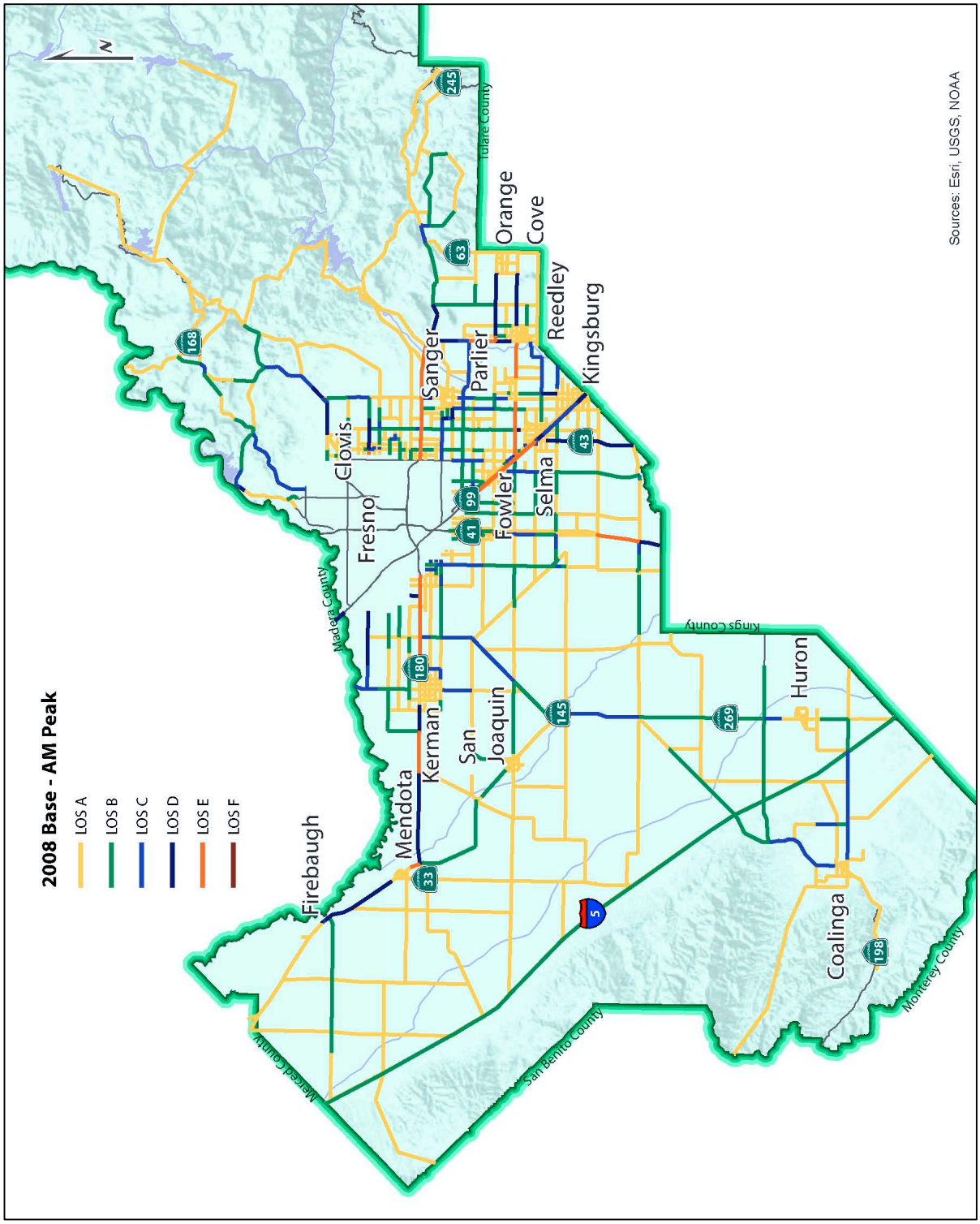


FIGURE 3-21
Year 2008 – Rural Area
PM Peak Hour - Level of Service

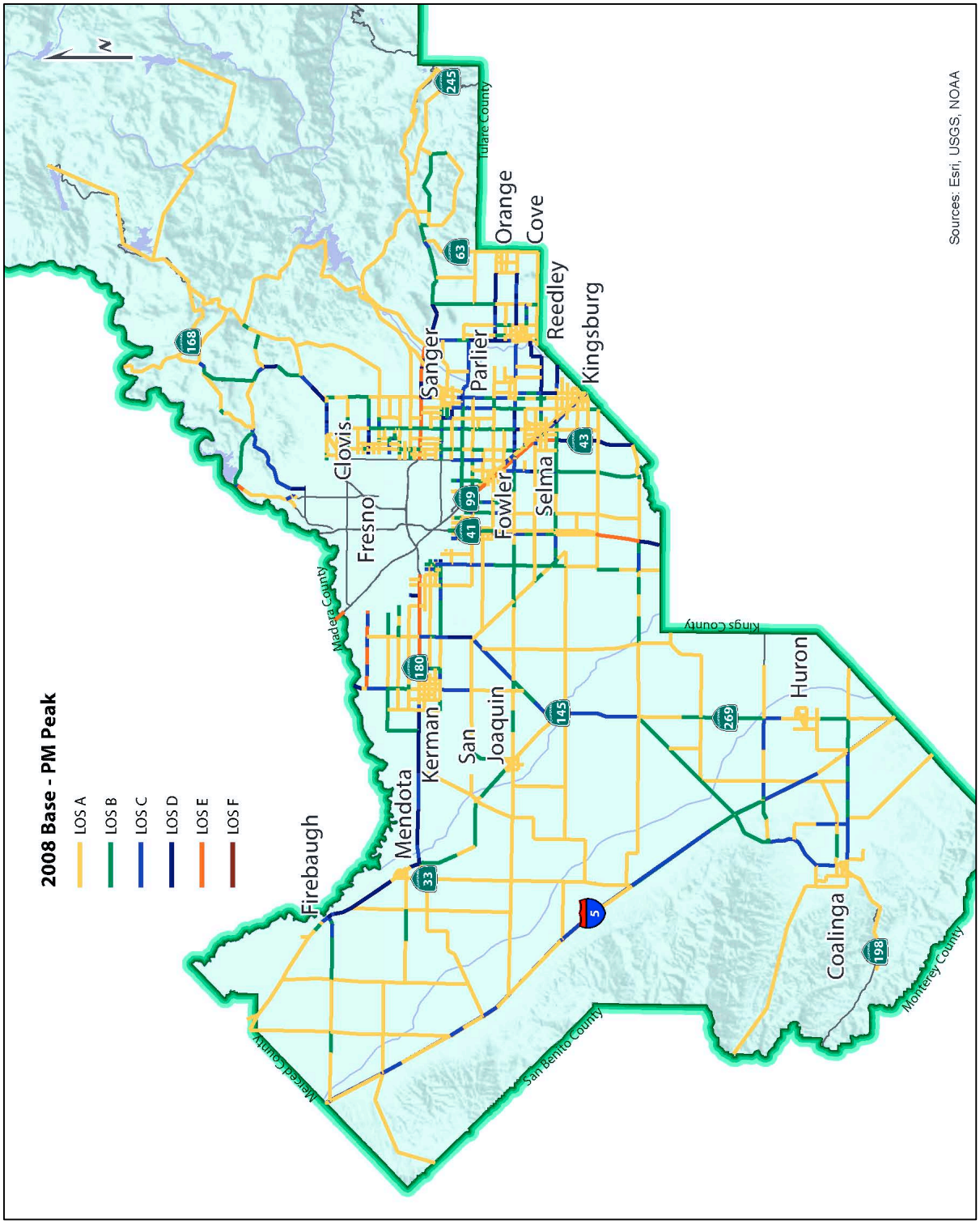


Table 3-86 below identifies the performance metrics associated with the base year or 2008. The year 2008 is the base year for purposes of the transportation impact analysis because this is the year for which traffic model calibration and validation were accomplished. The year 2008 is also the year in which traffic counts and other related traffic and travel-related information were collected.

Mass Transportation Existing Conditions

Existing mass transportation services in Fresno County consist of both public transit and AMTRAK rail passenger service. Transit services include inter-city, fixed-route, and demand-responsive operations. Common carriers within Fresno County include AMTRAK, Greyhound, Orange Belt Stage Lines, and others.

In the Fresno-Clovis Metropolitan Area (FCMA), urban public transportation is provided by Fresno Area Express (FAX), considered as the major transportation service provider in the area. As a department of the City of Fresno, FAX provides two categories of public transportation service in the area: fixed-route service for the general public, and Handy Ride's demand-responsive service. Handy Ride provides service to elderly and disabled individuals who are unable to ride the fixed-route system.

In addition to these services, the City of Clovis provides public transportation services, which include Clovis Stageline, a general public fixed-route system, and Clovis Round Up, which provides demand responsive, curb-to-curb transportation service to the elderly and disabled. Both Clovis Stageline and Clovis Round Up provide transport service within Clovis City limits.

The Fresno County Rural Area is served by common carriers, the general public and social service providers. The primary provider of rural general public transportation is the Fresno County Rural Transit Agency (FCRTA), which provides fixed-route services that link communities with each other and with the Fresno-Clovis Metropolitan Area. Intra-community public transport services (fixed-route and/or demand-response) are provided through public, and private or non-profit agencies. These services address the needs of the elderly, disabled, as well as the general public.

Fresno COG designated the Fresno County Rural Transit Agency (FCRTA) and the Fresno County Economic Opportunities Commission (FCEOC) as the Rural Consolidated Transportation Service Agency (Rural CTSA). FCEOC is responsible for program administration including coordination with social service agencies, data collection, development and implementation of the Rural CTSA Operations Program and Budget, enactment of service contracts, and other administrative tasks. The Rural CTSA process involves four types of coordinated transportation services that include vehicle timesharing, ridesharing, consolidation, and maintenance. In addition to providing service to these agencies, the Rural CTSA provides FCRTA with drivers for some of its public transit sub-systems.

TABLE 3-86
Traffic Model Summary Performance Measures
2014 RTP Project (2008 Conditions)

Summary Performance Measures from Network			
21,831,626	Vehicle-Miles of Travel	Vehicles	Daily
56,771	Intrazonal Trips	Vehicles	Daily
21,888,397	Total VMT	Vehicles	Daily
4,623,350	Vehicle-Miles of Travel in Congestion	Vehicles	Daily
21.12%	Percent VMT in Congestion	Vehicles	Daily
N/A	Person-Miles of Travel	Vehicles	Daily
190,702	Person-Miles of Travel	Transit	Daily
1,080,935	Vehicle-Hours of Travel	Vehicles	Daily
N/A	Person-Hours of Travel	Vehicles	Daily
N/A	Person-Hours of Travel	Transit	Daily
102,228	Vehicle-Hours of Delay	Vehicles	Daily
N/A	Person-Hours of Delay	Vehicles	Daily
N/A	Person-Hours of Delay	Transit	Daily
33.66	Average Speed	Vehicles	Daily
N/A	Average Speed	Transit	Daily
Summary Performance Measures from Trip Tables Excluding Through Trips			
439,818	Work Auto Trips	Trips	Daily
5,166	Work Transit Trips	Trips	Daily
12,554	Work Walk/Bike Trips	Trips	Daily
457,538	Work Total Trips	Trips	Daily
1,604,398	Non-Work Auto Trips	Trips	Daily
27,690	Non-Work Transit Trips	Trips	Daily
131,235	Non-Work Walk/Bike Trips	Trips	Daily
1,763,323	Non-Work Total Trips	Trips	Daily
2,044,216	Total Auto Trips	Trips	Daily
32,856	Total Transit Trips	Trips	Daily
143,789	Total Walk/Bike Trips	Trips	Daily
2,220,861	Total Trips	Trips	Daily
96.13%	% Work Auto Trips	Percent	Daily
1.13%	% Work Transit Trips	Percent	Daily
2.74%	% Work Walk/Bike Trips	Percent	Daily
90.99%	% Non-Work Auto Trips	Percent	Daily
1.57%	% Non-Work Transit Trips	Percent	Daily
7.44%	% Non-Work Walk/Bike Trips	Percent	Daily
92.05%	% Total Auto Trips	Percent	Daily
1.48%	% Total Transit Trips	Percent	Daily
6.47%	% Total Walk/Bike Trips	Percent	Daily

Passenger rail service provided by AMTRAK and potential future high speed rail passenger service are described in the Railroad and Goods Movement section of this Section.

Details regarding these and other mass transportation systems and a graphics depicting the systems within the County are provided in Chapter 2 of this EIR.

Aviation

Fresno County has a total of nine (9) public use airports with the Fresno Yosemite International (FYI) being the primary passenger airport facility in the region. The Fresno Yosemite International is the largest and busiest airport in the San Joaquin Valley. During 2013, 1.4 million passengers flew in and out of FYI. The number of passengers and the amount of enplaned cargo has also increased in recent years. The upward trend in the amount of enplaned cargo is expected to continue over the next twenty-five years, while the number of enplaned passengers is expected to once again meet and exceed its historic highs.

Total operations at FYI were approximately 135,000 per year for the year ending February 12, 2012, the most recent period for which data is available. This includes air carrier/commuter/charter, general aviation, and military operations but not including airfreight operations, which are separately estimated to be over 1,000 operations per year. FYI's four fixed base operators (FBOs) offer a wide range of services including fueling, aircraft maintenance, repair, storage, charter services, flight instruction, an aircraft mechanic school, advertising, surveying, air taxi, patrol, rentals and sales. FYI is designated a Primary Commercial Service Hub Airport in the California Aviation System Plan.

Details regarding these and other public use airports and a graphic depicting the airports within the County are provided in Chapter 2 of this PEIR.

Non-Motorized Existing Conditions

The cities and Fresno County continue to be involved in implementing bicycle lanes. Local planning efforts also include equestrian and hiking trail systems and pedestrian facilities. Pedestrian facilities hold particular importance in community design and redesign in working toward a more livable environment. Equestrian facilities are essentially recreational in nature. Equestrian facilities are typically not regional in function and, following the direction of the District 6 System Management Plan, this RTP will not consider them as alternative transportation modes at the regional level. This RTP will, however, consider pedestrian facilities as alternative transportation modes. Nevertheless, this RTP recognizes the value of equestrian trail systems for recreational purposes, as enhancements to the multimodal transportation system, and for their contribution to an improved quality of life in Fresno County and, therefore, supports their continued development.

For many, the use of bicycles as a means of transportation has several appealing aspects. Bicycling has positive air quality; energy, economic and health impacts and can reduce automobile congestion. From an air quality perspective, every bicycle trip that substitutes for auto travel, results in cleaner air. Bicycles do not consume scarce fuel, maintenance is low, and bicycling can be used for commuting as well as for recreational purposes while it promotes physical exercise.

The bicycle's door-to-door capability for shorter trips makes it an attractive alternative mode of transportation in the Fresno region when the climate is mild, because the flat terrain is ideal for riding. Implementation of a bikeway system will provide connectivity between cities and access to destinations of regional interest, as well as commuter lanes in the Fresno-Clovis Metropolitan Area and in many smaller cities within the county.

Goals for the development of bicycle transportation in Fresno County are as follows:

- ✓ Planning - The recognition and integration of the bicycle as a valid transportation mode in transportation planning activities.
- ✓ Physical Facilities - Safe, convenient, and continuous routes for bicyclists of all types that interface with and complement a multimodal transportation system.
- ✓ Safety and Education - Improved bicycle safety through education and enforcement.
- ✓ Encouragement - Increased acceptance of bicycling both as a legitimate transportation mode on public roads and highways and as a transportation mode that is a viable alternative to the automobile.
- ✓ Implementation - Increased development of the regional bikeways system and related facilities by maximizing funding opportunities.

Further details regarding the planned bikeways system are provided in Chapter 2 of this EIR along with figures depicting the existing and planned system. The plan calls for community routes and routes that link communities and provide access to activity centers, including major commercial and employment centers, major recreational sites, and schools. All of the cities in the County and the County itself have planned bikeway facilities, although limited available funding has had an impact on their construction. Nevertheless, local agencies continue to add to the inventory of completed bikeways on an ongoing basis, particularly in conjunction with new development.

Railroad and Goods Movement

The San Joaquin AMTRAK route provides passenger rail service to Oakland, Sacramento, and Bakersfield several times daily. AMTRAK also provides bus service from various rail stations along the San Joaquin route to cities that are not accessible by rail, such as Los Angeles and San Diego. The largest ridership along the San Joaquin route is Fresno.

With 280 miles of rail, there are four railroad companies that own or operate rail lines in Fresno County. The Union Pacific Railroad operates two mainlines and two branch lines. The Burlington Northern and Santa Fe (BNSF) Company operates one mainline and two branch lines. The San Joaquin Valley Railroad and the Tulare Valley Railroad each operate two branch lines. These rail lines are used to service industrial and agricultural areas in Fresno County.

Plans are currently being made for the future implementation of high speed rail service in California. The California High-Speed Rail Authority is responsible for planning, designing, building and operation of the first high-speed rail system in the nation. California high-speed rail will pass through Fresno and will connect the major cities of the state. By 2029, plans call for a system will run from San Francisco to the Los Angeles basin in under three hours at speeds capable of over 200 miles per hour. The system is planned to extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations. In addition, the Authority is working with regional partners to implement a state-wide rail modernization plan that will invest billions of dollars in local and regional rail lines to meet the state's 21st century transportation needs.

RTP Policies

The RTP Policy Element seeks to identify the transportation goals, objectives, and policies that meet the regional needs. Goals, objectives, and policies are established to direct the courses of action that will provide efficient, integrated multimodal transportation systems to serve the mobility needs of people, including accessible pedestrian and bicycle facilities, and freight, while fostering economic prosperity and development, and minimizing mobile sources of air pollution. The 2014 RTP reflects transportation planning for Fresno County through the year 2040. Because Fresno County is one of eight MPOs that make up the San Joaquin Valley Air Basin, we are linked for regional transportation planning through air quality guidelines. As such, the Needs Assessment is addressed on the regional Valley level and can be found in the *San Joaquin Valley Regional Transportation Chapter*; the *Regional Setting, State and Federal Issues Chapter*; and is further developed in the *Needs Assessment and Action Element Chapter* (available for review at the San Joaquin Valley Air Pollution Control District). The Action Element describes the programs and actions necessary to implement the Goals of the Policy Element. The Financial Element Chapter summarizes the cost of plan implementation constrained by a realistic projection of available revenues.

In addition, the 2014 RTP will include the first Sustainable Communities Strategies (SCS) for Fresno County. As such, a separate committee and public participation process was followed. Performance measures /indicators were developed to evaluate the scenario process and can be located in the Sustainable Communities Strategies chapter of the 2014 RTP.

Additional details regarding the Policy Element are provided in Chapter 2 of this EIR. In developing the Policy Element for the 2014 RTP broad overarching focus points are evident: preservation of existing facilities, sound financial management with leveraging of existing funding, and balancing transportation needs with land use.

Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Criteria for Significance

The following significance criteria were used to determine the level of significance of impacts on the transportation system resulting from the proposed Project. Significance criteria were developed based on Appendix G of the State CEQA Guidelines and on professional judgment. In general, an individual improvement project and new development project contained within the RTP and SCS would result in a significant transportation impact if it:

- ✓ Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
- ✓ Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.
- ✓ Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- ✓ Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- ✓ Result in inadequate emergency access.
- ✓ Result in inadequate parking capacity.
- ✓ Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Generally, proposed projects are of the following two types:

- ✓ New Systems (new highway and transit facilities).
- ✓ Modifications to Existing Systems (widening roads, addition of carpool lanes, grade crossings, intelligent transportation systems, maintenance, and service alterations).

Impact 3.17.1 – Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system

A description of the existing transportation system is provided earlier in this section. Table 3-87 provides estimates of vehicle miles traveled (VMT), person-miles and person-hours of travel, vehicle hours of travel (VHT), vehicle-hours, and person-hours of delay, and average speed for Fresno County under the Project scenario (RTP and SCS). The proposed 2014 RTP and SCS results in total VMT that increases by over 11 million miles per day (a 50 percent increase from the 2008 baseline VMT), due to the travel associated with 450,000 new residents (a 50 percent increase from 2008 baseline population) in Fresno County. Given the expected population growth from 2008 to 2040, the total VMT was expected to increase relative to 2008 for the proposed RTP and SCS. Table 3-86 provides 2008 estimates of vehicle miles traveled (VMT), person-miles and person-hours of travel, vehicle hours of travel (VHT), vehicle-hours, and person-hours of delay, and average speed for Fresno County.

The proposed RTP and SCS are based on regional employment and population forecasts, and accommodate this growth through land use and transportation projects. The RTP and SCS do not create the forecasted growth, but provide strategies to accommodate it in ways that increase transportation system efficiency and minimize VMT. Therefore, this section considers whether the RTP and SCS have the potential to induce growth beyond the current forecasted growth. While the proposed RTP and SCS increase VMT by 50% relative to 2008, the percent VMT in congestion only increases by 1.73% over this same time period. This minor increase indicates that the land use changes and transportation investments in the proposed RTP and SCS are effectively working together to improve system efficiency.

This is achieved through both land use and transportation changes in the RTP and SCS that encourage more compact land uses that are more effectively served by transit, walking, and biking, and therefore generate less vehicle travel. Concentrating development in transit corridors likely increases transit usage. In addition, an emphasis on transit service and complete streets in appropriate land uses and areas will likely increase multi-modal travel options. Road and highway projects focus on relieving vehicle congestion while other Blueprint strategies allow for better optimization of existing transportation infrastructure. Although the project focuses on relieving vehicle congestion to the extent possible, it does cause an increase in VMT and that leads to an increase in traffic congestion. This is a significant impact of the project.

The potential impact of the 2014 RTP and SCS on adjacent jurisdictions was considered. However, the project does not include land use changes in adjacent counties and therefore would not cause trip generation increases in adjacent counties. The RTP and SCS will tend to make changes to the distribution of trips in adjacent counties and therefore does have the potential to cause significant traffic impacts in adjacent counties. This is considered to be a significant and unavoidable impact of the Project.

TABLE 3-87
Traffic Model Summary Performance Measures
2014 RTP Project (2040 Conditions)

Summary Performance Measures from Network			
32,816,192	Vehicle-Miles of Travel	Vehicles	Daily
75,931	Intrazonal Trips	Vehicles	Daily
32,892,123	Total VMT	Vehicles	Daily
7,514,902	Vehicle-Miles of Travel in Congestion	Vehicles	Daily
22.85%	Percent VMT in Congestion	Vehicles	Daily
N/A	Person-Miles of Travel	Vehicles	Daily
290,583	Person-Miles of Travel	Transit	Daily
2,363,439	Vehicle-Hours of Travel	Vehicles	Daily
N/A	Person-Hours of Travel	Vehicles	Daily
N/A	Person-Hours of Travel	Transit	Daily
711,277	Vehicle-Hours of Delay	Vehicles	Daily
N/A	Person-Hours of Delay	Vehicles	Daily
N/A	Person-Hours of Delay	Transit	Daily
33.32	Average Speed	Vehicles	Daily
N/A	Average Speed	Transit	Daily
Summary Performance Measures from Trip Tables Excluding Through Trips			
603,316	Work Auto Trips	Trips	Daily
8,721	Work Transit Trips	Trips	Daily
18,124	Work Walk/Bike Trips	Trips	Daily
629,380	Work Total Trips	Trips	Daily
2,296,220	Non-Work Auto Trips	Trips	Daily
41,085	Non-Work Transit Trips	Trips	Daily
192,497	Non-Work Walk/Bike Trips	Trips	Daily
2,529,801	Non-Work Total Trips	Trips	Daily
2,899,536	Total Auto Trips	Trips	Daily
49,412	Total Transit Trips	Trips	Daily
210,234	Total Walk/Bike Trips	Trips	Daily
3,159,182	Total Trips	Trips	Daily
95.86%	% Work Auto Trips	Percent	Daily
1.39%	% Work Transit Trips	Percent	Daily
2.88%	% Work Walk/Bike Trips	Percent	Daily
90.77%	% Non-Work Auto Trips	Percent	Daily
1.62%	% Non-Work Transit Trips	Percent	Daily
7.61%	% Non-Work Walk/Bike Trips	Percent	Daily
91.78%	% Total Auto Trips	Percent	Daily
1.56%	% Total Transit Trips	Percent	Daily
6.65%	% Total Walk/Bike Trips	Percent	Daily

Mitigation Measures

Implementation of street and highway improvement projects and programs generally will serve to improve traffic flows and reduce congestion and delay within Fresno County. However, street and highway needs are constrained by limited funding sources that are necessary to implement additional projects along the regional transportation system. As indicated above, traffic increases are projected to occur given the forecasted population growth in Fresno County.

To address related impacts such as increased VMT and VHT, and to support auto trip-making consistent with policies contained in the 2014 RTP and SCS, the following mitigation measures are recommended.

- ✓ Measures intended to reduce vehicle miles traveled (VMT) and reduce vehicle hours of delay (VHT) or congestion levels are part of the RTP and SCS. These include: increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use/transportation connection through increased densities, other Travel Demand Management measures described in the RTP and in local agency General Plans, and key transportation investments targeted to reduce congestion levels and improve LOS.

- ✓ Fresno COG will continue to score funding programs considering a projects ability to enhance complete streets objectives

- ✓ Beyond the currently financially and institutionally feasible measures included in the 2014 RTP and SCS, Fresno COG will identify further reduction in VMT, and fuel consumption that could be obtained through land-use strategies, additional car-sharing programs, additional vanpools, and additional bicycle programs.

- ✓ Transportation Planning: Fresno COG will assist local jurisdictions to encourage new developments incorporate both local and regional transit measures into the project design that promote the use of alternative modes of transportation.

- ✓ Local jurisdictions can and should promote ride sharing programs e.g., by designating a certain percentage of parking spaces for high-occupancy vehicles, providing larger parking spaces to accommodate vans used for ride-sharing, and designating adequate passenger loading and unloading and waiting areas.

- ✓ The Plan includes measures intended to reduce vehicle hours of delay. These include: system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the

land use-transportation connection and key transportation investments targeted to reduce delay. Fresno COG shall encourage local agencies to fully implement these policies and projects.

- ✓ The Plan includes measures intended to reduce daily heavy-duty truck vehicle hours of delay. These include: goods movement capacity enhancements, system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce heavy-duty truck delay. Fresno COG shall encourage local agencies to fully implement these policies and projects.

- ✓ Local jurisdictions can and should encourage the use of public transit systems by enhancing safety and cleanliness on vehicles and in and around stations, providing shuttle service to public transit, offering public transit incentives and providing public education and publicity about public transportation services.

- ✓ Local jurisdictions can and should encourage bicycling and walking by incorporating bicycle lanes into street systems in regional transportation plans, new subdivisions, and large developments, creating bicycle lanes and walking paths directed to the location of schools and other logical points of destination and provide adequate bicycle parking, and encouraging commercial projects to include facilities on-site to encourage employees to bicycle or walk to work.

- ✓ Transit agencies can and should encourage bicycling to transit facilities by providing additional bicycle parking, locker facilities, and bike lane access to transit facilities when feasible.

- ✓ Project sponsors can and should build or fund a major transit stop within or near the development.

- ✓ Local jurisdictions and transit agencies can and should provide public transit incentives such as free or low-cost monthly transit passes to employees, or free ride areas to residents and customers.

- ✓ Local jurisdictions and project sponsors can and should incorporate bicycle lanes, routes and facilities into street systems, new subdivisions, and large developments.

- ✓ Local jurisdictions can and should require amenities for non-motorized transportation, such as secure and convenient bicycle parking.

- ✓ Local jurisdictions can and should ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation.

- ✓ Local jurisdictions can and should connect parks and open space through shared pedestrian/bike paths and trails to encourage walking and bicycling.

- ✓ Local jurisdictions can and should create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.

- ✓ Local jurisdictions can and should work with the school districts to improve pedestrian and bike access to schools and to restore or expand school bus service using lower-emitting vehicles.

- ✓ Local jurisdictions and transit agencies can and should provide information on alternative transportation options for consumers, residents, tenants and employees to reduce transportation-related emissions.

- ✓ Local jurisdictions can and should educate consumers, residents, tenants and the public about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; vehicle performance and efficiency (e.g., keeping tires inflated); and low or zero-emission vehicles.

- ✓ Project Selection: Local jurisdictions can and should give priority to transportation projects that would contribute to a reduction in vehicle miles traveled per capita, while maintaining economic vitality and sustainability.

- ✓ System Interconnectivity: Local jurisdictions can and should create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car sharing, bicycling and walking, by incorporating the following:
  - ➢ Ensure transportation centers are multi-modal to allow transportation modes to intersect;
  - ➢ Provide adequate and affordable public transportation choices, including expanded bus routes and service, as well as other transit choices such as shuttles, light rail, and rail;
  - ➢ To the extent feasible, extend service and hours of operation to underserved arterials and population centers or destinations such as colleges;
  - ➢ Focus transit resources on high-volume corridors and high-boarding destinations such as colleges, employment centers and regional destinations;
  - ➢ Coordinate schedules and routes across service lines with neighboring transit authorities;
  - ➢ Support programs to provide “station cars” for short trips to and from transit nodes (e.g., neighborhood electric vehicles);
  - ➢ Study the feasibility of providing free transit to areas with residential densities of 15 dwelling units per acre or more;
  - ➢ Employ transit-preferential measures, such as signal priority and bypass lanes. Where compatible with adjacent land use designations, right-of-way acquisition or parking removal may occur to accommodate transit-preferential measures or improve access to transit. The use of access

management should be considered where needed to reduce conflicts between transit vehicles and other vehicles;
- Provide safe and convenient access for pedestrians and bicyclists to, across, and along major transit priority streets;
- Use park-and-ride facilities to access transit stations only at ends of regional transitways or where adequate feeder bus service is not feasible.

✓ Transit System Infrastructure: Local jurisdictions can and should upgrade and maintain transit system infrastructure to enhance public use, including:
- Ensure transit stops and bus lanes are safe, convenient, clean and efficient;
- Ensure transit stops have clearly marked street-level designation, and are accessible;
- Ensure transit stops are safe, sheltered, benches are clean, and lighting is adequate;
- Place transit stations along transit corridors within mixed-use or transit-oriented development areas at intervals of three to four blocks, or no less than one-half mile.

✓ Customer Service: Transit agencies can and should enhance customer service and system ease-of-use, including:
- Develop a Regional Pass system to reduce the number of different passes and tickets required of system users;
- Implement "Smart Bus" technology, using GPS and electronic displays at transit stops to provide customers with "real-time" arrival and departure time information (and to allow the system operator to respond more quickly and effectively to disruptions in service);
- Investigate the feasibility of an on-line trip-planning program.

✓ Transit Funding: Local jurisdictions can and should prioritize transportation funding to support a shift from private passenger vehicles to transit and other modes of transportation, including:
- Give funding preference to improvements in public transit over other new infrastructure for private automobile traffic;
- Before funding transportation improvements that increase roadway capacity and VMT, evaluate the feasibility and effectiveness of funding projects that support alternative modes of transportation and reduce VMT, including transit, and bicycle and pedestrian access.

✓ Transit and Multimodal Impact Fees: Local jurisdictions can and should assess transit and multimodal impact fees on new developments to fund public transportation infrastructure, bicycle infrastructure, pedestrian infrastructure and other multimodal accommodations.

✓ System Monitoring: Local jurisdictions can and should monitor traffic and congestion to determine when and where new transportation facilities are needed in order to increase access and efficiency.

- ✓ Arterial Traffic Management: Local jurisdictions can and should modify arterial roadways to allow more efficient bus operation, including bus lanes and signal priority/preemption where necessary.

- ✓ HOV Lanes: Local jurisdictions can and should encourage the construction of high-occupancy vehicle (HOV) lanes or similar mechanisms whenever necessary to relieve congestion and reduce emissions.

- ✓ Ride-Share Programs: Fresno COG and local jurisdictions can and should promote ride sharing programs, including:
  - ➢ Designate a certain percentage of parking spaces for ride-sharing vehicles;
  - ➢ Designate adequate passenger loading, unloading, and waiting areas for ride-sharing vehicles;
  - ➢ Provide a web site or message board for coordinating shared rides;
  - ➢ Encourage private, for-profit community car-sharing, including parking spaces for car share vehicles at convenient locations accessible by public transit;
  - ➢ Hire or designate a rideshare coordinator to develop and implement ridesharing programs.

- ✓ Employer-based Trip Reduction: Local jurisdictions can and should support voluntary, employer-based trip reduction programs, including:
  - ➢ Provide assistance to regional and local ridesharing organizations;
  - ➢ Advocate for legislation to maintain and expand incentives for employer ridesharing programs;
  - ➢ Require the development of Transportation Management Associations for large employers and commercial/ industrial complexes;
  - ➢ Provide public recognition of effective programs through awards, top ten lists, and other mechanisms.

- ✓ Ride Home Programs: Local jurisdictions can and should implement a “guaranteed ride home” program for those who commute by public transit, ride-sharing, or other modes of transportation, and encourage employers to subscribe to or support the program.

- ✓ Local Area Shuttles: Transit agencies can and should encourage and utilize shuttles to serve neighborhoods, employment centers and major destinations.

- ✓ Local jurisdictions and transit agencies can and should create a free or low-cost local area shuttle system that includes a fixed route to popular tourist destinations or shopping and business centers.

- ✓ Local jurisdictions can and should work with existing shuttle service providers to coordinate their services.

- ✓ Low- and No-Travel Employment Opportunities: Local jurisdictions can and should facilitate employment opportunities that minimize the need for private vehicle trips, including:

- Amend zoning ordinances and the Development Code to include live/work sites and satellite work centers in appropriate locations;
- Encourage telecommuting options with new and existing employers, through project review and incentives, as appropriate.

✓ Local jurisdictions can and should support bicycle use as a mode of transportation by enhancing infrastructure to accommodate bicycles and riders, and providing incentives.

✓ Development Standards for Bicycles: Local jurisdictions can and should establish standards for new development and redevelopment projects to support bicycle use, including:

- Amending the Development Code to include standards for safe pedestrian and bicyclist accommodations, by incorporating the following:

  - "Complete Streets" policies that foster equal access by all users in the roadway design;
  - Bicycle and pedestrian access internally and in connection to other areas through easements;
  - Safe access to public transportation and other non-motorized uses through construction of dedicated paths;
  - Safe road crossings at major intersections, especially for school children and seniors;
  - Adequate, convenient and secure bike parking at public and private facilities and destinations in all urban areas;
  - Street standards will include provisions for bicycle parking within the public right of way.

✓ Local jurisdictions can and should require new development and redevelopment projects to include bicycle facilities, as appropriate with the new land use, including:

- Construction of weatherproof bicycle facilities where feasible, and at a minimum, bicycle racks or covered, secure parking near the building entrances;
- Provision and maintenance of changing rooms, lockers, and showers at large employers or employment centers.
- Prohibit projects that impede bicycle and pedestrian access, such as large parking areas that cannot be safely crossed by non-motorized vehicles, and developments that block through access on existing or potential bicycle and pedestrian routes;
- Encourage the development of bicycle stations at intermodal hubs, with attended or "valet" bicycle parking, and other amenities such as bicycle rental and repair, and changing areas with lockers and showers;
- Conduct a connectivity analysis of the existing bikeway network to identify gaps, and prioritize bikeway development where gaps exist.

- ✓ Bicycle and Pedestrian Trails: Local jurisdictions can and should establish a network of multi-use trails to facilitate safe and direct off-street bicycle and pedestrian travel, and will provide bike racks along these trails at secure, lighted locations.

- ✓ Bicycle Safety Program: Local jurisdictions can and should develop and implement a bicycle safety educational program to teach drivers and riders the laws, riding protocols, routes, safety tips, and emergency maneuvers.

- ✓ Bicycle and Pedestrian Project Funding: Local jurisdictions can and should pursue and provide enhanced funding for bicycle and pedestrian facilities and access projects, including, as appropriate:
  - Apply for regional, State, and federal grants for bicycle and pedestrian infrastructure projects;
  - Establish development exactions and impact fees to fund bicycle and pedestrian facilities;
  - Use existing revenues, such as State gas tax subventions, sales tax funds, and general fund monies for projects to enhance bicycle use and walking for transportation.

- ✓ Bicycle Parking: Local jurisdictions can and should adopt bicycle parking standards that ensure bicycle parking sufficient to accommodate 5 to 10 percent of projected use at all public and commercial facilities, and at a rate of at least one per residential unit in multiple-family developments.

- ✓ Local jurisdictions can and should implement measures to reduce employee vehicle trips and to mitigate emissions impacts from municipal travel.

- ✓ Pedestrian and Bicycle Promotion: Local jurisdictions can and should work with local community groups and downtown business associations to organize and publicize walking tours and bicycle events, and to encourage pedestrian and bicycle modes of transportation.

- ✓ Trip Reduction Program: Local jurisdictions can and should implement a program to reduce vehicle trips by employees, including:
  - Providing incentives and infrastructure for vanpooling and carpooling, such as pool vehicles, preferred parking, and a website or bulletin board to facilitate ride-sharing;
  - Providing subsidized passes for mass transit;
  - Offering compressed work hours, off-peak work hours, and telecommuting, where appropriate;
  - Offer a guaranteed ride home for employees who use alternative modes of transportation to commute.

- ✓ Bicycle Transportation Support: Local jurisdictions can and should promote and support the use of bicycles as transportation, including:
  - Providing bicycle stations with secure, covered parking, changing areas with storage lockers and showers, as well as a central facility where minor repairs can be made;

- Providing bicycles, including electric bikes, for employees to use for short trips during business hours;
- Implementing a police-on-bicycles program;
- Providing a bicycle safety program, and information about safe routes to work.

✓ Transit Access to Municipal Facilities: Local jurisdiction and agency facilities can and should be located on major transit corridors, unless their use is plainly incompatible with other uses located along major transit corridors.

Significance After Mitigation

The mitigation measures would require implementing agencies to avoid or mitigate impacts to all types of transportation facilities (multi-modal). Fresno COG does not have land use authority nor does it have the ability to design and construct transportation improvement projects and future land use developments included in the RTP and SCS. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies. Therefore the impact is considered significant and unavoidable.

Impact 3.17.2 – Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways

For the Fresno County Congestion Management Program (CMP), the adopted Level of Service (LOS) standard is LOS D or the minimum threshold for the streets and roads in the Fresno-Clovis metropolitan areas, and LOS C for the rest of the County. The most recent CMP for the Fresno region\was completed in 2009 and includes LOS estimates for 2007 (the CMP base year) and for 2030 (the future year). Details regarding CMP LOS are provided in the 2014 RTP Appendices.

To determine the Year 2040 LOS for each segment along the Regionally Significant Roads System, segment LOS was estimated using the Fresno COG Traffic Model. The Model considers the capacity of individual segments based on numerous roadway variables (freeway design speed, signalized intersections per mile, number of lanes, saturation flow, etc.). For the 2014 RTP and SCS, the minimum LOS standard is as reflected in the 2009 CMP, which is LOS D or the minimum threshold for the streets and roads in the Fresno-Clovis metropolitan areas, and LOS C for the rest of the County. Results of the 2040 LOS segment analysis with the Project (2014 RTP and SCS) along the RTP Regionally Significant Roads System are reflected in Figures 3-22 and 3-23 (FCMA) and Figures 3-24 and 3-25 (Fresno County). Those segments with levels of service at E or F in the FCMA are considered deficient and a significant impact and those segments in the rest of the County that show levels of service at D, E or F, are considered a significant impact. Other details related to the Project condition are provided in Table 3-87.

FIGURE 3-22
Year 2040 Build – FCMA
AM Peak Hour - Level of Service

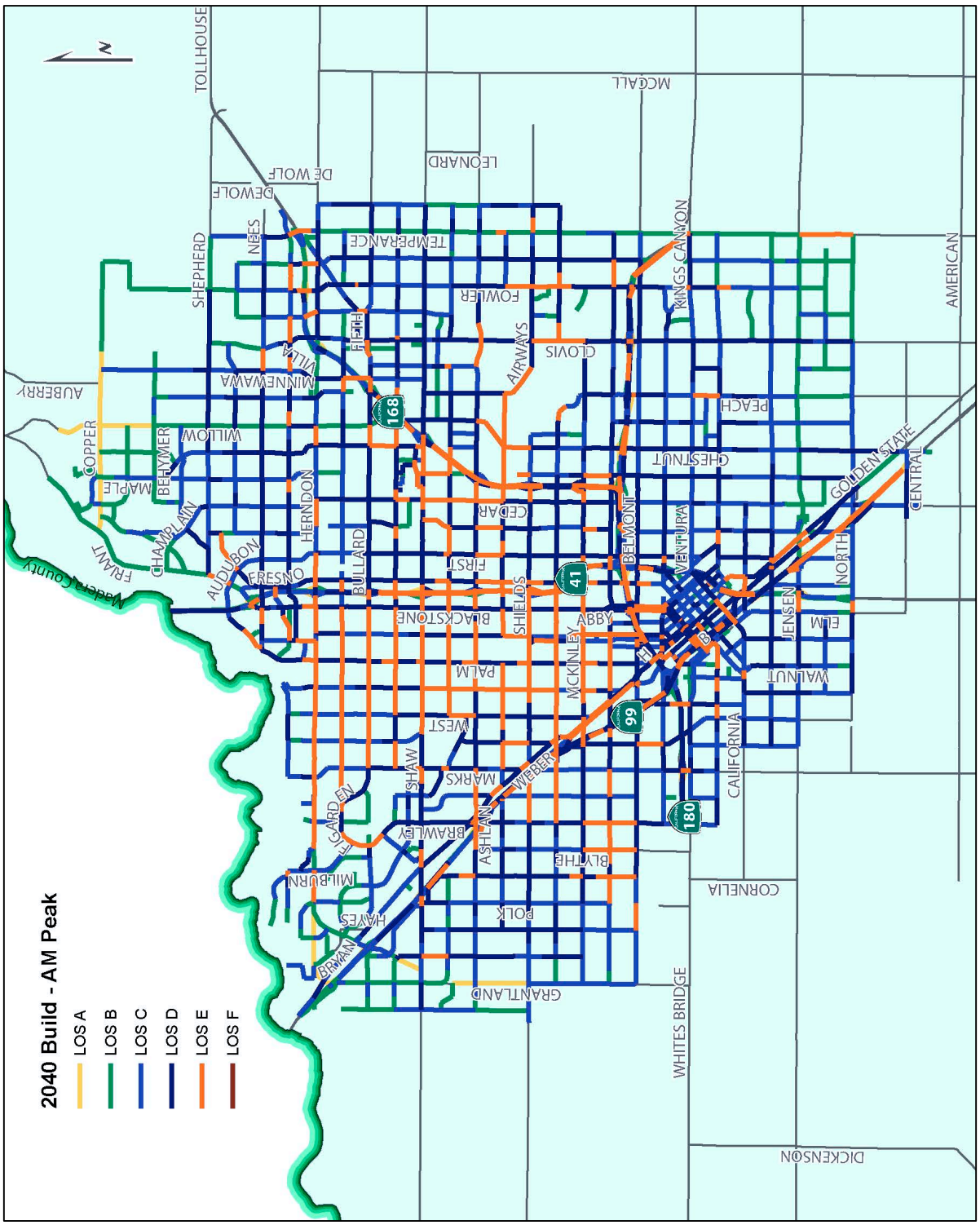


FIGURE 3-23
Year 2040 Build – FCMA
PM Peak Hour - Level of Service

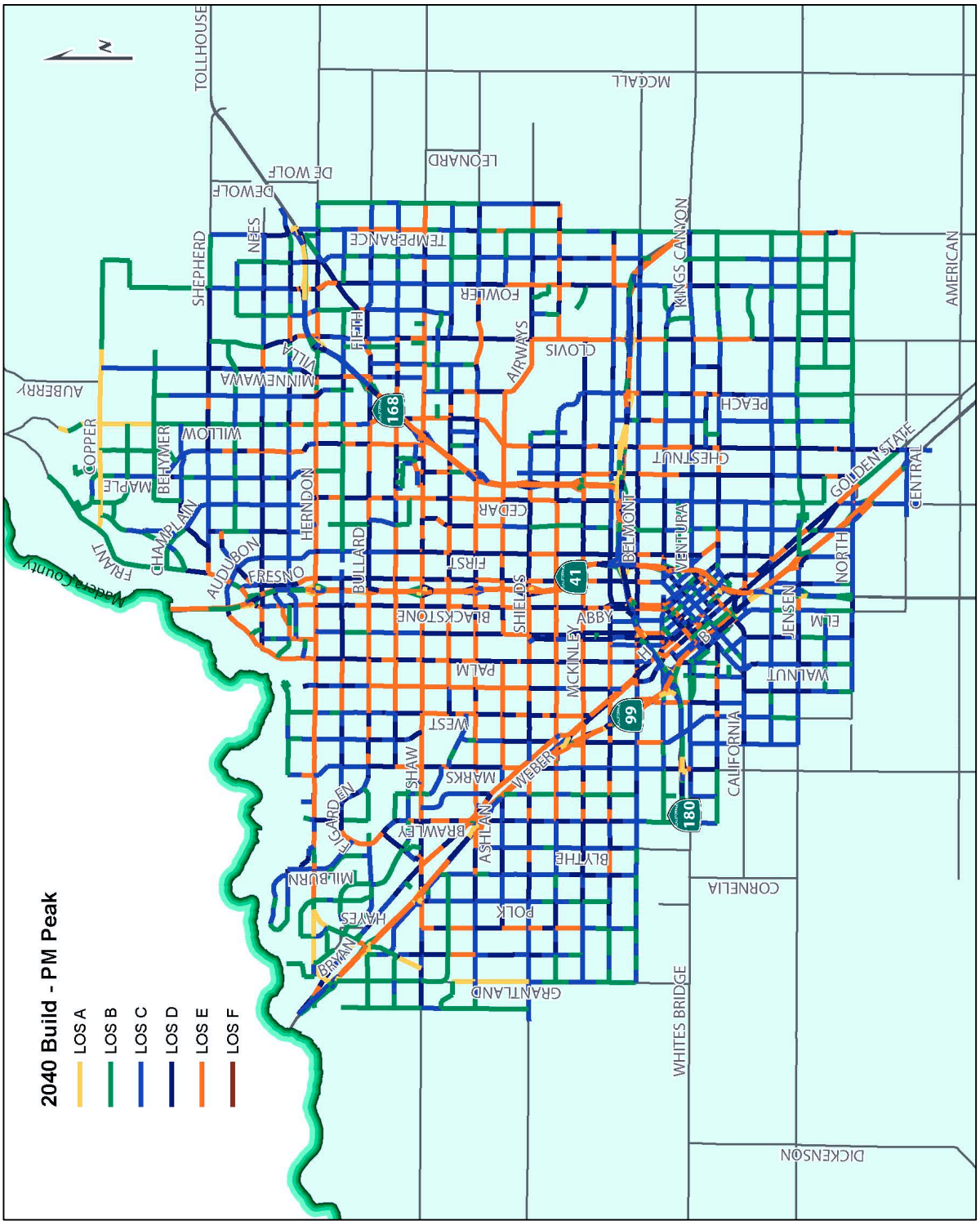


FIGURE 3-24
Year 2040 Build – Rural Area
AM Peak Hour – Level of Service

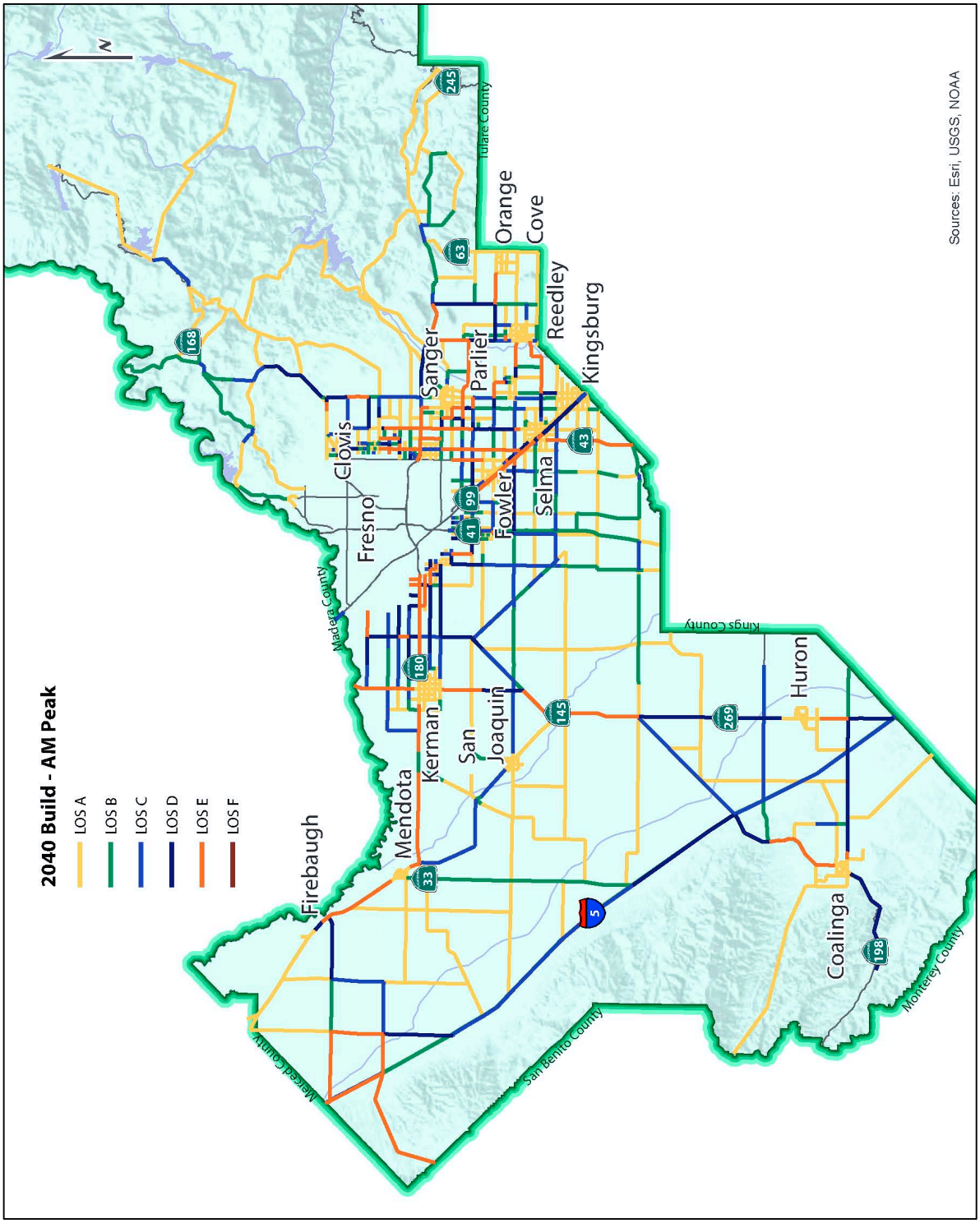
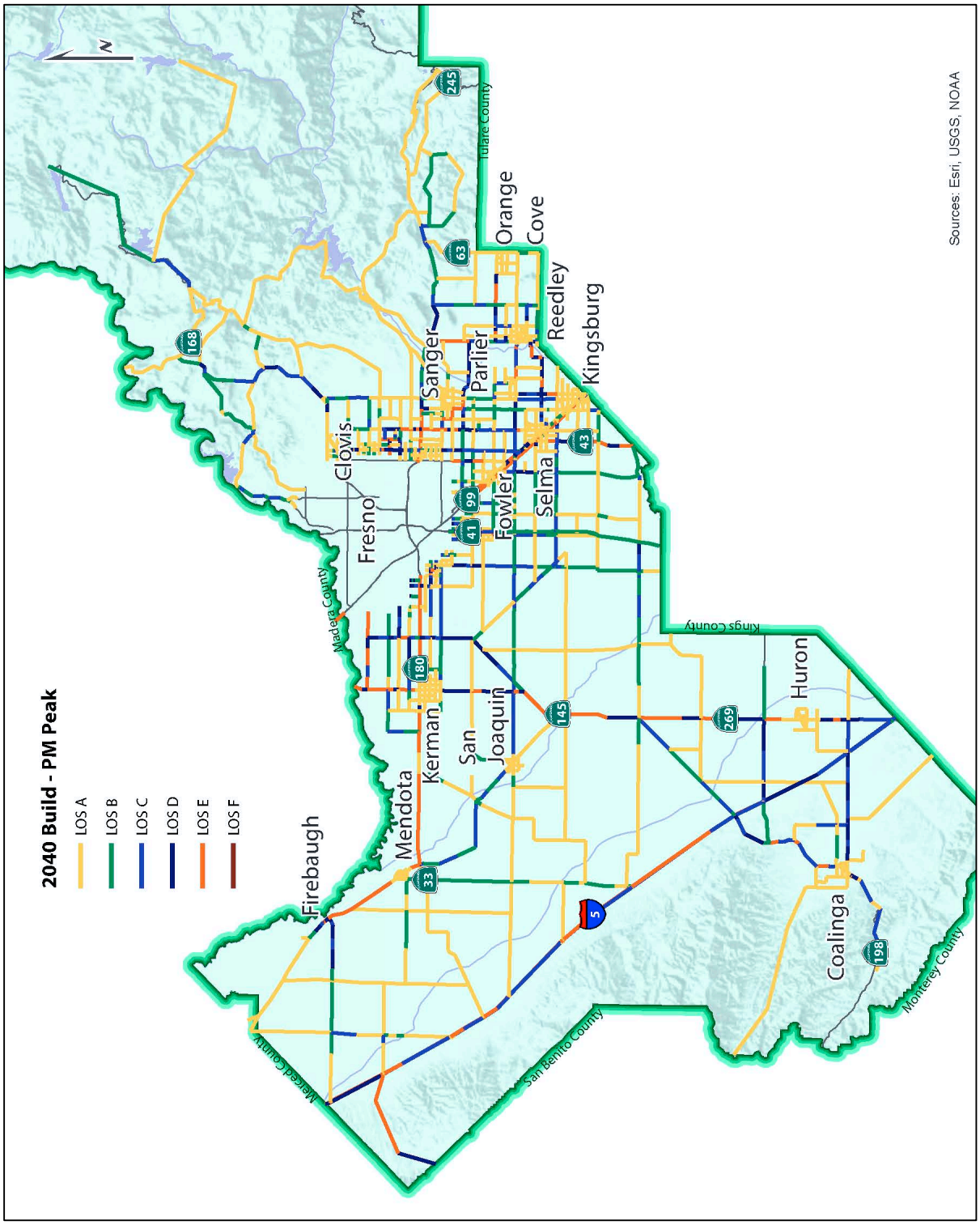


FIGURE 3-25
Year 2040 Build – Rural Area
PM Peak Hour - Level of Service



The resultant number of deficient facilities along the Regionally Significant Roads System with and without the Project indicates that when the individual improvement project improvements are made to the regionally significant street and highway system, LOS conditions within the Fresno County region will significantly improve. However, deficiencies will remain even after implementation of the roadway improvement projects included in the RTP. Capacity increasing projects that would improve these remaining deficient levels of service are not included in the Project.

Referencing Tables 3-86 and 3-87, congestion decreases and transit use increases with the Project compared to the 2008 base line and to the No Project Alternative as referenced in Chapter 4. In addition, employment choices are increased for both automobile and transit users. Because one of the stated objectives of the Project is to reduce congestion and improve mobility, this is considered a significant beneficial impact. As reflected in the CMP (contained in the RTP Appendices) and Figures 3-18 through 3-21 for the 2008 or base year condition and in Figures 3-22 through 3-25 for the Project condition, segment LOS deficiencies will increase with the Project. While the Project will improve deficient levels of service compared to the No Project Alternative (reference Chapter 4 of this PEIR), the Project will not address all deficient levels of service anticipated in the future.

In comparing levels of service on individual roadways for 2008 conditions (Figures 3-18 through 3-21) and 2040 conditions with the 2014 RTP and SCS (Figures 3-22 through 3-25), it can be concluded that the number of roadways that have a deficient level of service is expected to increase from 2008 to 2040 with the 2014 RTP and SCS. In the FCMA, this is noticeable through extended lengths of SR-99 and SR-41 that are expected to be deficient. In addition, there are a number of arterial streets that are expected to experience deficient conditions in 2040 that are not deficient in 2008. In the rural area, the increase in the number of deficient roadway segments can be most easily noted on various two-lane County roads and State highways, such as Colorado Road, SR-180, and SR-198. In both the FCMA and rural areas, there are also roadways that are expected to experience improvements in level of service between 2008 and 2040 with the RTP and SCS.

The potential impact of the 2014 RTP and SCS on adjacent jurisdictions was considered. However, the project does not include land use changes in adjacent counties and therefore would not cause trip generation increases in adjacent counties. The RTP and SCS will tend to make changes to the distribution of trips in adjacent counties and therefore does have the potential to cause significant traffic impacts in adjacent counties. This is considered to be a significant and unavoidable impact of the Project.

Mitigation Measures

Implementation of street and highway improvement projects and programs generally will serve to improve traffic flows and reduce congestion and delay within Fresno County. However, street and highway needs are constrained by limited funding sources that are necessary to implement additional

projects along the regional transportation system. As indicated above, LOS deficiencies are projected to occur, even considering the wide range of financially constrained street and highway improvements identified in the RTP.

To address related impacts and to support policies contained in the 2014 RTP and SCS, the following mitigation measures are recommended.

- ✓ A number of local street and road and State Route segments along the regional street and highway will experience deficient LOS conditions by 2040. Mitigation measures for these segments have not been identified or programmed in the RTP. Intersection improvements and lane additions would improve deficient levels of service to acceptable levels consistent with minimum LOS policies identified in the RTP; however, funding to address the improvements is not available or the costs to mitigate the deficiencies are prohibitive. Fresno COG should coordinate efforts to identify appropriate strategies that would improve deficient levels of service along the affected streets and highways. Fresno COG should work continue to with local agencies and Caltrans, District 6 to identify alternative improvements, associated cost estimates, and an implementation plan and schedule as part of various Caltrans studies and during update of local general plans and other planning efforts. Various funding sources should be analyzed as part of implementation plans and findings should be incorporated into future RTPs.

- ✓ Project sponsors of a commercial use can and should submit to the Lead Agency (or other appropriate government agency) a Transportation Demand Management (TDM) plan containing strategies to reduce on-site parking demand and single occupancy vehicle travel. The sponsor should implement the approved TDM plan. The TDM should include strategies to increase bicycle, pedestrian, transit, and carpools/vanpool use. All four modes of travel should be considered. Strategies to consider include the following:

  - Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement
  - Construction of bike lanes per the prevailing Bicycle Master Plan (or other similar document)
  - Signage and striping onsite to encourage bike safety
  - Installation of pedestrian safety elements (such as cross walk striping, curb ramps, countdown signals, bulb outs, etc.) to encourage convenient crossing at arterials
  - Installation of amenities such as lighting, street trees, trash and any applicable streetscape plan.
  - Direct transit sales or subsidized transit passes
  - Guaranteed ride home program
  - Pre-tax commuter benefits (checks)
  - On-site car-sharing program
  - On-site carpooling program
  - Distribution of information concerning alternative transportation options

- Parking spaces sold/leased separately
- Parking management strategies; including attendant/valet parking and shared parking spaces

✓ Project sponsors and construction contractors can and should meet with the appropriate Lead Agency (or other government agency) to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project sponsor should develop a construction management plan for review and approval by the Lead Agency (or other government agency as appropriate). The plan should include at least the following items and requirements:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.
- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
- Location of construction staging areas for materials, equipment, and vehicles at an approved location.
- A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager should determine the cause of the complaints and should take prompt action to correct the problem. The Lead Agency should be informed who the Manager is prior to the issuance of the first permit.
- Provision for accommodation of pedestrian flow.
- As necessary, provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on street spaces.
- Any damage to the street caused by heavy equipment, or as a result of this construction, should be repaired, at the project sponsor's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair should occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety should be repaired immediately. The street should be restored to its condition prior to the new construction as established by the Lead Agency (or other appropriate government agency) and/or photo documentation, at the sponsor's expense, before the issuance of a Certificate of Occupancy.
- Any heavy equipment brought to the construction site should be transported by truck, where feasible.
- No materials or equipment should be stored on the traveled roadway at any time.
- Prior to construction, a portable toilet facility and a debris box should be installed on the site, and properly maintained through project completion.
- All equipment should be equipped with mufflers.

- Prior to the end of each work-day during construction, the contractor or contractor should pick up and properly dispose of all litter resulting from or related to the project whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.

✓ Project sponsors can and should ensure that prior to construction all necessary local and State road and railroad encroachment permits are obtained. As deemed necessary by the governing jurisdiction, the road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans should include the following requirements:

- Identification of all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow.
- Development of circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone.
- Scheduling of truck trips outside of peak morning and evening commute hours.
- Limiting of lane closures during peak hours to the extent possible.
- Usage of haul routes minimizing truck traffic on local roadways to the extent possible.
- Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction.
- Installation of traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones.
- Development and implementation of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. The access plans would be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions should be asked to identify detours for emergency vehicles, which will then be posted by the contractor. Notify in advance the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures.
- Storage of construction materials only in designated areas
- Coordination with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary.

✓ Local jurisdictions can and should implement traffic and roadway management strategies to improve mobility and efficiency, and reduce associated emissions.

✓ Signal Synchronization: Local jurisdictions can and should expand signal timing programs where emissions reduction benefits can be demonstrated, including maintenance of the synchronization system, and will coordinate with adjoining jurisdictions as needed to optimize transit operation while maintaining a free flow of traffic.

- ✓ Delivery Schedules: Local jurisdictions can and should establish ordinances or land use permit conditions limiting the hours when deliveries can be made to off-peak hours in high traffic areas.

Significance After Mitigation

While improved mobility will result from implementation of the projects contained in the RTP as well as the mitigation measures listed above, some significant unavoidable impacts, considering the regional minimum LOS policy of "D" will occur. LOS deficiencies will result along a number of regional street and highway segments and associated intersections because of the inability to widen such facilities due to funding and other constraints even with RTP projects. It is anticipated that even with implementation of the Project, significant LOS deficiencies will continue therefore; this impact would be considered significant and unavoidable.

Congestion decreases and transit use increases with the Project are considered beneficial impacts. In addition, employment choices are increased for both automobile and transit users. Because one of the stated objectives of the 2014 RTP and SCS is to reduce congestion and improve mobility, this is considered a significant beneficial impact.

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts on the level of service standard established by the county congestion management agency for designated roads or highways, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce impacts identified.

Impact 3.17.3 – Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks

The 2014 RTP and SCS will not directly result in changes in air traffic patterns; however, increased population forecast to occur by 2040 would likely result in increased air traffic. The Airport Land Use Commission (ALUC) of Fresno County establishes the policies on land uses around the airport, ensuring they are compatible with airport operations (which is done on an advisory basis). It also evaluates the compatibility of proposed local agency land use policy actions with the relevant provisions within the associated Airport Land Use Compatibility Plan (ALUCP). The ALUC also reviews individual development projects to ensure they are within the noise and safety standards in accordance with state laws and the ALUCP within the review area of influence of the airport the project is located in. The ALUCPs provide the

guidance intended to minimize the public's exposure to excessive noise and safety hazards, as well as ensure that the approaches to airports are kept clear of structures and other conflicts that could pose an aviation safety hazard. The most recently adopted ALUCPs for public airports in Fresno County are:

- Coalinga Airport Land Use Plan
- Fresno-Chandler Executive Airport Land Use Plan
- Fresno Yosemite International Airport Land Use Compatibility Plan
- Harris Ranch Land Use Plan
- Reedley Airport Land Use Plan
- Selma-Reedley-Firebaugh-Mendota Airports Land Use Plans
- Sierra Sky Park Land Use Plan

The ALUC is also responsible for working collaboratively with the incorporated cities and Fresno County, developers, and the public at-large to ensure that consistency is maintained between the land use decision making process and the areas surrounding each of the public access airports. Implementation of the ALUCPs will avoid or mitigate safety risks associated with air traffic.

Mitigation Measures

Not applicable.

Significance After Mitigation

Not applicable.

Impact 3.17.4 – Substantially increase hazards due to a design feature or incompatible uses

While the 2014 RTP and SCS will not directly result in increased hazards due to design feature (e.g., sharp curves or dangerous intersections) or increase conflicts between incompatible uses (e.g., farm equipment and other vehicular traffic), measures should be implemented to ensure that traffic hazards are minimized in the design of the individual transportation projects included in the RTP. Land use development in urban areas of Fresno County will increase the number of residents in close proximity to public transit. It will also increase opportunities for walking and biking, thereby making it necessary that multi-modal facilities be designed to enhance the safety of these users.

Mitigation Measures

The implementing agency would be responsible for developing and ensuring adherence to necessary mitigation measures. Fresno COG is not an implementing agency and does not have the ability to design and construct transportation improvement projects included in the RTP and SCS. The responsibility to

design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies.

To address related impacts and to support policies contained in the 2014 RTP and SCS, the following additional mitigation measures are recommended.

- ✓ Implementing agencies should consider safety an objective in the design of RTP projects, and should plan to avoid, improve, or mitigate safety impacts in the course of project-level environmental review.

- ✓ Fresno COG shall conduct a forum where policy-makers can be educated and can develop consensus on regional transportation safety and security policies.

- ✓ Fresno COG shall work with local officials to assist with implementation of regional transportation safety and security policies.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts that substantially increase hazards due to a design feature or incompatible uses, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce impacts identified.

Impact 3.17.5 – Result in inadequate emergency access

Congestion is expected to worsen between now and 2040 which could adversely impact emergency access. While the 2014 RTP and SCS would generally enhance mobility and access to destinations (including access for emergency vehicles) as compared to the No Project Alternative, measures should be implemented to maintain adequate emergency access in the design of RTP projects. Before 2014 RTP projects are implemented by local jurisdictions, all projects will undergo additional environmental analysis, as applicable and appropriate, that will include evaluation of impacts by emergency and public services. The implementing agencies will use these to ensure adequate access in the design of individual RTP projects. During emergencies, emergency vehicles demand (and should be given) right of way which

is signaled through lights and sirens. This will remain the case in the future, allowing emergency vehicles to avoid some congestion.

Mitigation Measures

Implementing agencies should consider emergency access impacts in the design of RTP projects, and should plan to avoid, improve, or mitigate these impacts in the course of project-level environmental review. The implementing agency would be responsible for requiring and ensuring adherence to necessary mitigation measures. Fresno COG is not an implementing agency and does not have the ability to design and construct transportation improvement projects included in the RTP and SCS. The responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies.

To address related impacts and to support policies contained in the 2014 RTP and SCS, the following additional mitigation measures are recommended.

- ✓ Fresno COG shall support local agencies with the rapid repair of transportation infrastructure in the event of an emergency. This will be accomplished by Fresno COG, in cooperation with local and State agencies, identifying critical infrastructure needs necessary for: a) emergency responders to enter the region, b) evacuation of affected facilities, and c) restoration of utilities. In addition, Fresno COG shall establish transportation infrastructure practices that promote and enhance security.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts that result in inadequate emergency access, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce impacts identified.

Impact 3.17.6 – Result in inadequate parking capacity

While the 2014 RTP and SCS will not directly result in inadequate parking capacity, measures should be implemented to ensure that negative parking impacts are minimized in the design of the individual

transportation projects included in the RTP. Expected population increases as well as land use development in Fresno County will increase the traffic volumes and parking demand.

Mitigation Measures

Implementing agencies should consider existing parking facilities in the design of RTP projects, and should plan to avoid, improve, or mitigate impacts to these facilities in the course of project-level environmental review. Implementing agencies should also consider additional parking demand and capacity in future land use development. The implementing agency would be responsible for developing and ensuring adherence to necessary mitigation measures. Fresno COG does not have land use authority nor does it have the ability to design and construct transportation improvement projects and future land use developments included in the RTP and SCS. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies.

To address related impacts and to support policies contained in the 2014 RTP and SCS, the following additional mitigation measures are recommended.

- ✓ Local jurisdictions can and should establish parking policies and requirements that capture the true cost of private vehicle use and support alternative modes of transportation.

- ✓ Parking Policy: Local jurisdictions can and should adopt a comprehensive parking policy to discourage private vehicle use and encourage the use of alternative transportation by incorporating the following:

    - Reduce the available parking spaces for private vehicles while increasing parking spaces for shared vehicles, bicycles, and other alternative modes of transportation;
    - Eliminate or reduce minimum parking requirements for new buildings;
    - "Unbundle" parking (require that parking is paid for separately and is not included in the base rent for residential and commercial space);
    - Use parking pricing to discourage private vehicle use, especially at peak times;
    - Create parking benefit districts, which invest meter revenues in pedestrian infrastructure and other public amenities;
    - Establish performance pricing of street parking, so that it is expensive enough to promote frequent turnover and keep 15 percent of spaces empty at all times;
    - Encourage shared parking programs in mixed-use and transit-oriented development areas.

- ✓ Event Parking Policies: Local jurisdictions can and should establish policies and programs to reduce onsite parking demand and promote ride-sharing and public transit at large events, including:

  - ➢ Promote the use of peripheral parking by increasing on-site parking rates and offering reduced rates for peripheral parking;
  - ➢ Encourage special event center operators to advertise and offer discounted transit passes with event tickets;
  - ➢ Encourage special event center operators to advertise and offer discount parking incentives to carpooling patrons, with four or more persons per vehicle for on-site parking;
  - ➢ Promote the use of bicycles by providing space for the operation of valet bicycle parking service.

- ✓ Parking "Cash-out" Program: Local jurisdictions can and should require new office developments with more than 50 employees to offer a Parking "Cash-out" Program to discourage private vehicle use.

- ✓ Electric/Alternative Fuel Vehicle Parking: Local jurisdictions can and should require new commercial and retail developments to provide prioritized parking for electric vehicles and vehicles using alternative fuels.

- ✓ Municipal Parking Management: Local jurisdictions can and should implement a Parking Management Program to discourage private vehicle use, including:

  - ➢ Encouraging carpools and vanpools with preferential parking and a reduced parking fee;
  - ➢ Institute a parking cash-out program;
  - ➢ Renegotiate employee contracts, where possible, to eliminate parking subsidies;
  - ➢ Install on-street parking meters with fee structures designed to discourage private vehicle use; establish a parking fee for all single-occupant vehicles.

- ✓ Local jurisdictions can and should adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts that result in inadequate parking capacity, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to

determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce impacts identified.

Impact 3.17.7 – Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

The 2014 RTP and SCS includes a list of improvement projects and programs (including public transit, bicycle and trail, and pedestrian projects) to enhance Fresno County's multi-modal transportation system. These RTP projects are consistent with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. At the time of project implementation, additional environmental analyses will be required which the implementing agency will use to ensure adequate access for transit and active mode users in the design of RTP projects.

While the RTP and SCS would generally enhance and improve mobility for transit and active modes, it also contains roadway projects that have the potential to create conflicts between motorists and transit riders, pedestrians and cyclists.

Mitigation Measures

Implementing agencies should consider access and mobility needs of transit riders, pedestrians and cyclists and plan to enhance the mobility and access for these alternative modes, and to avoid, improve, or mitigate impacts to these modes in the course of project-level environmental review and design. Implementing agency agencies should require measures that increase alternate modes of transportation. Fresno COG does not have land use authority nor does it have the ability to design and construct transportation improvement projects and future land use developments included in the RTP and SCS. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies.

To address related impacts and to support policies contained in the 2014 RTP and SCS, the following additional mitigation measures are recommended.

- ✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect the current status of future 2014 RTP street and highway improvements and future land use allocations reflected in the SCS.

Significance After Mitigation

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above mitigation measures will provide the framework and direction to avoid or reduce impacts that cause potential conflicts with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks), it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-notated mitigation strategies intended to avoid or reduce impacts identified.

4.0 COMPARISON OF PROJECT ALTERNATIVES

4.1 INTRODUCTION

CEQA requires that an EIR describe a reasonable range of alternatives to the project or to the location of the project that could feasibly avoid or lessen significant environmental impacts while at the same time substantially attaining the basic objectives of the project. CEQA also states that an EIR should also evaluate the comparative merits of the alternatives. This chapter identifies the potential alternatives to the proposed project, a qualitative analysis of each alternative, and a comparison of each alternative to the proposed project. Key provisions of *State CEQA Guidelines* Section 15126.6 pertaining to the alternatives analysis are provided below.

- ✓ An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.

- ✓ An EIR need not consider any conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible.

- ✓ Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment, the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

- ✓ The range of alternatives required in an EIR is governed by a "rule of reason" That requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the proposed project. Of these alternatives, the EIR need examine in detail only the ones that the Lead Agency determines could feasibly attain most of the basic objectives of the project.

- ✓ The No Project Alternative shall be evaluated along with its impacts to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The No Project Alternative analysis shall discuss the existing conditions at the time the notice of preparation is published, as well as what would reasonably be expected to occur in the

foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

- ✓ An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

According to CEQA, the range of feasible alternatives is selected and discussed in a manner that would foster meaningful public participation and informed decision-making. Factors that may be taken into account when addressing the feasibility of alternatives (as described in *State CEQA Guidelines* Section 5126.6[f][1]) are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site.

Referencing CEQA, an EIR must briefly describe the reasons for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are feasible, and, therefore, merit in-depth consideration. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet project objectives, are infeasible, or do not avoid any significant environmental effects.

State CEQA Guidelines require that an EIR identify a range of reasonable Project alternatives, or alternative Project locations, which could feasibly meet the basic objectives of the Project, as well as evaluate the merits of the alternatives. The Guidelines also require that the No Project alternative and its impacts are evaluated, and that discussion should focus on alternatives that are capable of eliminating significant adverse environmental effects of the Project or reducing them to less-than-significant levels. In addition, SB 375 required analysis only includes lands outside of the current spheres of influence; while CEQA requires that all land be considered. As such, several notations throughout this chapter will refer to SB 375 land analysis, and CEQA analysis, indicating which type of data the item is referring to. Within this document, the SB 375 analysis is notated for transparency and consistency with discussions that have taken place throughout the RTP and SCS planning process. To ensure CEQA requirements are met, data indicating impact levels to all lands is clearly notated throughout the chapter.

The alternative impact analysis is presented below at a summary level of detail, relying upon the base information presented in Section 3 of this EIR. This section only provides a comparison for the purpose of selecting the environmentally superior alternative. If the alternative with the least environmental impact is the No Project alternative, then one of the other alternatives is to be identified as the environmentally superior alternative.

4.2 OVERVIEW

The impact analyses presented in Section 3 of this Daft PEIR focuses on an analysis of the Project (2014 RTP and SCS Scenario B). Three (3) additional alternatives have been developed in this section of the Draft PEIR to ensure that a reasonable range of alternatives to the Project is provided. The Policy Element for the 2014 RTP supports three broad overarching objectives:

- ✓ Preservation of existing facilities and services
- ✓ Sound financial management leveraging of existing funding
- ✓ Balancing transportation needs with land use

These overarching focal points referenced in the RTP Policy Element are also considered as EIR objectives for purposes of this Draft PEIR. Specifics regarding each focus point or PEIR objective follows.

- ✓ ***Preservation of existing facilities and services***
  Maintaining existing facilities and services is a responsibility that is primarily tasked to the local agencies, since the majority of state and federal funds that come to Fresno COG are mainly limited to capital improvements. Fresno COG supports multimodal uses and roadway maintenance and rehabilitation, which can be a cost-effective approach to delivering more complete streets. The transit system works to gain efficiency from coordinating diverse services, leading to better customer service and ridership. Potential improvements are investigated to make transit attractive to new users, while enhancing the experience for the transit-dependent population, inclusive of low-income and minority areas. Transportation demand management works to help residents find alternatives to single occupancy driving. Fresno COG continues with a well-developed rideshare and senior taxi script programs.

- ✓ ***Sound financial management leveraging of existing funding***
  The effects of the national recession continue to be felt in Fresno County. With the shortfalls in county and cities' budgets, it continues to be important for Fresno COG to provide support to local planning efforts while seeking additional funding. The decreased jobs and housing growth along with slower rates of population growth projections creates less money forecasted for investment.

- ✓ ***Balancing transportation needs with land use***
  The 2014 RTP and SCS was developed following Fresno COG member agency input, Transportation Technical Committee, Policy Advisory Committee, Policy Board direction, and state and federal requirements, along with input from the 2014 RTP Roundtable Committee and community stakeholder input. While continuing to build on the Blueprint Principles, the 2014 RTP and SCS integrates the transportation system with land use and more compact development. Mixed use development with better balance of jobs and housing will help meet the changing needs of our communities. Successful

incorporation of this future development can lead to shorter commutes, fewer trips overall, and providing more transportation choices including bike/pedestrian and transit availability.

For purposes of this analysis, Project alternatives include the "No Project" or Status Quo, Scenario A, and Scenario C. Each of these alternatives are defined below in Section 4.3. A matrix identifying the Performance Measures and results used to evaluate and compare each of the alternatives is displayed in Table 4-1 and discussed below. A comparison of SCS scenario alternatives A, B, and C, based on areas of particular interest to involved stakeholder groups is presented in Table 4-2.

TABLE 4-1
2014 RTP and SCS Performance Measures

	Performance Measure/Indicator	Definition	Analysis	Scenario A	Scenario B	Scenario C	Scenario D	Status Quo
Land Use (Location Efficiency)	Transit-oriented development	Share of the region's growth in households and employment within half-mile of Bus Rapid Transit (BRT)	Using GIS, identify the planning areas intersecting a half-mile buffer around the scenario's BRT lines; compare total housing units and jobs against their respective scenario countywide totals.	HU: 27,475 (28.0%) EMP: 35,805 (43.7%)	HU: 20,389 (21.3%) EMP: 29,958 (36.6%)	HU: 26,416 (27.1%) EMP: 34,646 (42.3%)	HU: 33,415 (31.1%) EMP: 43,518 (53.1%)	HU: 5,787 (6.4%) EMP: 9,969 (12.2%)
	Residential density	Average residential density for new growth	Divide total new housing units by the sum acres of the scenario's planning areas that have non-zero residential growth.	8.3 HU/acre	7.4 HU/acre	8.5 HU/acre	10.2 HU/acre	4.6 HU/acre
	Percent of work trips less than 3 miles	Share of total work trips which are fewer than 3 miles	Percentage of work-based trips that are less than 3 miles long out of total work-based trips based on work trip length distribution provided by the traffic model.		17%			
	Work trip length distribution	Statistical distribution of work trip length in the region	Work-based trips length distribution provided by the traffic model.		8.9 miles on average (more details in distribution curves)			
	Housing	Percent of housing by types (SF/TH/MF)	The results for this indicator were provided by Envision Tomorrow.	44.1%/9.0%/46.9%	53.1%/9.1%/37.8%	45.1%/8.3%/46.6%	36.6%/14.6%/48.8%	77.7%/7.3%/15.1%
	Compact development	Growth in population compared with acres developed	Divide total population growth by the sum acres of the scenario's planning areas that have non-zero residential or employment growth.	27.6 ppl/acre	21.1 ppl/acre	24.7 ppl/acre	31.1 ppl/acre	13.9 ppl/acre
	Housing in terms of market demand	Housing types based on market study	Compare scenario housing mix with projected 2010-2040 consumer demand results from The Concord Group's market demand analysis, 2012 (SF/TH/MF).		SCS: 53%/9%/38% Demand: 57%/18%/25%			
	Access to transit line	New housing development within half-mile of transit stops	Using GIS, identify planning areas that intersect a half-mile buffer around existing and planned transit stop locations throughout Fresno County. (Sources: FAX bus stops, Clovis Transit stops, FCRTA stops, proposed BRT stops)		34,036 HU (35.5%)			
Transportation (Mobility, Accessibility, and Reliability)	(Recurrent) person delay per capita	Daily delay per capita in minutes	Per capita daily delay was calculated by dividing total daily delay, provided by the traffic model, by total population for each analysis year.		17.4 min			
	Total Person delay	Excess travel time resulting from the difference between a reference speed and actual speed	Total daily person delay based on delay by facility type (freeway, arterial, collector, etc.) and mode (drive alone, 2-person car pool, etc.) provided by the traffic model.		377689 hours/day			
	Travel time distribution for work and non-work trips	Travel time distribution for work and non-work trips	Travel time distribution by trip purpose (work-based and non-work-based) provided by the traffic model.		HBW: 16.6 min / HBO: 21.1 min / NHB: 16.4 min (more details in distribution curves)			
	Average distance for work or non-work trips in miles	The average distance traveled for work or non-work trips separately	Average trip lengths for work-based and non-work-based trips based on the trip length distribution provided by the traffic model.		HBW: 8.9 mi / HBO: 111.6 mi / NHB: 8.3 mi			
	Average work trip travel time	In minutes	Average trip length in time (minutes) for work-based trips, estimated by the traffic model.		16.6 min			
	Average work trip speed by mode	In mph by mode	Average speed in mph for work-based trips made in auto modes (drive alone, carpool), estimated by the traffic model.		Drive Alone: 31.3 mph / Carpool: 31.9 mph			
	Percent of work trips accessible in 30 minutes	In peak periods by mode (drive alone, carpool, and transit)	Percentage of work-based trips that are shorter than 30 minutes, estimated by mode by the traffic model.		Drive alone:94%/Carpool: 91%/Transit:			
	Percent of non-work trips accessible in 15 minutes	By mode (drive alone, carpool, and transit)	Percentage of non-work-based trips that are shorter than 15 minutes, estimated by mode by the traffic model.		Drive alone: 47%/Carpol 45%/Transit:7%/Walk:1			
	Vehicle Miles Traveled (VMT)	Total VMT and per capita VMT, per capita VMT reduction against 2005	Per capita VMT are calculated by dividing total daily VMT, provided by the traffic model excluding through traffic VMT, by the total population of the analysis year. Year 2005 value was back-casted to serve as a reference point for per capita VMT reduction.	23,584,242 miles / 18.1 miles / -11.88%	23,766,798 miles / 18.3 miles / -11.20%	23,416901 miles / 18.0 miles / -12.5%	23,724,332 miles / 18.2 miles / -11.36%	24,437,535miles / 18.8 miles / -8.69%
	Congested Vehicle Miles Traveled (VMT)	Congested VMT total and per capita, percentage of total auto/transit travel in congested conditions (peaks, all day)	Congested travel when V/C is greater than 0.75, summarized in total congested VMT, per capita congested VMT, and percentage of congested VMT in total VMT. Data was estimated by the traffic model by facility by different time periods (a.m. peak hour, p.m. peak hour, daily, etc.)		Daily Freeway: 3,762,593 / Daily Local: 2,804,821 (other time of day available)			
	Commute Travel (work trip) mode share	Weekday commute trips by mode, commute mode share	Mode share (drive alone, carpool, transit, bike and walk) among home-based work trips, estimated by the traffic model.		Drive Alone 81.9% / Carpool 13.4% / Transit 1.5% / Walk 2.5% / Bike 0.7%			
	Non-Commute Travel (non-work trip) mode share	Weekday non-commute trips by mode, non-commute mode share	Mode share (drive alone, carpool, transit, bike and walk) among all trips other than home-based work trips, estimated by the traffic model.		Drive Alone 28.4% / Carpool 62.3% / Transit 1.6% / Walk 5.7% / Bike 2.0%			

TABLE 4-1
2014 RTP and SCS Performance Measures

	Performance Measure/Indicator	Definition	Analysis	Scenario A	Scenario B	Scenario C	Scenario D	Status Quo
Healthy Environment	Criteria pollutants emissions	CO, NOX, PM2.5, PM10, and VOC	Criteria pollutants emissions were output from emission model EMFAC2011, which takes input such as facility type, speed profile, and VMT provide by the traffic model.	CO: 40 tons/ PM10: 7.9 tons / PM2.5: 1.0 tons / NOx: 11.6 tons (All Pass Conformity)	CO: 40 tons/ PM10: 7.9 tons / PM2.5: 1.0 tons / NOx: 11.6 tons (All Pass Conformity)	CO: 40 tons/ PM10: 7.8 tons / PM2.5: 1.0 tons / NOx: 11.5 tons (All Pass Conformity)	CO: 40 tons/ PM10: 7.9 tons / PM2.5: 1.0 tons / NOx: 11.6 tons (All Pass Conformity)	CO: 41 tons/ PM10: 8.2 tons / PM2.5: 1.0 tons / NOx: 11.9 tons (All Pass Conformity)
	Greenhouse gas reduction	Per capita greenhouse gas reduction against 2005	Greenhouse gas (GHG) emission was provided by emission model EMFAC2011, which takes input such as facility type, speed profile, and VMT provide by the traffic model. Per capita GHG emission was calculated by dividing total GHG by total population for each analysis year. Year 2005 values were back-casted to serve as a reference point for per capita GHG reduction.	-11.62%	-10.97%	-12.13%	-11.02%	-8.42%
	Fuel Consumption	On-road fuel consumed in gallons per capita	Total fuel (gasoline and diesel) consumption estimated by emission model EMFAC2011, which takes input such as facility type, speed profile, and VMT provide by the traffic model. Per capita fuel consumption was calculated by dividing total fuel in gallons by total population for each analysis year.		0.78 gallon			
	Transit productivity	Weekday passenger boarding	Total daily transit boarding figures provided by the traffic model.		47,186			
	Impervious surface	Total acres of impervious surface built from new growth	The results for this indicator were provided by Envision Tomorrow.		7,867 acres			
	Active Transportation and Transit Travel	Weekday person trips by transit, walk and bike modes	Daily personal trips made by active transportation (walking and biking) and transit modes provided by the traffic model.	transit: 49,247 / walk: 180,813 / bike: 57,081	transit: 47,186 / walk: 176,199 / bike: 56,212	transit: 48,796 / walk: 178,010 / bike: 56,751	transit: 51,461 / walk: 188,519 / bike: 59,461	transit: 40,660 / walk: 149,330 / bike: 54,610
	Near-roadway exposures	Percent of new housing within 1,000 feet of freeway or major roadway	Using GIS, identify the planning areas intersecting a 1,000-ft. buffer around existing state highways and interstates; compare total housing units against countywide total.		78,505 HU (81.9%)			
	Percent investment in active transportation	Investment in active transportation (sidewalks, bike lanes, etc.) as compared to total plan	Percentage of investment in planned transportation projects devoted to active transportation (biking and walking) as compared to total investments based on RTP financial plan.		2.11%			
Social Equity	Accessibility	Average A.M. peak work trip time by mode by Environmental Justice (EJ) and Non-EJ Traffic Analysis Zones (TAZ)	Numbers designated as countywide Non-EJ TAZs (EJ TAZs)		Drive Alone 19(15) / Carpool 18(17) / Transit 29(29)			
	Mobility	Average P.M. peak trip time by mode , by EJ and non-EJ TAZ	Numbers designated as countywide Non-EJ TAZs (EJ TAZs)		Drive Alone 20(17) / Carpool 20(19) / Transit 31(30)			
	Cost-effectiveness	Average Additional Daily Transit Passenger Miles Traveled (PMT) per $1,000 Investment	Numbers designated as countywide Non-EJ TAZs (EJ TAZs)		40.38(45.6)			
	Equity	Comparison of percentage of passenger miles traveled (PMT) and expenditures for EJ and non-EJ TAZ	Numbers designated as countywide Non-EJ TAZs (EJ TAZs)		132,498/$12.01(152,161/$10.46)			
	Reliability	Percent of VMT operating at level of service E or worse on links inside EJ and non EJ TAZ	Numbers designated as countywide Non-EJ TAZs (EJ TAZs)		33.27(9.80)			
	Consumer satisfaction	Average Vehicle Hours of Delay (VHD) for EJ and non-EJ TAZ	Numbers designated as countywide Non-EJ TAZs (EJ TAZs)		378,633(15,431)			
Resource Conservation	Land consumption	Acres of land consumed due to new development	Sum of vacant acres in planning areas with nonzero residential or employment growth.	11,226 acres	14,675 acres	12,542 acres	9,961 acres	22,308 acres
	Important Farmland	Total acres of important farmland (prime, unique and state-wide importance) consumed due to new growth	Using GIS, sum acres of the intersection of planning areas with nonzero residential or employment growth overlaid with applicable important farmland features. (Source: FMMP 2010)	101 acres	91.8 acres	74.1 acres	21.2 acres	345 acres
	Environmental resource land	Total acres of resource areas (CNDDB, critical habitat, FEMA, habitat connectivity, riparian forest, vernal pool & wetland, or input to be determined by Greenprint Committee)	Using GIS, sum acres of the intersection of planning areas with nonzero residential or employment growth overlaid with applicable features from the following datasets: CNDDB, Critical Habitat, FEMA floodzones, Habitat Connectivity, Riparian Forests, Vernal Pools, and Wetlands. (Sources: CA Dept. of Fish and Game, NOAA Fisheries, FEMA, USDA)		CNDDB 5,550 acres, CritHab 434 acres, FEMA 2,810 acres, HabConn 1,067 acres, RipFor 12.4 acres, VrnlPool 41.4 acres, Wetland 31.7 acres			
	Water consumption	Daily water consumption by new housing development based on national average rates	The results for this indicator were provided by Envision Tomorrow.		30,950,000 Gal/day			

TABLE 4-2
SCS Alternatives Comparison

Scenario:	A	B	C
Central Theme	Public input from November 2012 workshop	Current planning assumptions	Foothill growth to City of Fresno
Proposed By…	Public	Member Agencies	RTP Round Table
Defining Characteristics	• Considers public input from November 2012 workshop • Growth in the metro area conforms to historical trend • Some rural communities receive much higher growth	• Follows current general and specific plan updates • Growth allocation follows historical trend • Includes development in Friant Ranch, Millerton, and the proposed pharmacy school	• Additional 4% of countywide growth allocated to City of Fresno along corridors and activity centers • Unincorporated growth constrained to 10 existing communities; little change in incorporated cities • Development in Friant Ranch, Millerton, and the proposed pharmacy school not included
Communities with Significant Changes in Growth Allocation*	**Less Growth** • Clovis, Coalinga, Parlier, Sanger • Auberry, Friant Ranch, Millerton, Shaver Lake **More Growth** • Firebaugh, Fresno, Huron, Kerman, Kingsburg, Orange Cove, San Joaquin • Caruthers, Easton, Lanare, Laton, Raisin City, Riverdale, Squaw Valley	Each city/community receives growth based on historical trend	**No Growth** • Auberry, Friant Ranch, Millerton, Raisin City, Squaw Valley **More Growth** • Fresno

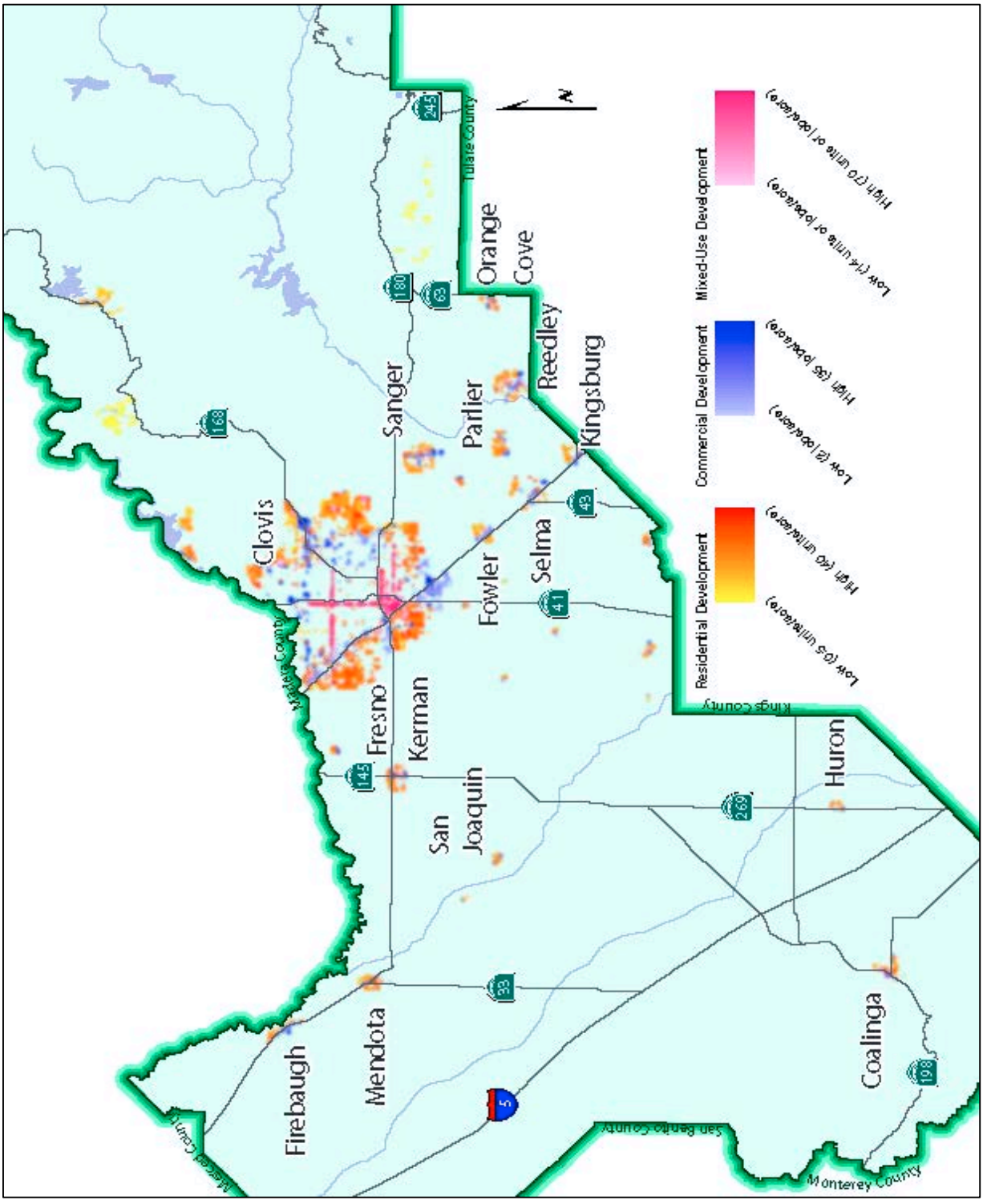
*Compared to planning assumptions based on historical trend. Cities/communities not listed will receive growth approximately consistent with historical trend.

4.3 PROJECT ALTERNATIVES

Scenario B (Preferred Project Alternative)

The Preferred Project Alternative (2014 RTP and SCS Scenario B - reference Figure 4-1) follows current general and specific plans and updates and was developed to reflect current planning assumptions. Growth allocation follows historical trends and is based on the general plans for each of the cities in Fresno County and for the County of Fresno. The Fresno and Clovis General Plan Updates are heavily influenced by the Valley-wide Blueprint goals.

FIGURE 4-1
Preferred Project Alternative Land Use Pattern



Scenario B also includes development in Friant Ranch, Millerton, and the proposed pharmacy school. The Preferred Project Alternative represents a growth scenario that is both ***ambitious and achievable*** for the Fresno County region. The merits of Scenario B are summarized as follows:

- ✓ An ***ambitious plan for sustainability*** with significant advancements over the No Project Alternative or Status Quo
- ✓ A growth ***plan that acknowledges current planning assumptions and local land use authority***
- ✓ On track to ***meet the goals set in the San Joaquin Valley Blueprint***
- ✓ ***Meets the requirement of SB 375***
- ✓ A ***realistic and feasible growth scenario*** that allows the Fresno County region to grow at its own pace and retain its own character

The Fresno COG Policy Board unanimously adopted Scenario B as the SCS scenario. Major features and benefits of Scenario B include:

- ✓ Compared to the No Project Alternative, Scenario B would reduce total land consumption since it would spread development over a larger area in the Fresno-Clovis Metropolitan Area (FCMA) and in outlying areas of the region.
- ✓ Scenario B will increase transit and walking trips by 15-20% and biking trips by 3% compared to the No Project Alternative given its emphasis on alternative modes including Bus Rapid Transit and other enhanced active transportation projects throughout the region.
- ✓ Residential densities will increase to 7.4 units per acre under Scenario B compared to the No Project Alternative. While average densities will be highest in the downtown metropolitan area, average residential densities will also increase in outlying communities.
- ✓ Less land consumed and higher densities are indicators of more compact development. Under Scenario B, average persons per acre of land will increase from under the No Project Alternative to 21.1.
- ✓ With Scenario B, 21.3% of all new housing and 36.6% of new employment will take place within ½ mile of bus rapid transit

The Fresno COG 2014 RTP and SCS reflects the core values residents in Fresno County identified in the Blueprint process. The Blueprint Smart Growth principles were reflected and implemented in the general plan updates and specific plans that are part of the SCS. The SCS creates a range of housing opportunities and choices by providing a more balanced supply of various housing types. The increased density and mixed use development proposed in the SCS helps preserve the precious farmland in the region, and also protects other natural resources such as critical habitat, wetland and vernal pools, etc. In addition, over 20% of new housing and 36% of new employment are allocated along the high-capacity transit corridors and activity centers, which provide foundation for Transit Oriented Development (TOD). The SCS also

reflects the sustainability principle of directing and strengthening development towards existing communities. The complete neighborhood concepts foster distinctive and attractive communities with a strong sense of place. The communities envisioned in the SCS will be more people friendly with more access to bike and walk facilities.

The Preferred Project Alternative was analyzed considering historical growth rates in VMT and VT, as well as anticipated growth in the use of other forms of transportation such as transit, rail, aviation, and non-motorized. Identification of TCMs, necessary to achieve positive air quality conformity findings, has also been evaluated as part of this alternative.

The following sections provide a comparison of the Preferred Project Alternative to the No Project Alternative, and Alternatives to the Preferred Project (Alternative A and Alternative C).

No Project Alternative

California Environmental Quality Act (CEQA), federal MAP-21, and federal Air Quality Conformity regulations require assessment of a No Project Alternative. This alternative has been analyzed to determine whether environmental impacts associated with the Project will be lessened if planned improvements to the future transportation system as identified in the 2011 RTP were made. This Project Alternative does consider projected (Year 2040) growth and development consistent with the pattern of development assumed in the 2011 RTP or similar to the Status Quo Scenario referenced in Chapter 4 of the RTP and further evaluated in Table 4-1 developed to compare the various alternative SCS scenarios.

The No Project Alternative reflects all existing transportation systems, and projects contained in the 2011 RTP and assumes that growth and development to the Year 2040 would occur in a fashion consistent with past development including residential densities and unit types, minimal mixed-use development, residential densities persons per acre consistent with historical trends, little transit oriented development, continued suburban growth and development resulting in an increasing development footprint and continued farmland conversion, increasing VMT and criteria pollutants emissions resulting from sprawling development, and increased auto trip making consistent with historical trends.

Significant impacts could result from this alternative; specifically, impacts upon each of the environmental areas addressed in Chapter 3 of this Draft PEIR. These impacts are discussed below.

- ✓ **Aesthetics**

  The No Project Alternative will have greater aesthetic impacts due to increased transportation projects and future land use development in currently undeveloped and outlying areas of the region

causing greater light and glare and obstruction of views and scenic resources impacts in comparison to existing urban areas that already experience such disturbance. The Preferred Project Alternative is focused on more compact development consistent with existing general plans resulting in less intrusion of light and glare and less obstruction to views and scenic resources in outlying areas.

✓ **Agricultural Resources**

The No Project Alternative will have greater impacts on the consumption of important farmland (consumption of approximately 345 acres) given less compact development associated with this alternative, while the Preferred Project Alternative would consume approximately 91.8 acres by 2035. While these results are for 2035, it is assumed that the land consumption would follow the rate to the year 2040.

✓ **Air Quality**

Air quality impacts are determined considering tons of pollutants (Carbon Monoxide, Reactive Organic Gases, Nitrogen Oxide, Particulate Matter 10, and Particulate Matter 2.5) released per a typical day in 2040. Referencing Table 4-1, compared to the Preferred Project Alternative, the No Project Alternative, even though it is expected to pass air quality conformity tests, will likely produce higher criteria pollutant emissions except Particulate Matter 2.5, which is expected to emit the same as the Preferred Project Alternative. Table 4-3 shows that for all pollutants noted, the No Project is worse for air quality than the Preferred Project Alternative.

✓ **Biotic Resources**

The No Project Alternative will have greater impacts to biotic resources since it is expected to consume more undeveloped land, which would disturb sensitive species habitats and natural lands due to increased transportation projects and future land use development in currently undeveloped and outlying areas of the region. The Preferred Project Alternative is focused on more compact development consistent with existing general plans resulting in less undisturbed land consumption in outlying areas.

TABLE 4-3
Year 2012, No Project and Project VMT and Air Quality Emissions

	2012	2040 No Project	2040 Project (2014 RTP/SCS Scenario B)
VMT	23,674,300	33,693,511	32,892,123
ROG (tons/day)	10.45	5.10	5.00
CO (tons/day)	98.64	41.10	40.19
NOX (tons/day)	34.95	12.85	12.55
PM10 (tons/day)	2.26	2.30	2.25
PM2.5 (tons/day)	1.36	1.09	1.06

Source: Fresno COG, EMFAC 2011.

✓ **Climate Change**

Climate Change impacts are determined considering annual tons of greenhouse gas emissions (Carbon Dioxide or CO_2, Methane or CH_4), Nitrous Oxide or N_2O and others). The No Project Alternative is expected to have a lower greenhouse gas reduction percentage against 2005 levels compared to the Preferred Project Alternative (11.0%) in 2035. While these results are for 2035, it is assumed that the greenhouse gas reduction percentage would follow the rate to the year 2040. Table 4-4 shows the comparison GHG emissions for the Year 2035 No Project Alternative and the Preferred Project Alternative for the Year 2035.

✓ **Cultural Resources**

The No Project Alternative will have greater impacts to cultural resources since it would consume more undeveloped land, which would disturb archeological, paleontological, or human remains, as well as historic structures due to increased transportation projects and future land use development in currently undeveloped and outlying areas of the region.

The Preferred Project Alternative is focused on more compact development consistent with existing general plans resulting in less undisturbed lands in outlying areas.

TABLE 4-4
Year 2035 No Project GHG Emissions
Vs. Year 2035 Preferred Project GHG Emissions

Year	Pounds per Capita GHG Emissions	% Change from 2005	VMT Per Capita	% Change from 2005
2035 No Build				
2005	15.8	--	20.6	--
2020	14.7	-7.0%	19.1	-7.3%
2035	14.5	-8.2%	18.9	-8.3%
2035 RTP/SCS				
2005	15.8	--	20.6	--
2020	14.4	-8.9%	18.8	-8.7%
2035	14.1	-11.0%	18.3	-11.2%

Source: Fresno COG, EMFAC 2011.

✓ **Energy & Energy Conservation**

The No Project Alternative will have greater VMT per capita (reference Table 4-1) vs. the Preferred Project Alternative (18.3 in 2035). With higher VMT the No Project Alternative would result in higher fuel consumption. More energy efficiency is expected to occur with the Preferred Project Alternative vs. the No Project Alternative as a result of more compact, mixed-use and walkable development resulting in more energy efficiency.

✓ **Geology/Soils/Mineral Resources**

The No Project Alternative will have greater impacts because development is less efficient in its use of construction materials compared to the more compact development pattern of the Preferred Project Alternative. Impacts related to geologic, seismic, and soils resources would be similar between the No Project and the Preferred Alternatives since the regional population distribution is generally similar under either alternative.

✓ **Hazardous Materials**

The No Project Alternative is expected to have higher VMT than the Preferred Project Alternative and is expected to result in increased opportunities for vehicular accidents involving the transport of hazardous materials. Under the Preferred Project Alternative, construction activities related to more compact development, could encounter potentially contaminated sites. The No Project Alternative would be expected to consume more farmland than the Preferred Project Alternative (91.8 acres by 2035), which may be potentially contaminated by previous pesticide use.

✓ **Hydrology and Water Resources**

While the No Project Alternative and Preferred Project Alternative would have the same projected population, the more sprawling land use pattern of the No Project Alternative would result in a greater per capita and less efficient use of water than the Preferred Project Alternative, due to the larger number of single family homes with landscaping. Similarly, waste water would be increased due to the less efficient land use pattern under the No Project Alternative. Under the No Project Alternative, new development would be serviced in areas not currently served by existing infrastructure. Impacts to water quality under the No Project Alternative would be greater than the Preferred Project Alternative due to the increased consumption of currently undeveloped land. Flooding would be site specific, but greater consumption of vacant land would occur under the No Project Alternative; thereby, increasing the risk of transportation projects and future land use development being located in flood prone areas.

✓ **Land Use and Planning**

The No Project Alternative would likely have a significantly larger number of acres of land consumed (reference Table 4-1) due to new development in comparison to the Preferred Project Alternative (14,675 acres). It would also likely have considerably more acres of important farmland consumed due to new growth. As referenced in Table 4-1, the residential density and average number of people per acre would likely be lower than the Preferred Project Alternative leading to less compact development. In addition, the No Project Alternative is not consistent with current local agency (city and County) general plans or general plan updates reflecting more compact growth and development; especially for the cities of Fresno and Clovis. The demand for educational facilities would be the same for the No Project Alternative and the Preferred Project Alternative.

✓ **Noise**

Noise impacts are considered significant under this Alternative. With less emphasis placed on mass transit, and active transportation choices (walking and biking) in the 2011 RTP, congestion levels along the major streets and roads within the region will increase resulting in increased noise levels. The No Project Alternative will also potentially have greater noise impacts due to increased transportation projects and future land use development in currently undeveloped and outlying areas of the region. There may be more intense noise impacts under the Preferred Project Alternative due to more compact development and noise associated with increased traffic and concentrations of people.

✓ **Population, Housing & Employment**

The No Project Alternative would likely have a significantly larger number of acres of land consumed due to new housing and other development in comparison to the Preferred Project Alternative (14,675 acres). It would likely also have considerably more acres of important farmland consumed due to new housing and other growth and development in outlying areas and communities throughout the region. The residential density and average number of people per acre would likely be lower than for the Preferred Project Alternative leading to less compact.

In addition, the No Project Alternative is not consistent with current local agency (city and County) general plans or general plan updates reflecting more compact housing development and other development; especially for the cities of Fresno and Clovis. For the Preferred Project Alternative, referencing Table 4-1, more compact development would occur resulting in a larger number of households within a half mile of transit corridors. The No Project Alternative does not include enhanced transit corridors and Bus Rapid Transit and increased densities and mixed uses along corridors similar to the Preferred Project Alternative. The cumulative impacts between the No Project and the Preferred Project Alternatives would be the same given the same number of people and households projected for the year 2040.

✓ **Public Utilities, Other Utilities & Services Systems**

Greater impacts are expected to occur as a result of the No Project Alternative since growth is spread out over a larger area resulting in the need for additional and extended public utilities, sewage systems, and other utilities and service systems. In addition, longer emergency vehicle response times would be experienced than under the Preferred Project Alternative. The No Project Alternative results in the same or fewer impacts to solid waste disposal and transfer facilities as the Preferred Project Alternative. The solid waste disposal and infrastructure of the No Project Alternative would be extended out into new growth areas vs. the Preferred Project Alternative, which focuses on more

compact growth and associated solid waste systems. The generation of green waste would increase under the No Project Alternative because there would be a larger area of vacant land developed and landscaped vs. the Preferred Project Alternative, which would result in less land consumption and more compact development.

✓ **Social and Economic Effects**

While the Preferred Project Alternative is expected to impact a larger number of minority and low-income communities and households compared to the No Project Alternative, the transportation improvement projects under the Preferred Project Alternative are expected to provide a benefit to these communities and households in the form of increased and improved transit services, and other active transportation systems. The No Project Alternative will provide a higher percentage of single family housing units compared to the Preferred Project Alternative, which would provide a better mix of single and multi-family housing units, resulting in increased housing affordability and housing choice.

✓ **Transportation/Traffic**

The No Project Alternative is expected to experience a higher total VMT per capita compared to the Preferred Project Alternative of 18.3 miles. The No Project Alternative is also expected to result in a lower VMT reduction per capita between 2005 and 2035 compared to the Preferred Project Alternative of 11.2%. In addition, the weekday person trips by transit, walk, and bike modes are expected to be lower for the No Project Alternative. To determine the Year 2040 LOS for each segment along the Regionally Significant Roads System, segment LOS was estimated using the Fresno COG Traffic Model. The Model considers the capacity of individual segments based on numerous roadway variables (freeway design speed, signalized intersections per mile, number of lanes, saturation flow, etc.).

Results of the 2040 LOS segment analysis of the No Project Alternative along the RTP Regionally Significant Roads System are reflected in Figures 4-2 and 4-3 (FCMA) and Figures 4-4 and 4-5 (Fresno County). Segment LOS for the Preferred Project Alternative are provided in Chapter 3, Section 3-17 and are provided below as Figures 4-6 and 4-7 (FCMA) and Figures 4-8 and 4-9 (Fresno County). The No Project Alternative condition assumes that the 2011 RTP would be in place considering the population forecast for 2040 and growth patterns similar to the Status Quo Scenario. Details regarding LOS by segment are provided in the 2014 RTP. Other details related to the Preferred Project Alternative and No Project Alternative are provided in Table 4-5 and 4-6.

FIGURE 4-2
Year 2040 No Project – FCMA AM Peak Hour Level of Service

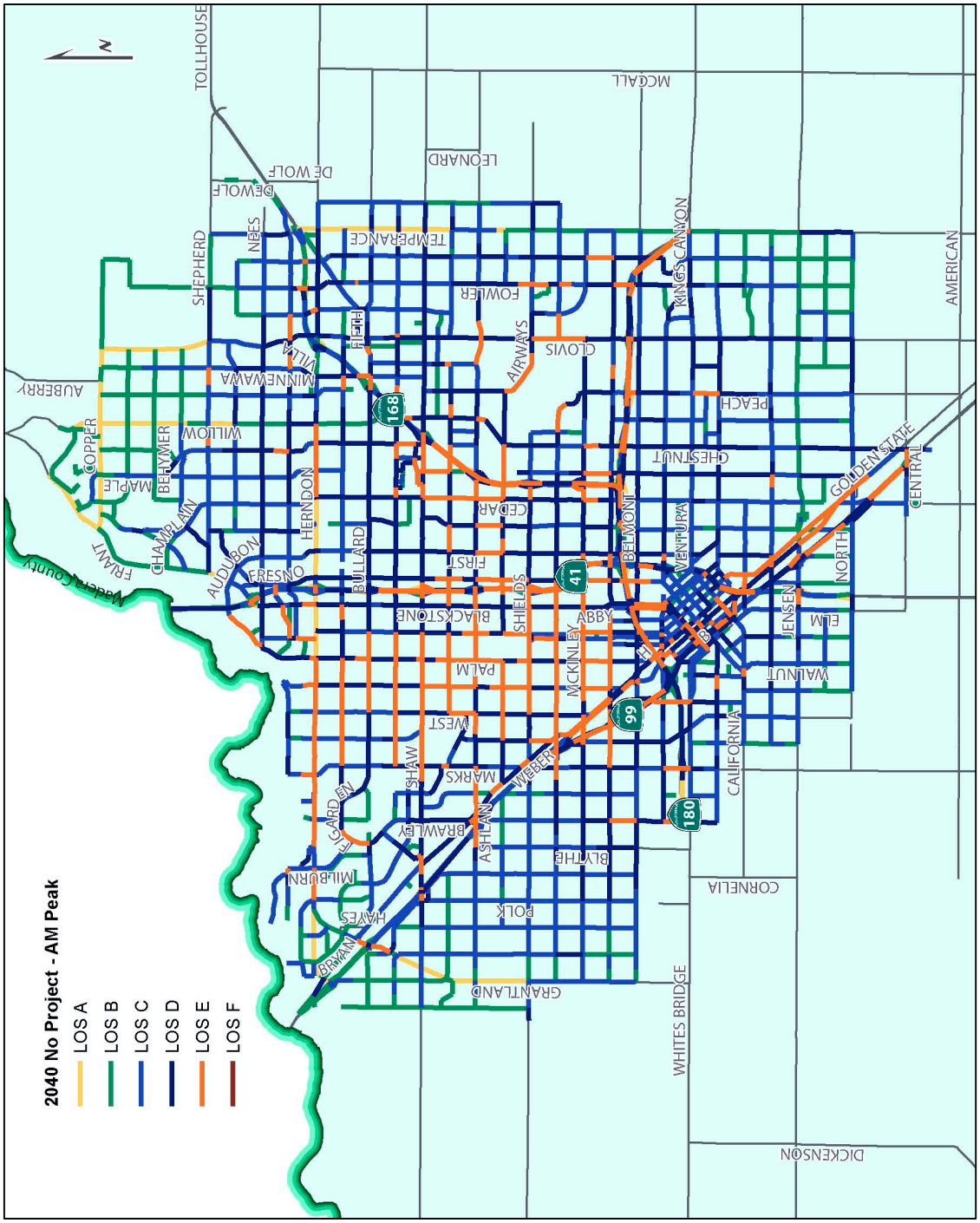


FIGURE 4-3
Year 2040 No Project – FCMA PM Peak Hour Level of Service

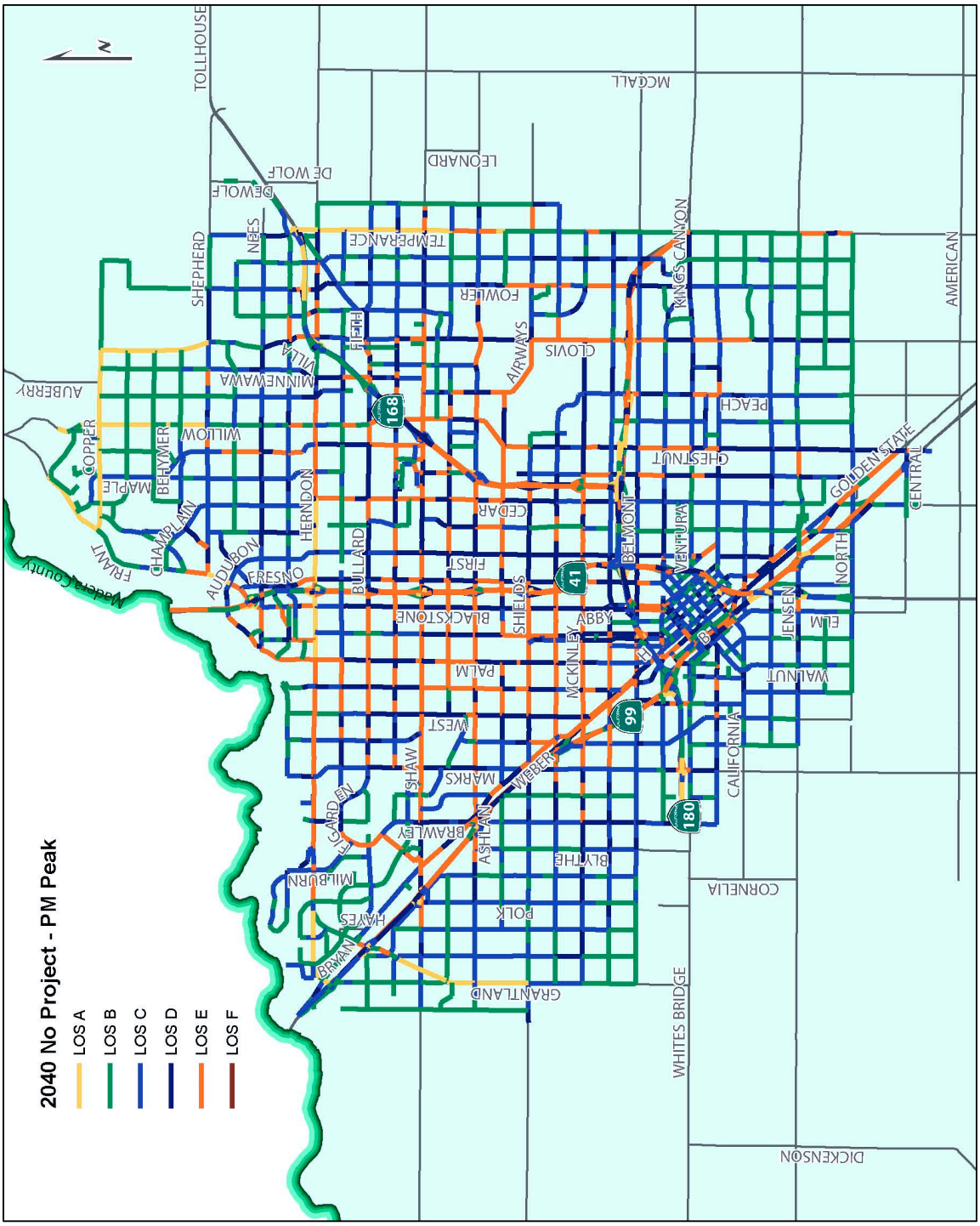


FIGURE 4-4
Year 2040 No Project – Rural Area AM Peak Hour Level of Service

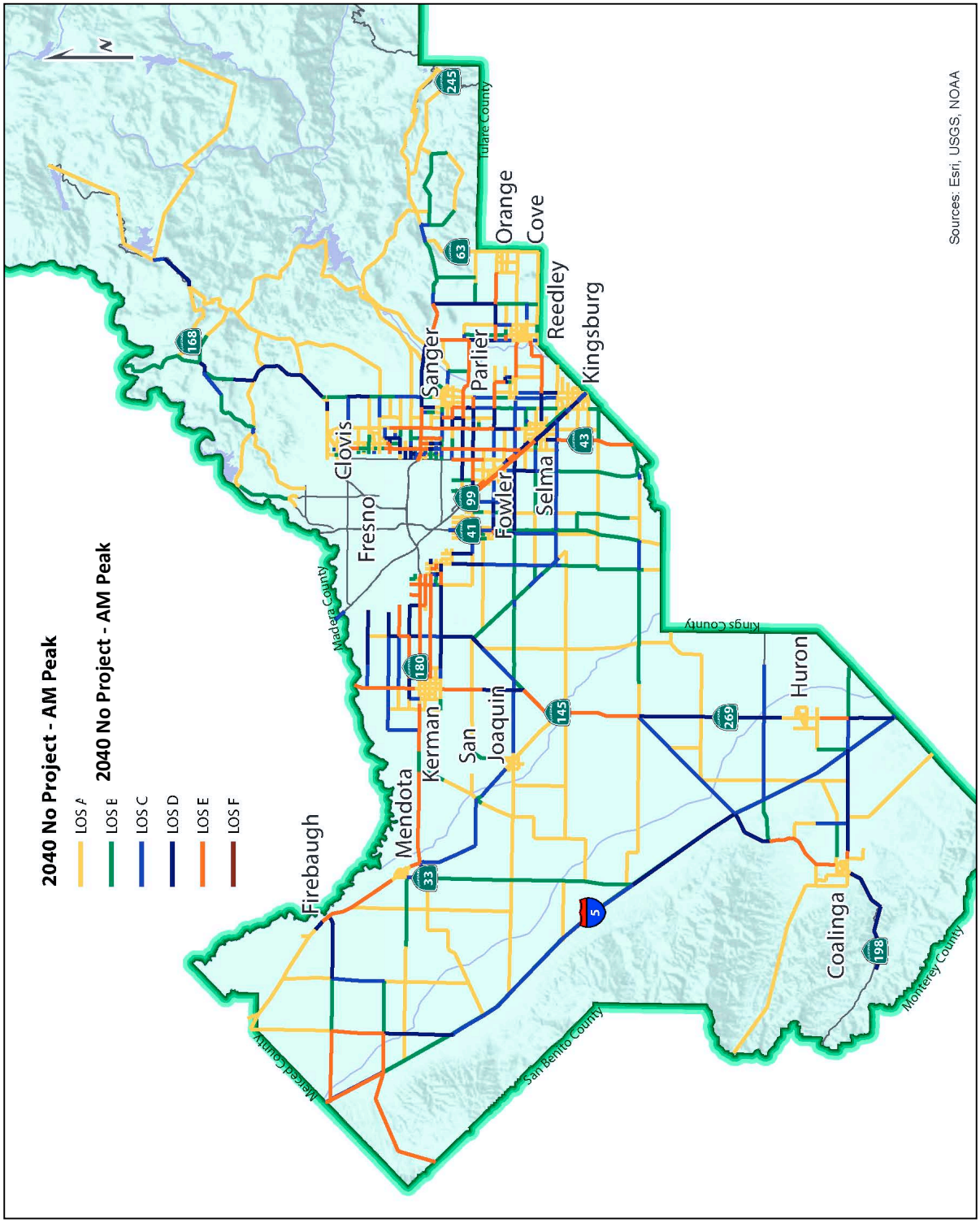


FIGURE 4-5
Year 2040 No Project – Rural Area PM Peak Hour Level of Service

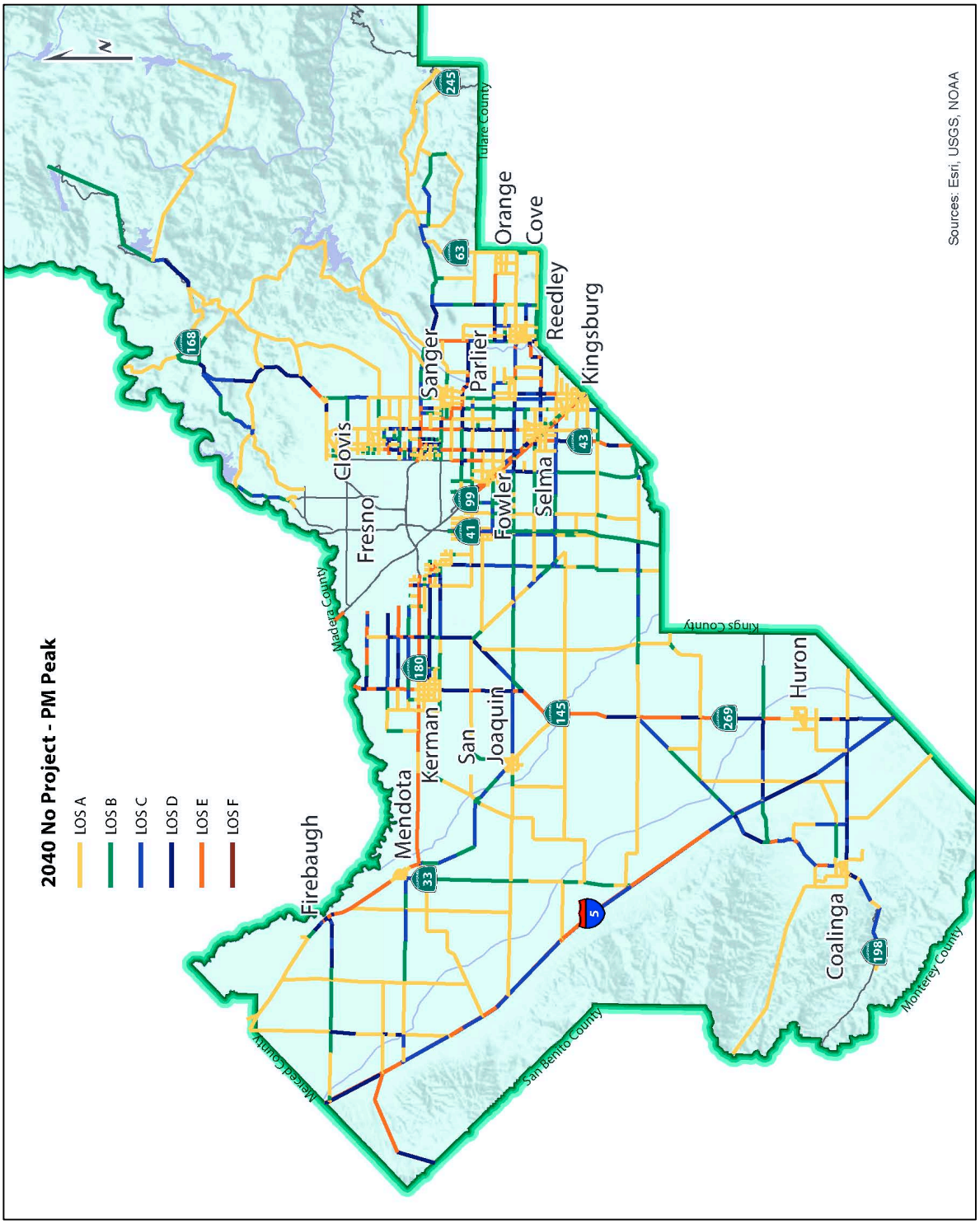


FIGURE 4-6
Year 2040 Preferred Project – FCMA AM Peak Hours Level of Service

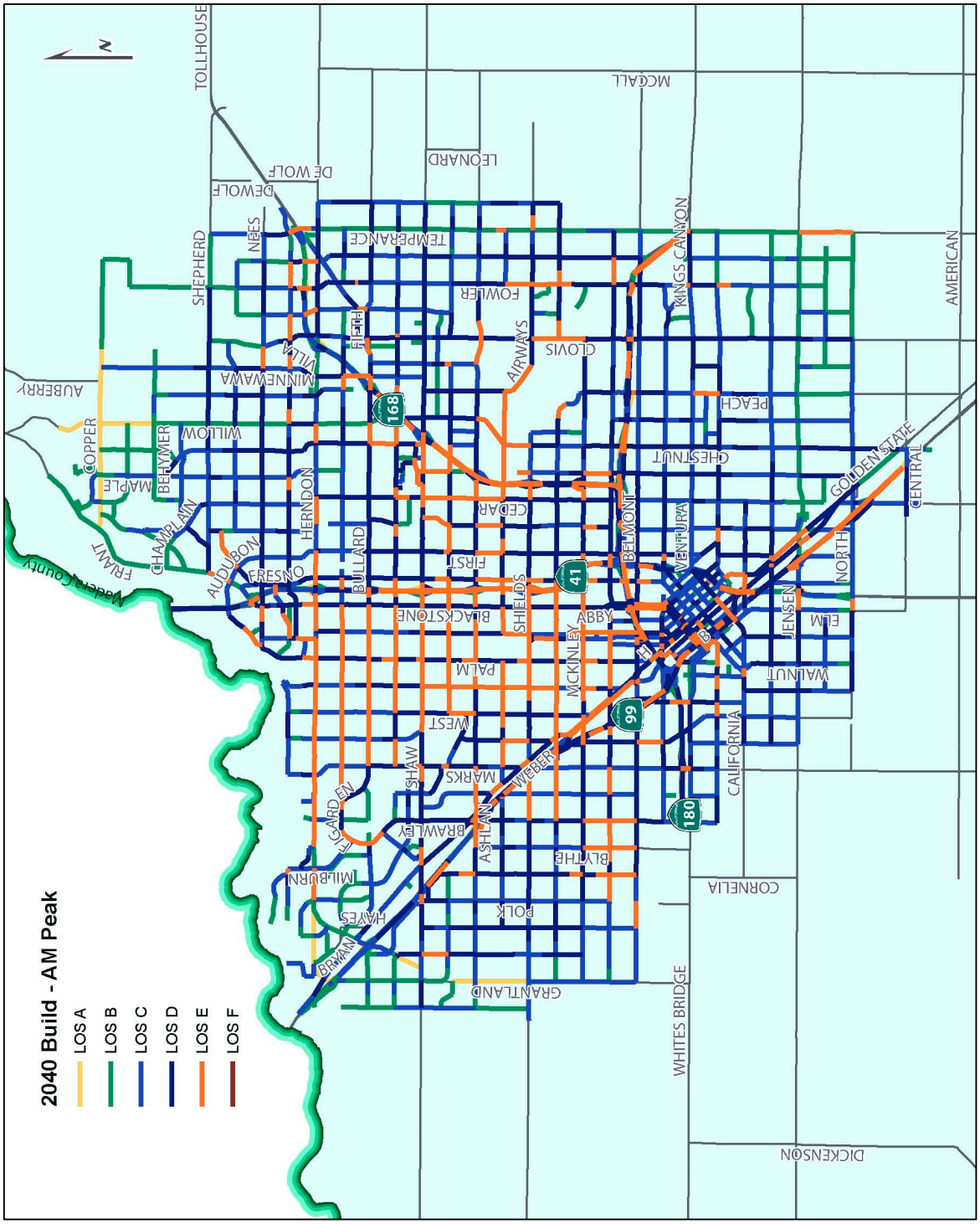


FIGURE 4-7
Year 2040 Preferred Project – FCMA PM Peak Hours Level of Service

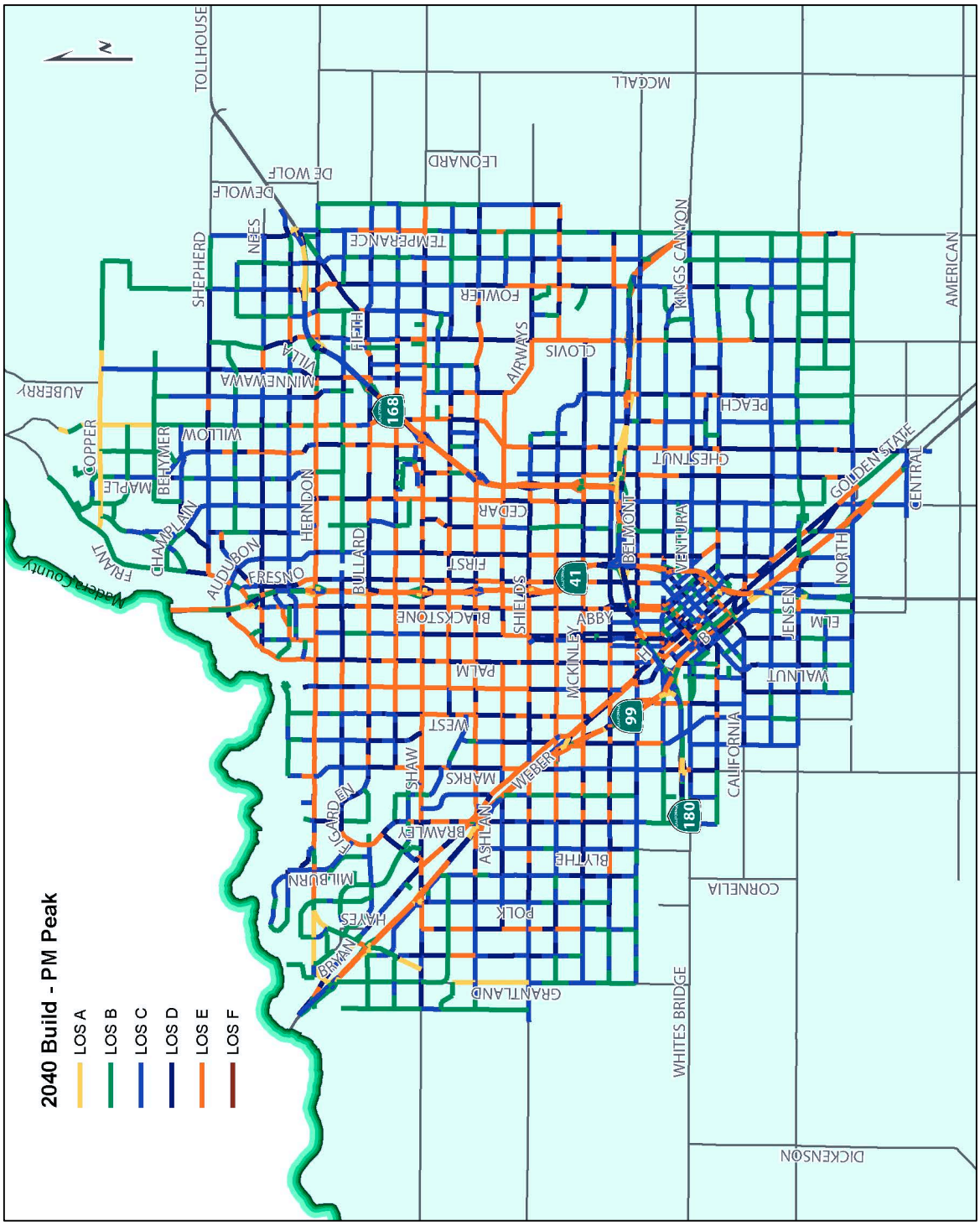


FIGURE 4-8
Year 2040 Preferred Project – Rural Area AM Peak Hour Level of Service

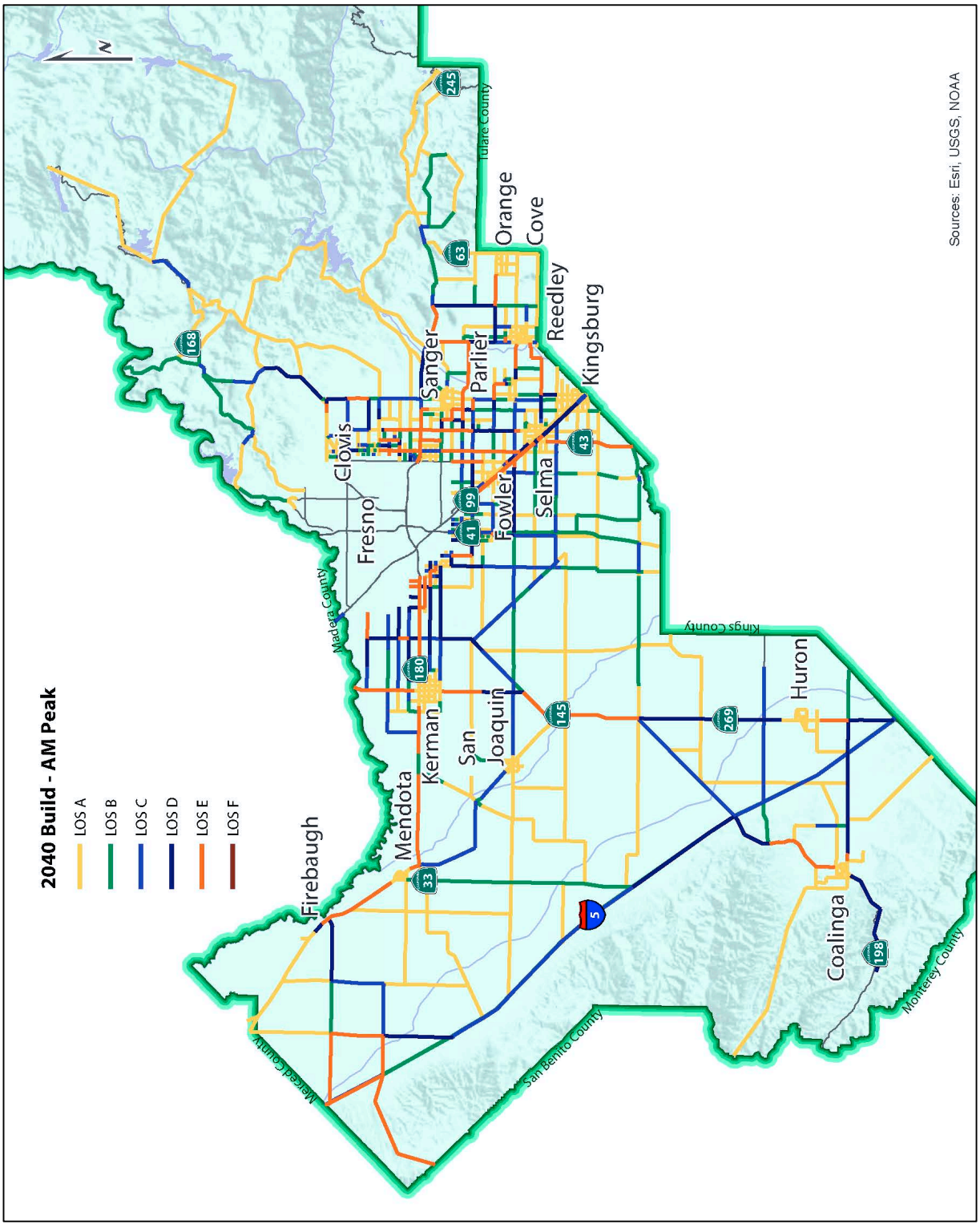


FIGURE 4-9
Year 2040 Preferred Project – Rural Area PM Peak Hours Level of Service

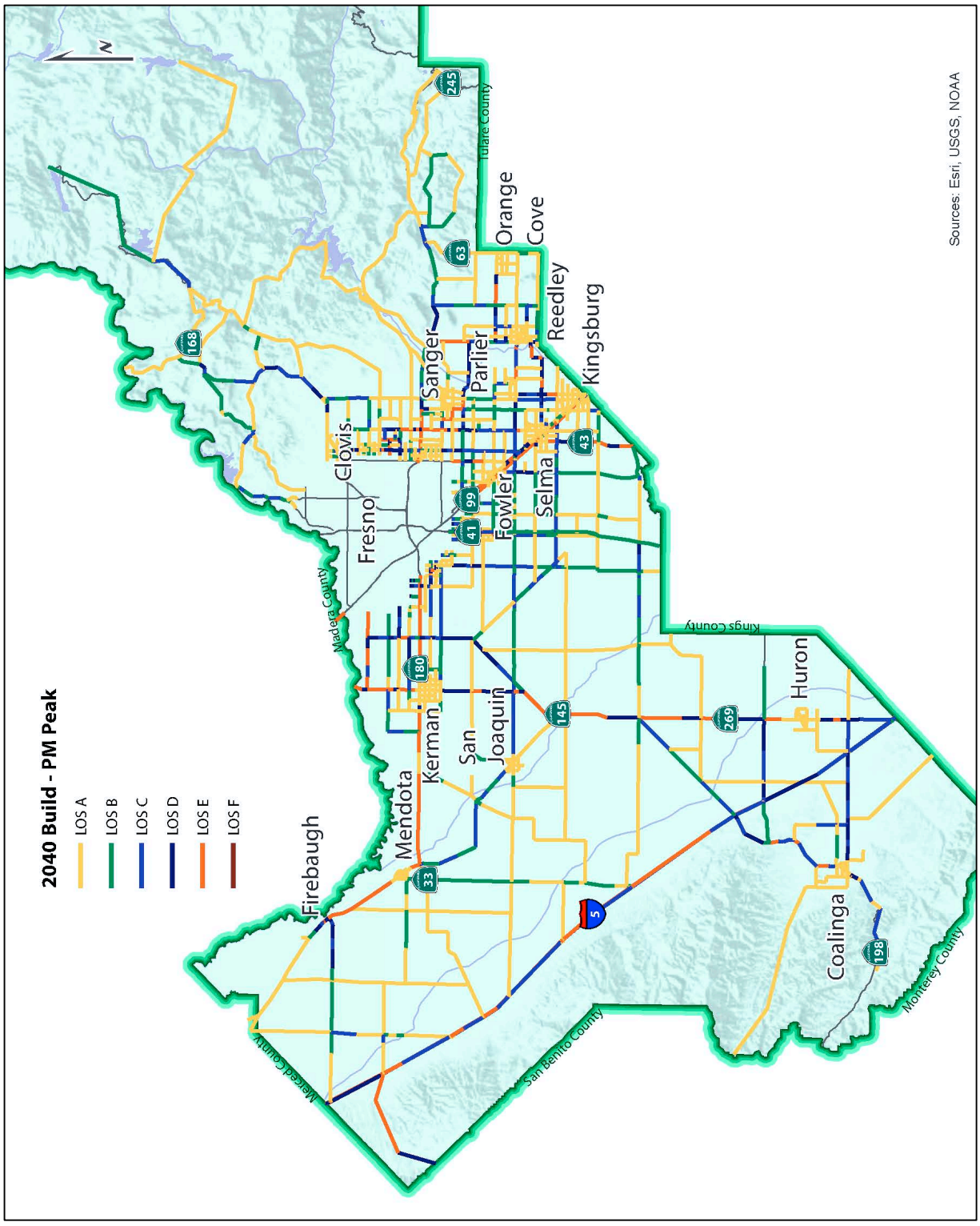


TABLE 4-5
2040 Traffic Model Summary Performance Measures
2014 RTP No Project

Summary Performance Measures from Network			
33,594,817	Vehicle-Miles of Travel	Vehicles	Daily
98,694	Intrazonal Trips	Vehicles	Daily
33,693,511	Total VMT	Vehicles	Daily
8,090,794	Vehicle-Miles of Travel in Congestion	Vehicles	Daily
24.01%	Percent VMT in Congestion	Vehicles	Daily
N/A	Person-Miles of Travel	Vehicles	Daily
248,993	Person-Miles of Travel	Transit	Daily
2,378,547	Vehicle-Hours of Travel	Vehicles	Daily
N/A	Person-Hours of Travel	Vehicles	Daily
N/A	Person-Hours of Travel	Transit	Daily
710,144	Vehicle-Hours of Delay	Vehicles	Daily
N/A	Person-Hours of Delay	Vehicles	Daily
N/A	Person-Hours of Delay	Transit	Daily
33.69	Average Speed	Vehicles	Daily
N/A	Average Speed	Transit	Daily
Summary Performance Measures from Trip Tables			
621,939	Work Auto Trips	Trips	Daily
6,677	Work Transit Trips	Trips	Daily
17,473	Work Walk/Bike Trips	Trips	Daily
646,089	Work Total Trips	Trips	Daily
2,335,048	Non-Work Auto Trips	Trips	Daily
35,117	Non-Work Transit Trips	Trips	Daily
178,468	Non-Work Walk/Bike Trips	Trips	Daily
2,548,633	Non-Work Total Trips	Trips	Daily
2,956,987	Total Auto Trips	Trips	Daily
41,794	Total Transit Trips	Trips	Daily
195,941	Total Walk/Bike Trips	Trips	Daily
3,194,722	Total Trips	Trips	Daily
96.26%	% Work Auto Trips	Percent	Daily
1.03%	% Work Transit Trips	Percent	Daily
2.70%	% Work Walk/Bike Trips	Percent	Daily
91.62%	% Non-Work Auto Trips	Percent	Daily
1.38%	% Non-Work Transit Trips	Percent	Daily
7.00%	% Non-Work Walk/Bike Trips	Percent	Daily
92.56%	% Total Auto Trips	Percent	Daily
1.31%	% Total Transit Trips	Percent	Daily
6.13%	% Total Walk/Bike Trips	Percent	Daily

TABLE 4-6
2040 Traffic Model Summary Performance Measures
2014 RTP Preferred Project Alternative

Summary Performance Measures from Network			
32,816,192	Vehicle-Miles of Travel	Vehicles	Daily
75,931	Intrazonal Trips	Vehicles	Daily
32,892,123	Total VMT	Vehicles	Daily
7,514,902	Vehicle-Miles of Travel in Congestion	Vehicles	Daily
22.85%	Percent VMT in Congestion	Vehicles	Daily
N/A	Person-Miles of Travel	Vehicles	Daily
290,583	Person-Miles of Travel	Transit	Daily
2,363,439	Vehicle-Hours of Travel	Vehicles	Daily
N/A	Person-Hours of Travel	Vehicles	Daily
N/A	Person-Hours of Travel	Transit	Daily
711,277	Vehicle-Hours of Delay	Vehicles	Daily
N/A	Person-Hours of Delay	Vehicles	Daily
N/A	Person-Hours of Delay	Transit	Daily
33.32	Average Speed	Vehicles	Daily
N/A	Average Speed	Transit	Daily
Summary Performance Measures from Trip Tables - Excluding Through Trips			
603,316	Work Auto Trips	Trips	Daily
8,721	Work Transit Trips	Trips	Daily
18,124	Work Walk/Bike Trips	Trips	Daily
629,380	Work Total Trips	Trips	Daily
2,296,220	Non-Work Auto Trips	Trips	Daily
41,085	Non-Work Transit Trips	Trips	Daily
192,497	Non-Work Walk/Bike Trips	Trips	Daily
2,529,801	Non-Work Total Trips	Trips	Daily
2,899,536	Total Auto Trips	Trips	Daily
49,412	Total Transit Trips	Trips	Daily
210,234	Total Walk/Bike Trips	Trips	Daily
3,159,182	Total Trips	Trips	Daily
95.86%	% Work Auto Trips	Percent	Daily
1.39%	% Work Transit Trips	Percent	Daily
2.88%	% Work Walk/Bike Trips	Percent	Daily
90.77%	% Non-Work Auto Trips	Percent	Daily
1.62%	% Non-Work Transit Trips	Percent	Daily
7.61%	% Non-Work Walk/Bike Trips	Percent	Daily
91.78%	% Total Auto Trips	Percent	Daily
1.56%	% Total Transit Trips	Percent	Daily
6.65%	% Total Walk/Bike Trips	Percent	Daily

Based on LOS results, the No Project Alternative has a slightly wider distribution of congested facilities vs. the Preferred Project Alternative, which concentrates LOS deficiencies along corridors planned for higher density development and in Downtown Fresno where higher densities are also planned. In the rural areas, the No Project Alternative provides a better LOS along streets and roads in the Kerman area in the PM Peak Hour than under the Preferred Project Alternative.

Referencing Tables 4-5 and 4-6, congestion decreases and transit use increases significantly with the Preferred Project Alternative compared to the No Project Alternative. In addition, employment choices are increased for both automobile and transit users. Because one of the stated objectives of the Project is to reduce congestion and improve mobility, this is considered a significant beneficial impact. While the Preferred Project Alternative will improve deficient levels of service compared to the No Project Alternative, the Preferred Project Alternative will not address all deficient levels of service anticipated in the future.

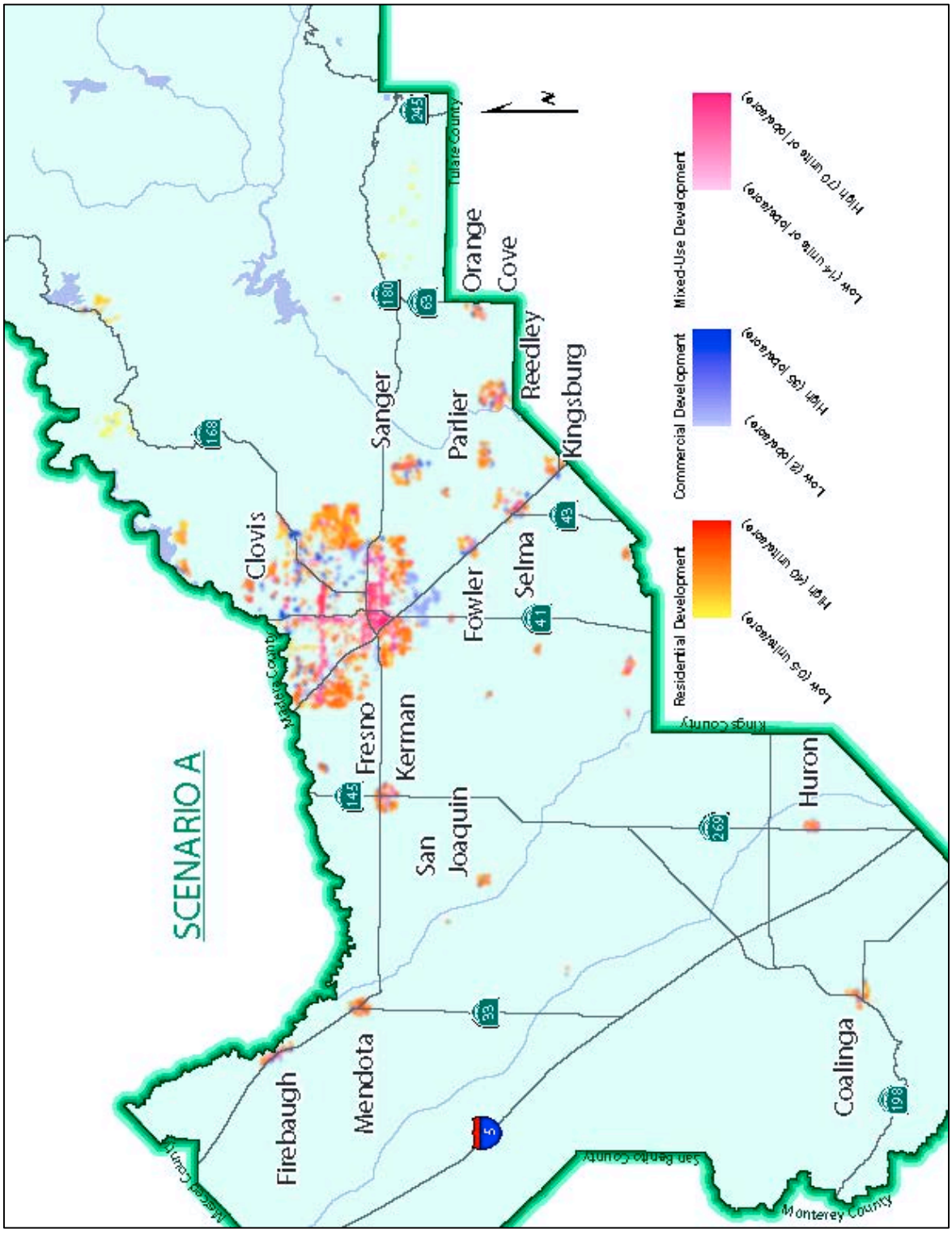
Project Alternative A

This Project Alternative considered public input from the November 2012 Workshop and would focus on growth in the metro area conforming to historical trends and some rural communities receiving much higher growth. Project Alternative A is referenced in the SCS as Scenario A. Its land use pattern is displayed in Figure 4-10.

✓ **Aesthetics**

Project Alternative A will have greater aesthetic impacts due to increased transportation projects and future land use development in currently undeveloped and outlying communities in the region causing greater light and glare and obstruction of views and scenic resources impacts in comparison to existing urban areas that already experience such disturbance. The Preferred Project Alternative is focused on more compact development consistent with existing general plans resulting in less intrusion of light and glare and less obstruction to views and scenic resources in outlying areas.

FIGURE 4-10
Scenario A Land Use Pattern



✓ **Agricultural Resources**

Utilizing required SB 375 analysis, Project Alternative A will have greater impacts on the consumption of important farmland outside of the current spheres of influence because it is expected to consume an estimated 101 acres of farmland by 2035, while the Preferred Project Alternative would consume only 91.8 acres. While these results are for 2035, it is assumed that the land consumption would follow the rate to the year 2040. In accordance with CEQA, Figure 4-11 displays the total impacts that Project Alternative A will have on all important farmland, including those lands within existing spheres of influence (as of the 2008 baseline).

✓ **Air Quality**

Air quality impacts are determined considering tons of pollutants (Carbon Monoxide, Reactive Organic Gases, Nitrogen Oxide, Particulate Matter 10, and Particulate Matter 2.5) released per a typical day in 2035. Referencing Table 4-1, compared to the Preferred Project Alternative, Project Alternative A is also expected to pass air quality conformity tests and will produce the same amount of criteria pollutant emissions as the Preferred Project Alternative.

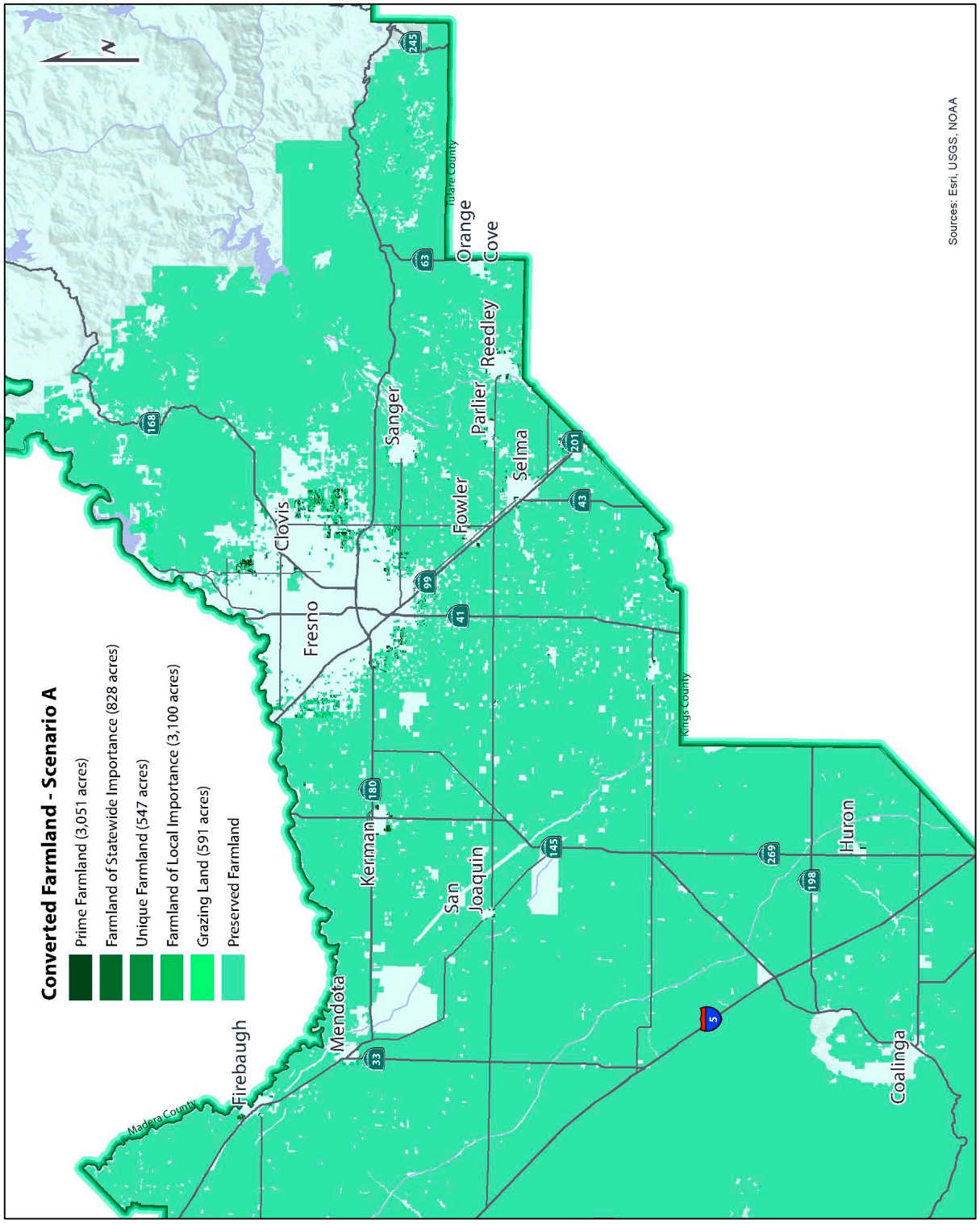
✓ **Biotic Resources**

Project Alternative A will have greater impacts to biotic resources since it would consume more undeveloped land, and would disturb sensitive species habitats and natural lands due to increased transportation projects and future land use development in currently undeveloped and outlying communities of the region. The Preferred Project Alternative is focused on more compact development consistent with existing general plans resulting in less undisturbed land consumption in outlying areas and communities.

✓ **Climate Change**

Climate Change impacts are determined considering annual tons of greenhouse gas emissions (Carbon Dioxide or CO_2, Methane or CH_4), Nitrous Oxide or N_2O and others). Project Alternative A is expected to have a higher greenhouse gas reduction percentage (11.62%) against 2005 levels compared to the Preferred Project Alternative (11.0) in 2035. While these results are for 2035, it is assumed that the greenhouse gas reduction percentage would follow the rate to the year 2040.

FIGURE 4-11
Scenario A Farmland Consumption



✓ **Cultural Resources**

Project Alternative A will have greater impacts to cultural resources since it would consume more undeveloped land, which would disturb archeological, paleontological, or human remains, as well as historic structures due to increased transportation projects and future land use development in currently undeveloped and outlying areas and communities in the region. The Preferred Project Alternative is focused on more compact development consistent with existing general plans resulting in less undisturbed lands in outlying areas.

✓ **Energy & Energy Conservation**

Project Alternative A will have lower VMT per capita (18.1 miles in 2035) vs. the Preferred Project Alternative (18.3 in 2035). Because of the lower VMT with Project Alternative A, there will be lower fuel consumption.

More energy efficiency is expected to occur with the Project Alternative A vs. Preferred Project Alternative as a result of more compact, mixed-use and walkable development resulting in more energy efficiency.

✓ **Geology/Soils/Mineral Resources**

Project Alternative A will have greater impacts because development is less efficient in its use of construction materials compared to the more compact development pattern of the Preferred Project Alternative. Impacts related to geologic, seismic, and soils resources would be similar between Project Alternative A and the Preferred Alternatives since the regional population distribution is generally similar under either alternative.

✓ **Hazardous Materials**

Referencing Table 4-1, Project Alternative A is expected to have lower VMT than the Preferred Project Alternative and is expected to result in decreased opportunities for vehicular accidents involving the transport of hazardous materials. Under the Project Alternative A, construction activities related to more compact development, could encounter potentially contaminated sites. Project Alternative A would consume more farmland (101 acres by 2035) than the Preferred Project Alternative (91.8 acres by 2035), which may be potentially contaminated by previous pesticide use. In addition, Alternative A will result in a greater spreading of traffic that could potentially result in accidents and the release of hazardous waste near outlying schools.

✓ **Hydrology and Water Resources**

While Project Alternative A and Preferred Project Alternative would have the same projected population, the less sprawling land use pattern of Project Alternative A would result in a less per capita and more efficient use of water than the Preferred Project Alternative, due to the fewer number of single family homes with landscaping. Similarly, waste water would be decreased due to the less efficient land use pattern under the No Project Alternative. Under Project Alternative A, less new development would be serviced in areas not currently served by existing infrastructure. Impacts to water quality under Project Alternative A would be less than the Preferred Project Alternative due to the increased consumption of currently undeveloped land. Flooding would be site specific, but less consumption of vacant land would occur under Project Alternative A; thereby, decreasing the risk of transportation projects and future land use development being located in flood prone areas.

✓ **Land Use and Planning**

Project Alternative A would have a lower number of acres of land consumed (11,226 acres in 2035) due to new development in comparison to the Preferred Project Alternative (14,675 acres). It would also have more acres of important farmland consumed due to new growth. As referenced in Table 4-1, the residential density and average number of people per acre would be higher than the Preferred Project Alternative leading to more compact development. In addition, ***Project Alternative A is not consistent with current local agency (city and County) general plans or general plan updates reflecting more compact growth and development***; especially for the cities of Fresno and Clovis. It is critical that the local agencies agree with the future land uses and transportation improvements reflected in the 2014 RTP and SCS or Preferred Project Alternative. Their agreement will lead to successful implementation of the 204 RTP and SCS. The demand for educational facilities would be the same for Project Alternative A and the Preferred Project Alternative; however, the location of the educational facilities would result in more schools being located in rural areas or communities than under the Preferred Project Alternative, which would result in more schools being located within Fresno and Clovis. In addition, Alternative A will accommodate more land use development in rural cities resulting in greater impacts to biotic resources in the surrounding areas. Finally, since Alternative A will accommodate more land use development in rural cities greater impacts on open space and community recreational areas will occur.

✓ **Noise**

Noise impacts are considered significant under this Alternative. With more emphasis placed on mass transit, and active transportation choices (walking and biking), congestion levels in existing rural areas and communities will decrease resulting in decreased noise levels. Project Alternative A will have less

noise impacts due to decreased transportation projects and future land use development in currently undeveloped and outlying areas and communities in the region. There may be more intense noise impacts under the Project Alternative A due to more compact development and noise associated with increased traffic and concentrations of people.

✓ **Population, Housing & Employment**

Project Alternative A would have a smaller number of acres of land consumed (11,226 acres in 2035) due to new housing and other development in comparison to the Preferred Project Alternative (14,675 acres). It would also have more acres of important farmland consumed due to new housing and other growth and development in the rural areas and communities. As referenced in Table 4-1, the residential density and average number of people per acre would be higher than the Preferred Project Alternative leading to more compact development. In addition, Project Alternative A is consistent with current local agency (city and County) general plans or general plan updates reflecting more compact housing development and other development; especially for the cities of Fresno and Clovis. For the Project Alternative A, referencing Table 4-1, more compact development would occur resulting in a larger number of households within a half mile of transit corridors compared to the Preferred Project Alternative. The cumulative impacts between Project Alternative A and the Preferred Project Alternative would be the same given the same number of people and households projected for the year 2040.

✓ **Public Utilities, Other Utilities & Services Systems**

Less impacts are expected to occur as a result of Project Alternative A since growth is not as spread out over a larger area of the region in outlying communities resulting in the need for additional and extended public utilities, sewage systems, and other utilities and service systems. In addition, shorter emergency vehicle response times would be experienced than under the Preferred Project Alternative. Project Alternative A results in the same or fewer impacts to solid waste disposal and transfer facilities as the Preferred Project Alternative. The solid waste disposal and infrastructure of Project Alternative A would be not be as extended out into new growth areas in outlying communities vs. the Preferred Project Alternative, because it focuses on more compact growth and associated solid waste systems. The generation of green waste would decrease under Project Alternative A because there would be a smaller area of vacant land developed and landscaped vs. the Preferred Project Alternative, which again would result in more land consumption and less compact development. Construction impacts would be similar to the Preferred Project Alternative.

✓ **Social and Economic Effects**

The Preferred Project Alternative is expected to impact a smaller number of minority and low-income communities and households compared to Project Alternative A, and the transportation improvement projects under the Preferred Project Alternative are expected to provide a benefit to these communities and households in the form of increased and improved transit services, and other active transportation systems. Project Alternative A will provide a lower percentage of single family housing units compared to the Preferred Project Alternative and which would provide a better mix of single and multi-family housing units, resulting in increased housing affordability and housing choice.

✓ **Transportation/Traffic**

Project Alternative A is expected to experience a lower total VMT per capita (18.1 miles in 2035) compared to the Preferred Project Alternative of 18.3 miles. Project Alternative A is also expected to result in a higher VMT reduction per capita (11.88%) between 2005 and 2035 compared to the Preferred Project Alternative of 11.2%. In addition, the weekday person trips by transit, walk, and bike modes are expected to be higher for Project Alternative A.

Year 2040 level of service results for the Preferred Project Alternative are very similar to the results for Project Alternative A (reference Figures 4-6 through 4-9 above and Section 3-17 in Chapter 3 of this Draft PEIR) with slightly better LOS associated with the Preferred Project Alternative. Figures 4-12 and 4-13 (FCMA) and Figures 4-14 and 4-15 (Fresno County) show Project Alternative A LOS.

FIGURE 4-12
Year 2040 Scenario A – FCMA AM Peak Hour Level of Service

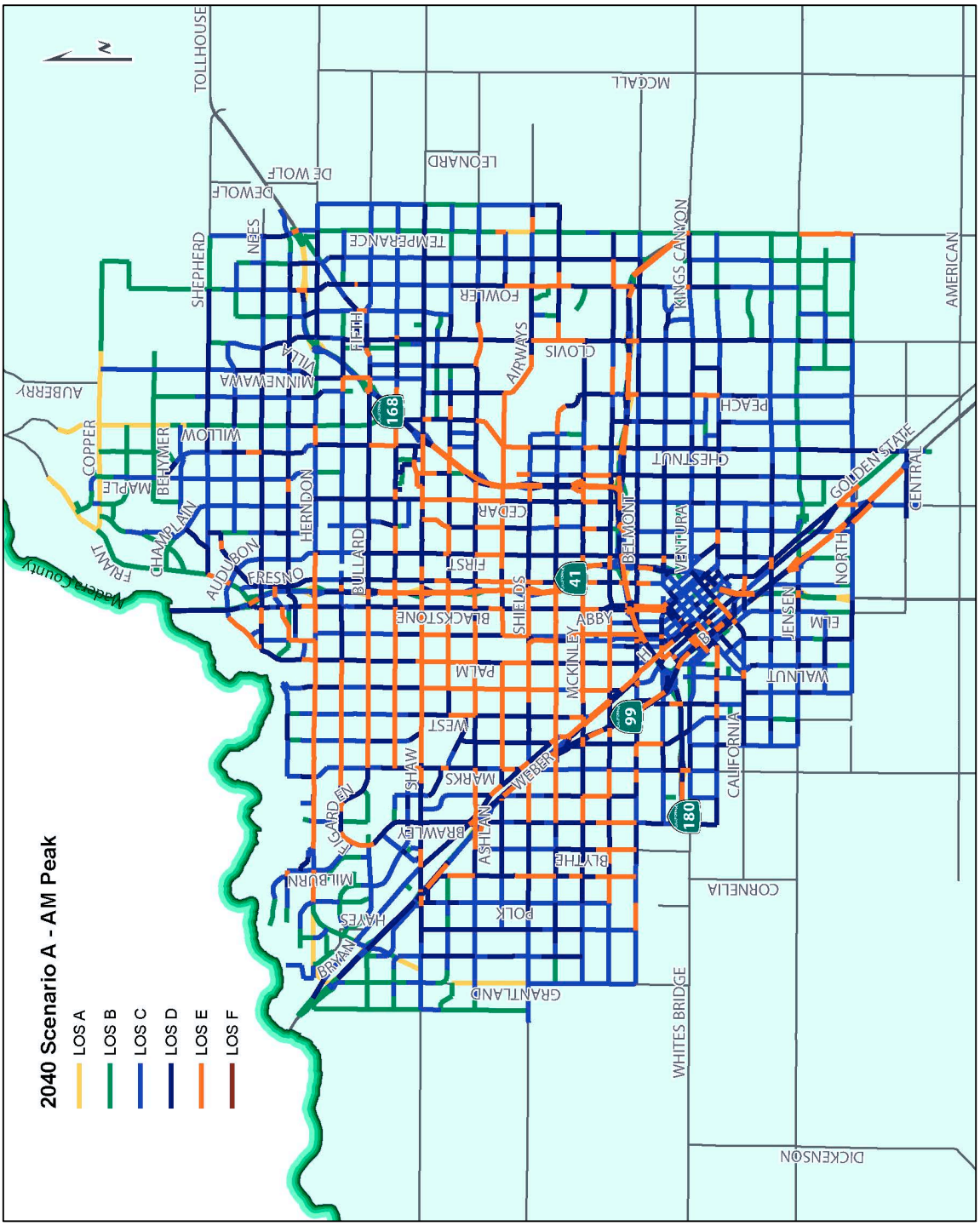


FIGURE 4-13
Year 2040 Scenario A – FCMA PM Peak Level of Service

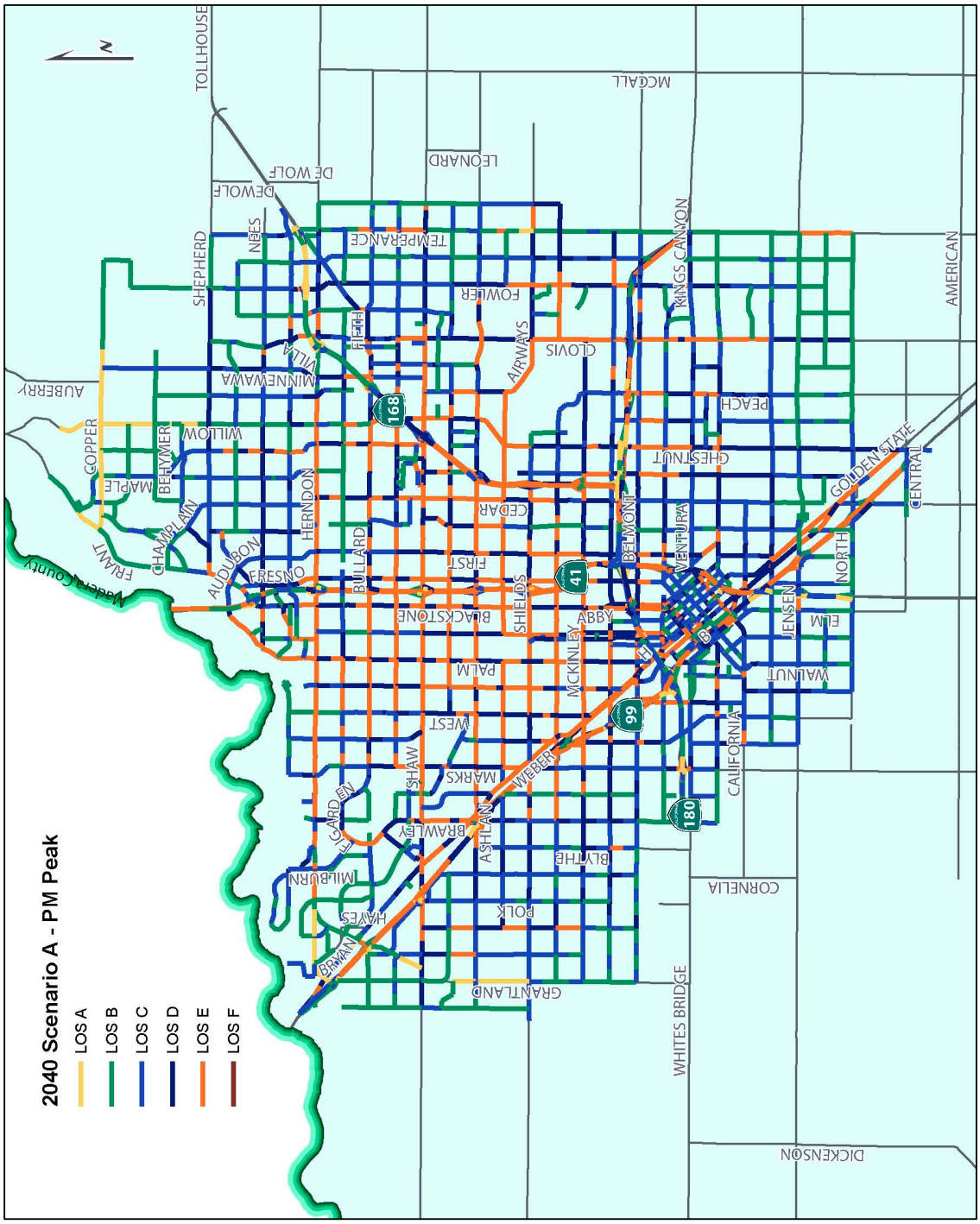


FIGURE 4-14
Year 2040 Scenario A – Rural Area AM Peak Hour Level of Service

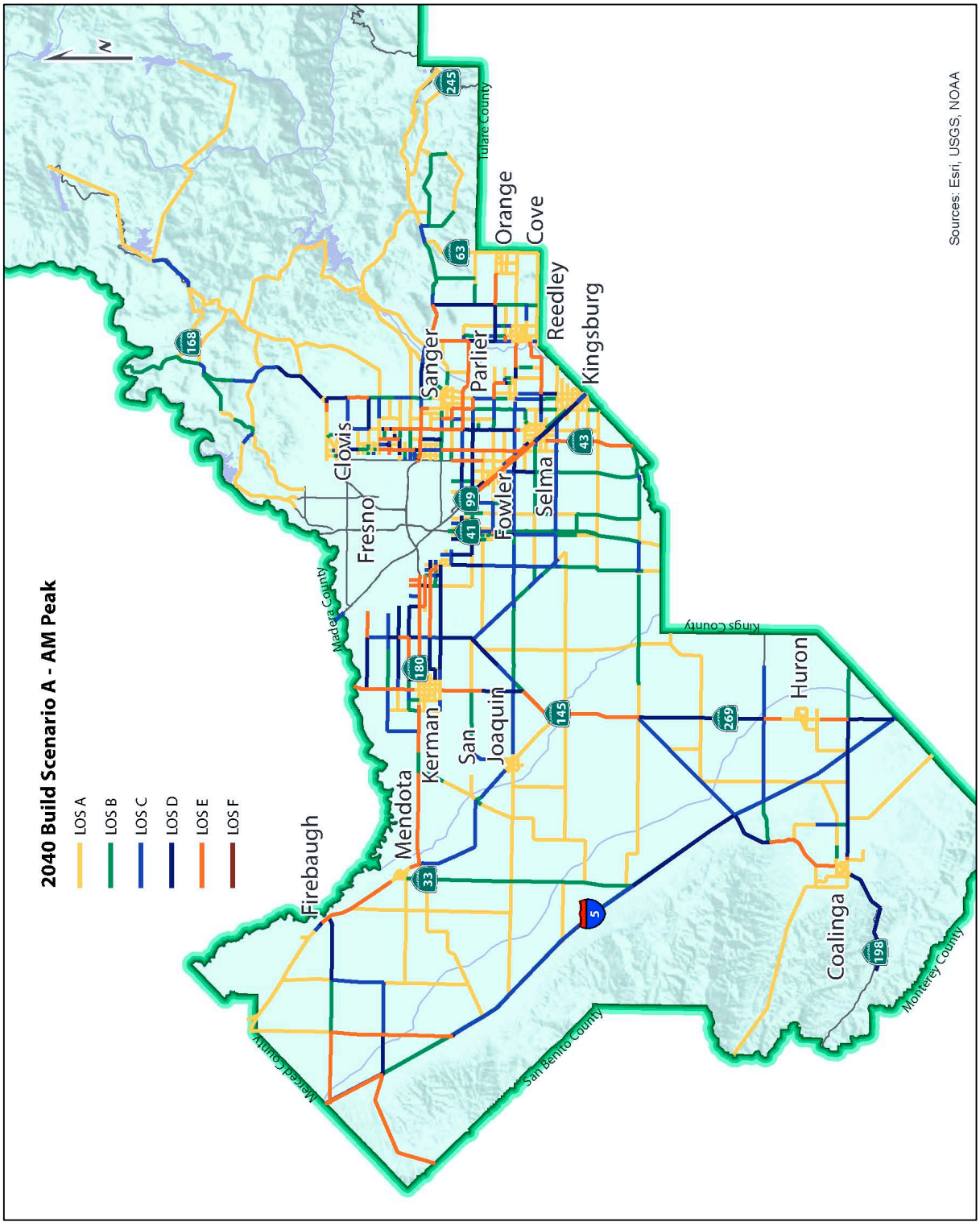
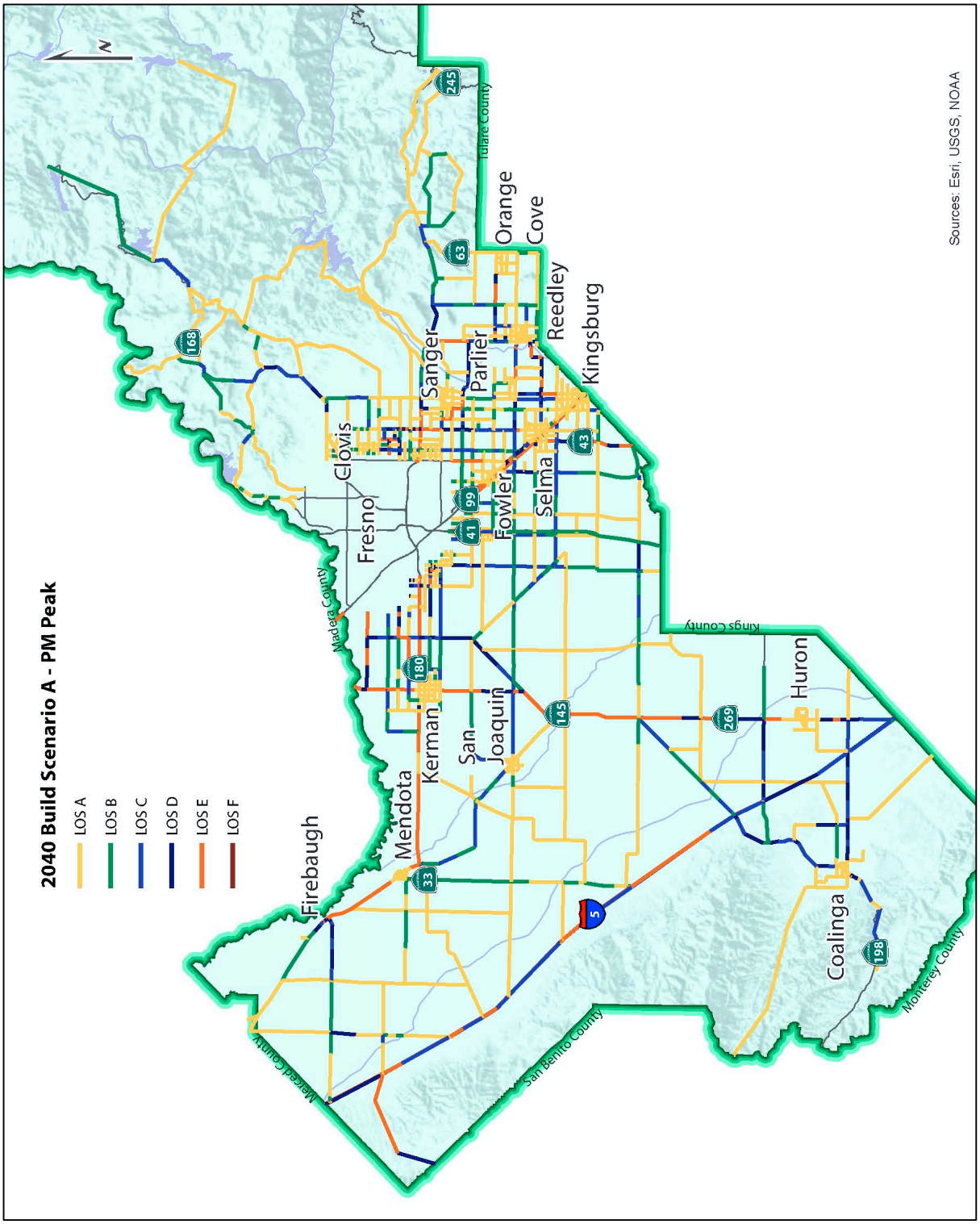


FIGURE 4-15
Year 2040 Scenario A – Rural Area PM Peak Hours Level of Service



Project Alternative C

This Project Alternative considered input from the RTP Roundtable and would focus on additional 4% of countywide growth allocated to the City of Fresno along corridors and activity centers. The unincorporated growth would be constrained to 10 existing communities with little change to incorporated cities. Development in Friant Ranch, Millerton, and the proposed pharmacy school were not included. This Project Alternative is known as SCS Scenario C. Its land use pattern is displayed in Figure 4-16 and results of the performance metrics for this alternative are provided in Table 4-1.

✓ **Aesthetics**

Project Alternative C will have fewer aesthetic impacts due to decreased transportation projects and future land use development in currently undeveloped and selected outlying unincorporated communities in the region causing less light and glare and obstruction of views and scenic resource impacts in comparison to existing urban areas that already experience such disturbance.

✓ **Agricultural Resources**

Utilizing required SB 375 analysis, Project Alternative C will have lower impacts on the consumption of important farmland outside of the current spheres of influence because it is expected to consume an estimated 71.4 acres of farmland by 2035, while the Preferred Project Alternative would consume 91.8 acres. While these results are for 2035, it is assumed that the land consumption would follow the rate to the year 2040. In accordance with CEQA, Figure 4-17 displays the impacts that Project Alternative A will have on all important farmland, including those lands within existing spheres of influence (as of the 2008 baseline).

✓ **Air Quality**

Air quality impacts are determined with respect to tons of pollutants (Carbon Monoxide, Reactive Organic Gases, Nitrogen Oxide, Particulate Matter 10, and Particulate Matter 2.5) released per a typical day in 2035. Compared to the Preferred Project Alternative, Project Alternative C is expected to emit the same amount of emissions for all pollutants except Nitrogen Oxide, which is expected to emit 11.5 tons (versus 11.6 tons for Preferred Project Alternative) and Particulate Matter 10, which is expected to emit 7.8 tons (versus 7.9 tons for Preferred Project Alternative).

FIGURE 4-16
Scenario C - Land Use Pattern

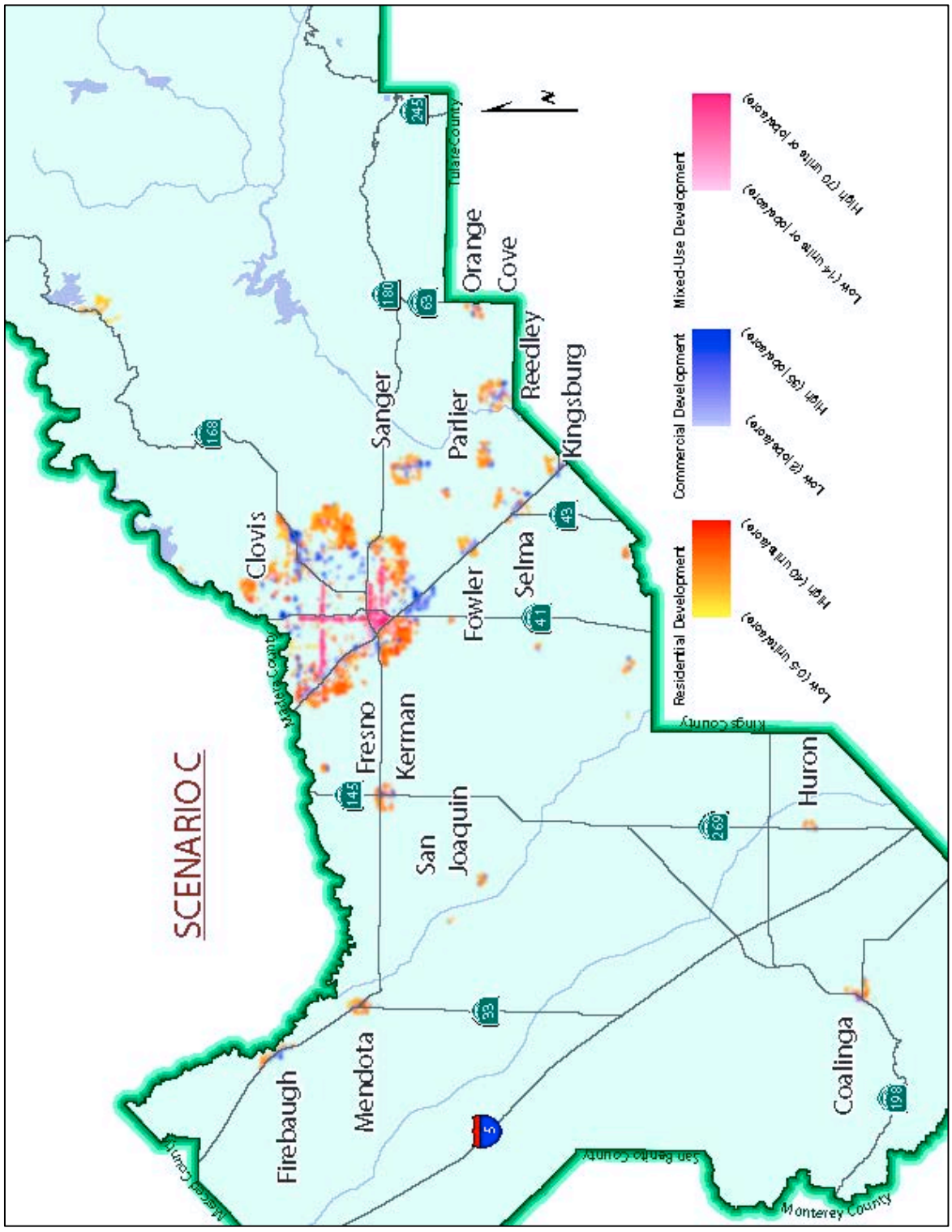
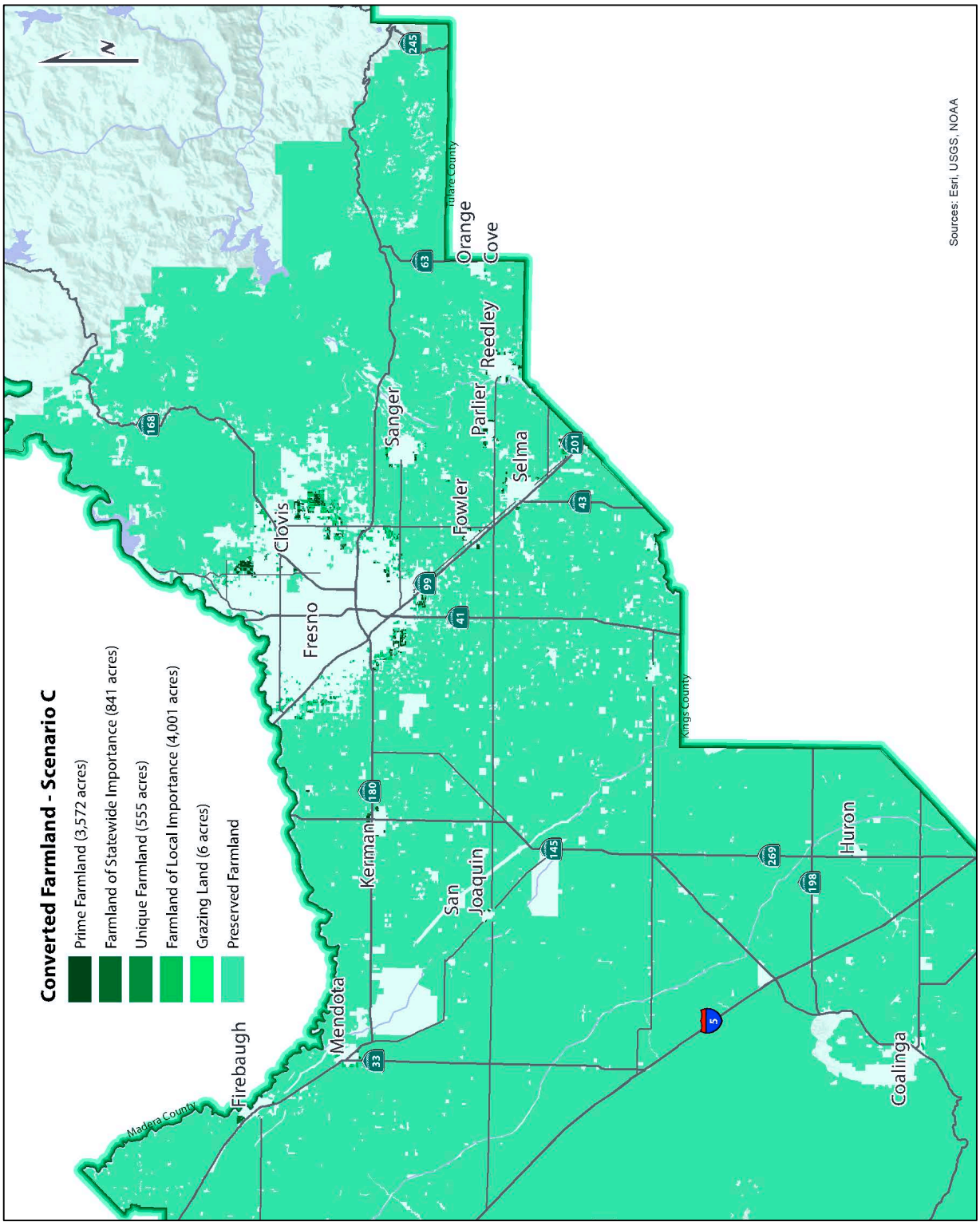


FIGURE 4-17
Scenario C Farmland Consumption



✓ **Cultural Resources**

Project Alternative C will have fewer impacts to cultural resources since it would consume less undeveloped land, which would disturb fewer archeological, paleontological, or human remains, as well as historic structures due to decreased transportation projects and future land use development in unincorporated communities in the region. The Project Alternative C is focused on more compact development resulting in less undisturbed lands in outlying areas.

✓ **Energy and Energy Conservation**

Project Alternative C will have less VMT per capita (18.0 miles in 2035) vs. the Preferred Project Alternative (18.3 in 2035). Because of the lower VMT associated with Project Alternative C, there will be lower fuel consumption. More energy efficiency is expected to occur with the Project Alternative C vs. Preferred Project Alternative as a result of more compact, mixed-use and walkable development resulting in more energy efficiency.

✓ **Geology/Soils/Mineral Resources**

Project Alternative C will have fewer impacts because development is more efficient in its use of construction materials compared to the less compact development pattern of the Preferred Project Alternative. Impacts related to geologic, seismic, and soils resources would be similar between Project Alternative C and the Preferred Alternatives since the regional population distribution is generally similar under either alternative.

✓ **Hazardous Materials**

Referencing Table 4-1, Project Alternative C is expected to have lower VMT than the Preferred Project Alternative and is expected to result in decreased opportunities for vehicular accidents involving the transport of hazardous materials. Under the Project Alternative C, construction activities related to more compact development, could encounter potentially contaminated sites. Project Alternative C would consume less farmland (74.1 acres by 2035) than the Preferred Project Alternative (91.8 acres by 2035), which may be potentially contaminated by previous pesticide use.

✓ **Hydrology and Water Resources**

While Project Alternative C and the Preferred Project Alternative would have the same projected population, the less sprawling land use pattern of the Project Alternative C into unincorporated communities throughout the County would result in a lower per capita and more efficient use of water

than the Preferred Project Alternative, due to the fewer number of single family homes with landscaping. Similarly, waste water would be decreased due to the more efficient land use pattern under Project Alternative C. Under Project Alternative C, less new development would be serviced in areas not currently served by existing infrastructure. Impacts to water quality under Project Alternative C would be less than the Preferred Project Alternative due to the decreased consumption of currently undeveloped land. Flooding would be site specific, but less consumption of vacant land would occur under Project Alternative C; thereby, decreasing the risk of transportation projects and future land use development being located in flood prone areas.

- ✓ **Land Use and Planning**

This alternative would have a smaller number of acres of land consumed due to new development in the City of Fresno in comparison to the Preferred Project Alternative. It would also have slightly fewer acres of important farmland consumed due to new growth. The residential density and average number of people per acre would be higher than the Preferred Project Alternative leading to more compact development in the City of Fresno. The demand for educational facilities would be the same for Project Alternative C and the Preferred Project Alternative.

- ✓ **Noise**

Noise impacts are considered significant under this Alternative. With more emphasis placed on mass transit, and active transportation choices (walking and biking), congestion levels in existing rural areas and communities will decrease resulting in decreased noise levels. Project Alternative C will have greater noise impacts due to increased transportation projects and future land use development in currently undeveloped and outlying areas and communities in the region. There may be more intense noise impacts under the Project Alternative C due to more compact development and noise associated with increased traffic and concentrations of people.

- ✓ **Population, Housing & Employment**

Project Alternative C would have a smaller number of acres of land consumed (11,226 acres in 2035) due to new housing and other development in comparison to the Preferred Project Alternative (14,675 acres). It would also have less acres of important farmland consumed due to new housing and other growth and development in the rural areas and communities. As referenced in Table 4-1, the residential density and average number of people per acre would be higher than the Preferred Project Alternative leading to more compact development. In addition, Project Alternative C is not consistent with current local agency (city and County) general plans or general plan updates because it increases densities beyond those reflected in general plans. Further, it places more growth in

unincorporated communities. For the Project Alternative C, referencing Table 4-1, more compact development would occur resulting in a larger number of households within a half mile of transit corridors compared to the Preferred Project Alternative. The cumulative impacts between Project Alternative C and the Preferred Project Alternative would be the same given the same number of people and households projected for the year 2040.

✓ **Public Utilities, Other Utilities & Services Systems**

Less impacts are expected to occur as a result of Project Alternative C since growth is not as spread out over a larger area of the region in outlying communities resulting in the need for additional and extended public utilities, sewage systems, and other utilities and service systems. In addition, shorter emergency vehicle response times would be experienced than under the Preferred Project Alternative. Project Alternative C results in the same or fewer impacts to solid waste disposal and transfer facilities as the Preferred Project Alternative. The solid waste disposal and infrastructure of Project Alternative C would be not be as extended out into new growth areas in outlying communities vs. the Preferred Project Alternative, because it focuses on more compact growth and associated solid waste systems. The generation of green waste would decrease under Project Alternative C because there would be a smaller area of vacant land developed and landscaped vs. the Preferred Project Alternative, which again would result in more land consumption and less compact development. Construction impacts would be similar to the Preferred Project Alternative.

✓ **Social and Economic Effects**

The Preferred Project Alternative is expected to impact a smaller number of minority and low-income communities and households compared to Project Alternative C, and the transportation improvement projects under the Preferred Project Alternative are expected to provide a benefit to these communities and households in the form of increased and improved transit services, and other active transportation systems. Project Alternative C will provide a lower percentage of single family housing units compared to the Preferred Project Alternative and would provide a better mix of single and multi-family housing units, resulting in increased housing affordability and housing choice.

✓ **Transportation/Traffic**

Compared to the Preferred Project Alternative, Project Alternative C is expected to experience a lower total Vehicle Miles Traveled (VMT) and a higher per capita VMT reduction. In addition, the weekday person trips by transit, walk, and bike modes are expected to be higher for Project Alternative C. Year 2040 level of service results for the Preferred Project Alternative (reference Figures 4-6 through 4-9 above and Section 3-17 in Chapter 3 of this Draft PEIR) are very similar to the results for Project Alternative C. Figures 4-18 and 4-19 (FCMA) and Figures 4-20 and 4-21 (Fresno County) below show Project Alternative C LOS.

FIGURE 4-18
Year 2040 Scenario C – FCMA AM Peak Hour Level of Service

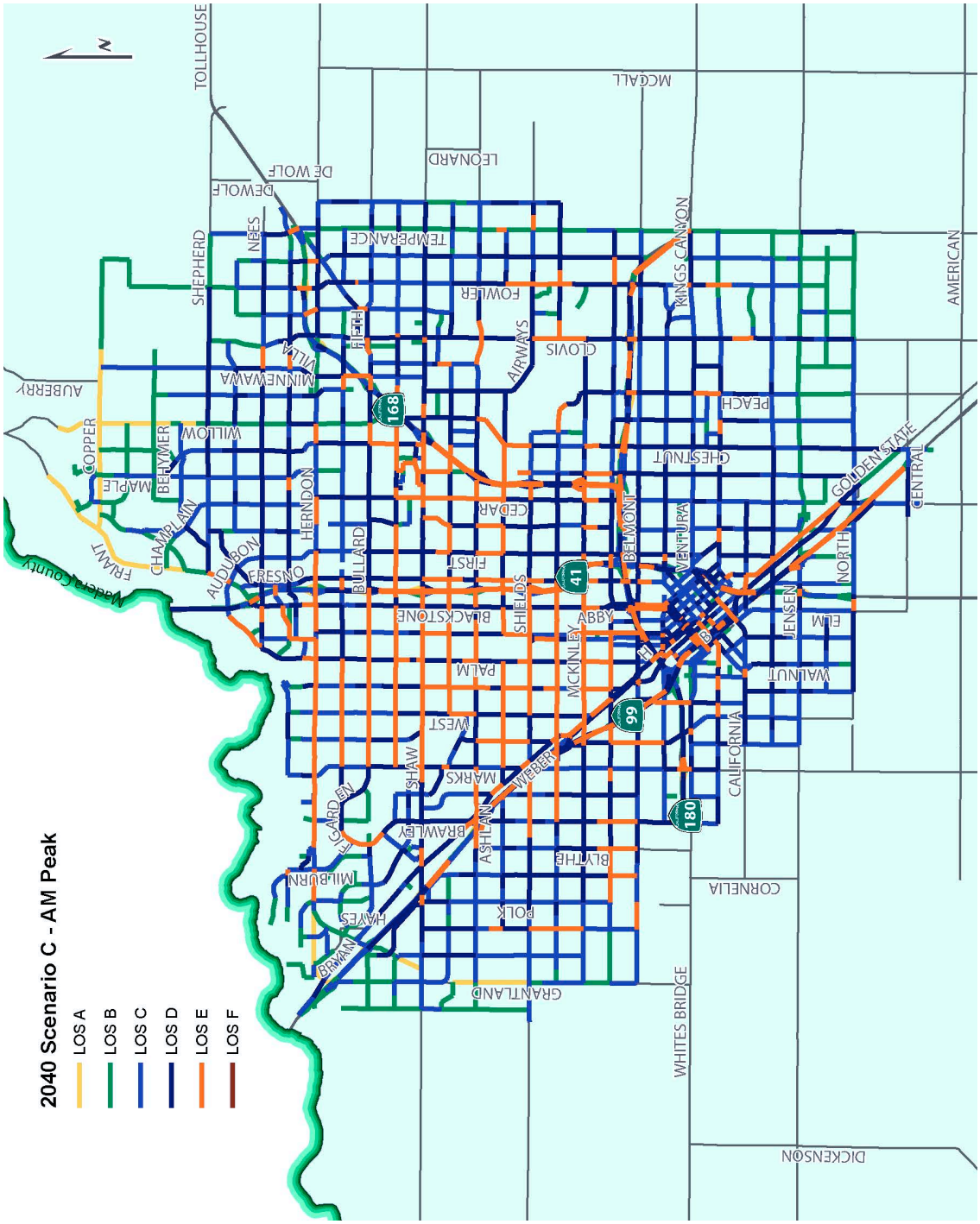


FIGURE 4-19
Year 2040 Scenario C – FCMA PM Peak Hour Level of Service

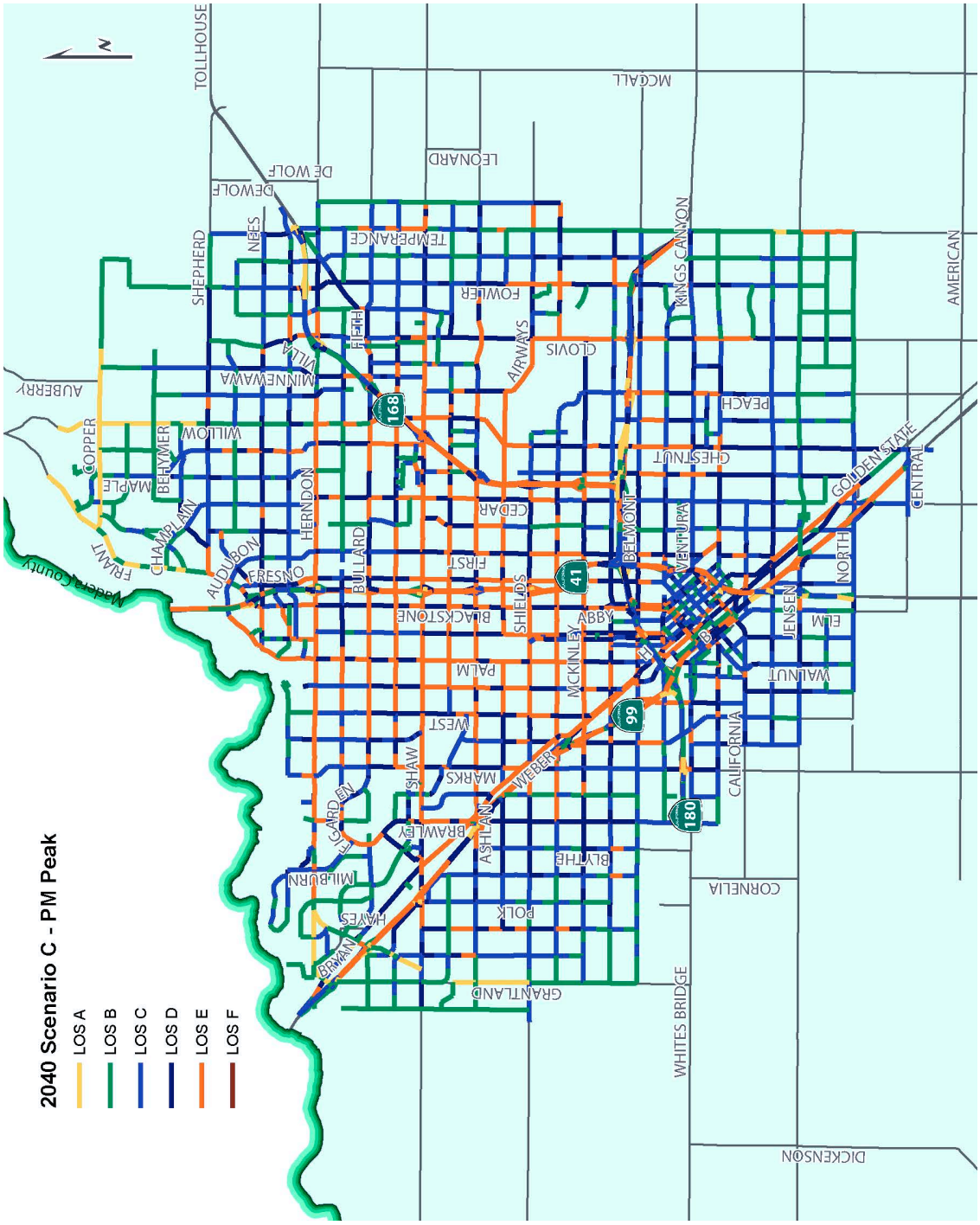


FIGURE 4-20
Year 2040 Scenario C – Fresno County AM Peak Hour Level of Service

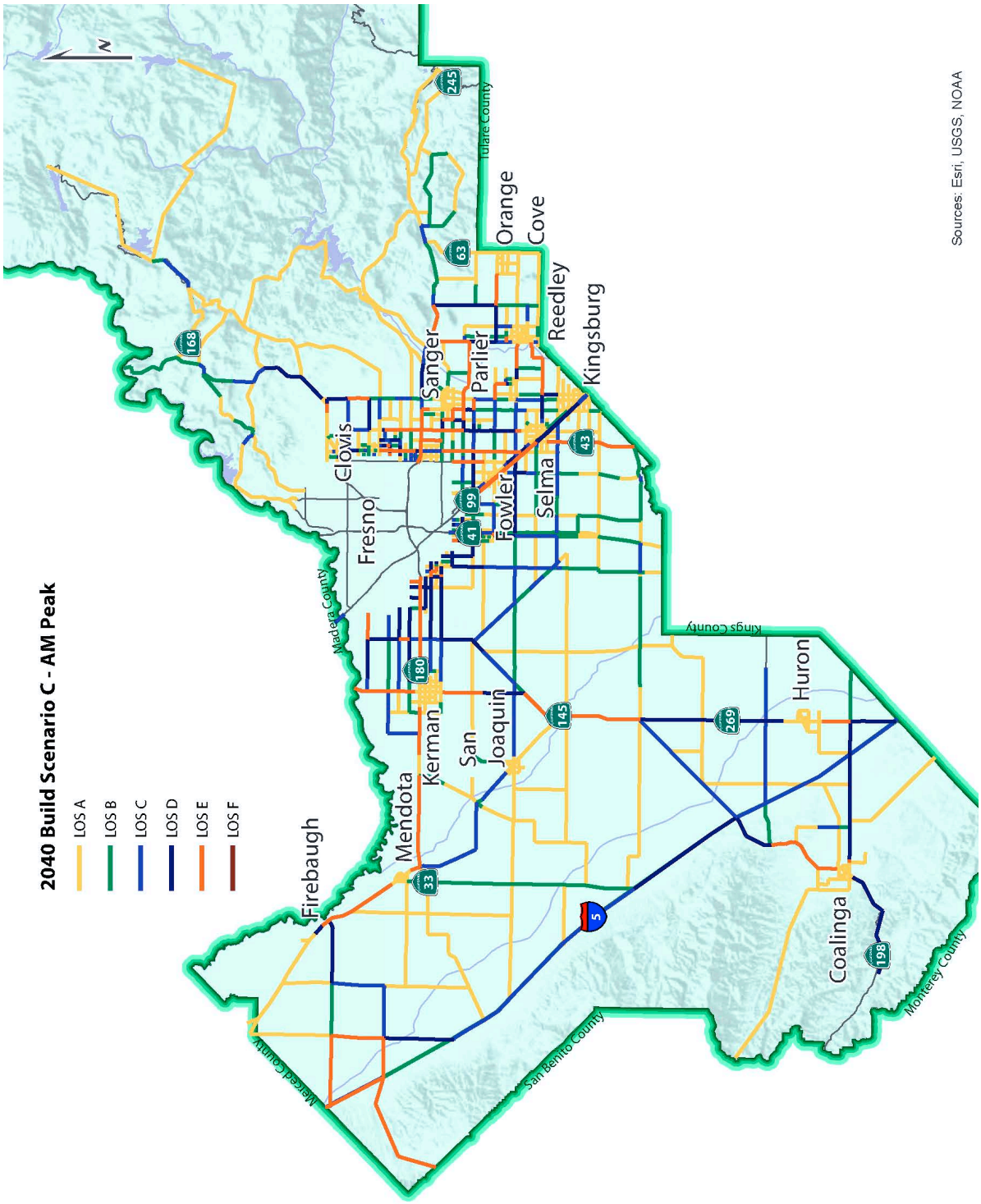
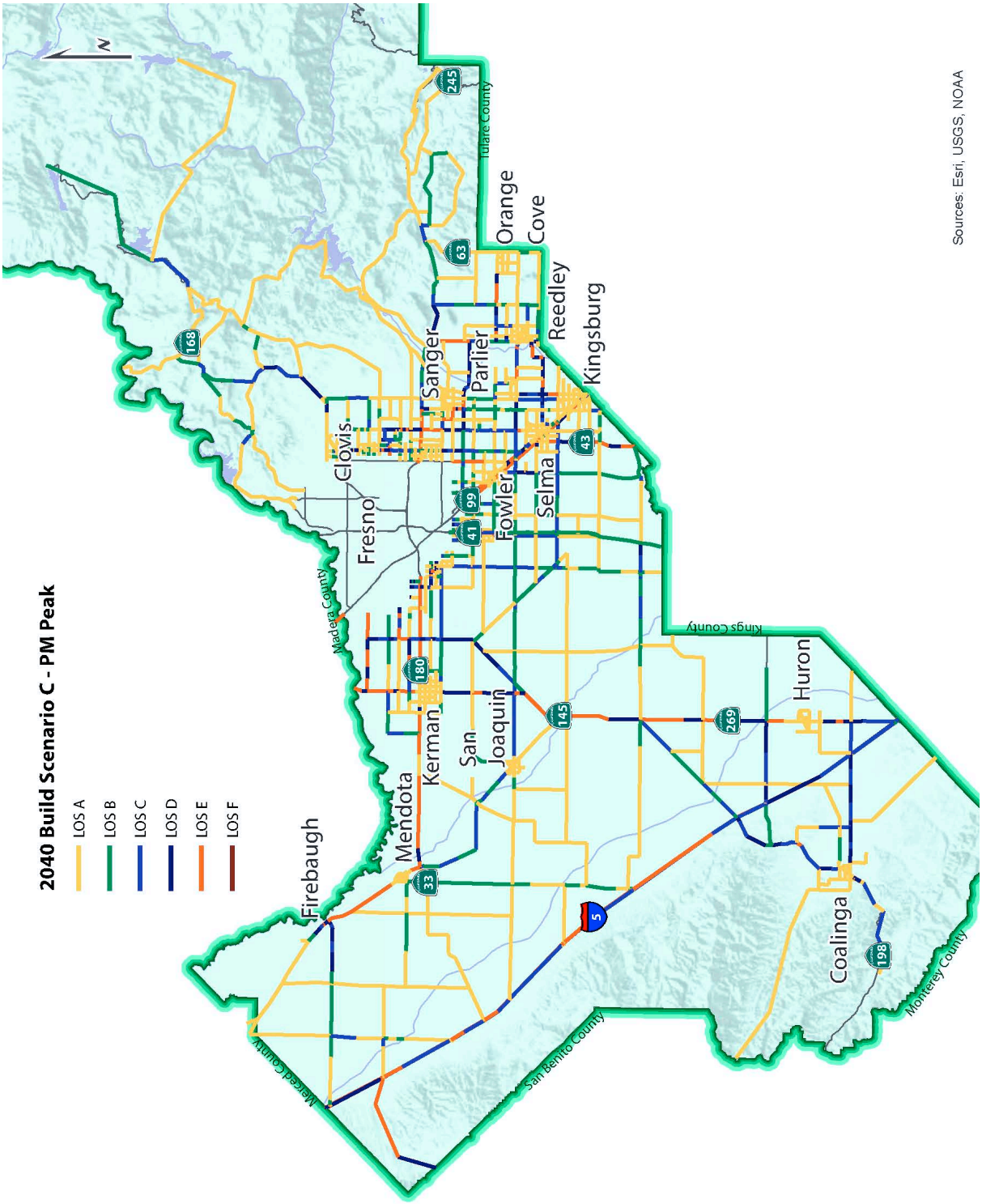


FIGURE 4--21
Year 2040 Scenario C – Fresno County PM Peak Hour Level of Service



4.4 ENVIRONMENTALLY PREFERRED ALTERNATIVE

Based on the analysis and results described in Section 3, the Preferred Project Alternative is implementation of the 2014 RTP and SCS (SCS Scenario B). The Project is considered the "Environmentally Preferred Alternative" because it ***is:***

✓ ***Feasible, Implementable, Achievable***

The Preferred Project Alternative is based on current planning assumptions reflected in current or draft general plans of each of the local jurisdictions. This alternative was proposed by member agencies leading to an alternative that is feasible, implementable, and achievable because general plan amendments to provide for consistency with the SCS will not be required. This alternative will see growth in cities and communities based on historical trend with the planned growth following current and draft general, community, and specific plans.

Scenario A is not preferred as the growth allocation was heavily influenced by only the citizens who participated in the SCS workshop. Due to the strong participation from residents of some communities, such communities received significantly more growth than can be reasonably foreseen. In many cases, these communities do not have sufficient infrastructure to support such extra growth.

Scenario C is not preferred as developments that have already received approval from the Fresno County Board of Supervisors, namely Friant Ranch and Millerton New Town, were removed; and growth was redistributed into City of Fresno. Removal of such approved projects is not practical or realistic in that it violates the County's land use authority.

✓ ***Consistent with Local General Plans and Policies***

Land uses within each city and the County are governed by general plans, which designate appropriate land uses throughout the jurisdiction and define specific goals, policies, and objectives. In general, most plans recognize existing land uses and determine acceptable uses for future development of land currently used for agriculture or open space. The Preferred Project Alternative was developed in cooperation between Fresno COG and the other four jurisdictions to ensure consistency with draft general plan land use designations, transportation systems, and general plan update policies. Future growth and development consistent with the general plans will be focused on the Fresno-Clovis Metropolitan Area with in-fill and increased densities along major corridors and within activity centers.

Scenario A is not preferred as the growth allocation was heavily influenced by only the citizens who participated in the SCS workshop. Due to the strong participation from residents of some communities, such communities received significantly more growth than can be reasonably foreseen,

and in many instances is in direct conflict with the land use plans of the local agencies. In addition, many of these communities do not have sufficient infrastructure to support such extra growth.

Scenario C is not preferred as developments that have already received approval from the Fresno County Board of Supervisors, namely Friant Ranch and Millerton New Town, were removed; and growth was redistributed into City of Fresno. Removal of such approved projects is not practical or realistic in that it violates the County's land use authority.

✓ ***Reduces Air Pollution***

In order to serve the needs of a growing and diverse population and meet air quality standards, demand management measures will be reviewed as a means of maintaining accessibility while also reducing congestion. The Preferred Project Alternative will encourage land use patterns that reduce dependency on automobiles, reduce energy consumption, and support the use of transit and other alternative modes. The goals, objectives, and policies for air quality attainment and energy conservation stress concerted efforts toward supporting alternative transportation modes including the improvement of bicycle and pedestrian systems and upgrading existing public transit and regional rail facilities. Each of these types of improvements are included in the Preferred Project Alternative.

✓ ***Meets GHG Reduction Targets***

The Preferred Project Alternative takes into consideration requirements of SB 375 and Sustainable Communities Strategy elements. As part of its mandate under SB 375, in 2010, the California Air Resources Board (CARB) set specific GHG emission reduction targets for cars and light trucks for each of the state's 18 metropolitan planning organizations from a 2005 base year. The GHG targets set for the Fresno region call for a 5 percent per capita reduction by 2020, and a 10 percent per capita reduction by 2035. Fresno COG has demonstrated that the 2014 RTP and SCS (Preferred Project Alternative) will meet and exceed the CARB GHG emission reduction targets for 2020 and 2035.

✓ ***Achieving the Goals of SB 375***

The strategies in the 2014 RTP and SCS are aimed at reducing travel and providing additional travel choices. As such, the 2014 RTP/SCS complies with the conformity requirements of the Clean Air Act, as further detailed in the conformity document (reference the 2014 RTP Appendix). An important part of the Revenue Constrained Transportation Network, described more fully in Chapter 7 of the RTP, is a significant investment in public transit, as well as facilities that encourage walking and bicycling as forms of active transportation. The aim of these investments is to significantly increase the attractiveness of public transit, walking, and bicycling – particularly in areas that are planned for more compact and mixed-use development. Investments in our local streets and roads, including

access to regional airports; goods movement projects, and Transportation Demand Management (TDM) and Transportation System Management (TSM) projects and programs are also integral to the overall transportation network.

It is expected that the 2014 RTP and SCS (Preferred Project Alternative) will produce benefits beyond simply reducing GHG emissions. The 2014 RTP and SCS will help the region contend with many ongoing issues across a wide range of concerns, including placemaking, the environment, responsiveness to the marketplace, and mobility:

- ✓ The 2014 RTP/SCS promotes development of better places to live and work through measures that encourage more compact development, varied housing options, bike and pedestrian improvements, and efficient transportation infrastructure.

- ✓ The demographic profile of the region is changing and the market for housing is changing with it. Residents will be looking for a "value lifestyle" in which both housing and transportation costs are minimized even as they maintain a high-quality of life. Strategies focused on high-quality places, compact infill development, and more housing and transportation choices provide a response to these newly emerging market forces.

- ✓ By including options that create more compact neighborhoods and placing destinations closer to homes and closer to one another, the 2014 RTP and SCS's strategies can reduce the cost of development for taxpayers and reduce everyday costs of housing and transportation.

- ✓ Reducing the footprint of new development protects farmland and open space.

- ✓ The 2014 RTP/SCS does not envision wholesale redevelopment of the region. The vast majority of neighborhoods and business districts that will exist in 2040 already exist today, and most of them will be unchanged in the next 20-25 years. Rather, the 2014 RTP and SCS envisions a new development pattern for new neighborhoods and revitalized neighborhoods and business districts that will build upon current patterns to give residents more choices and opportunities as they consider where to live and work.

The Preferred Project Scenario was developed considering the existing and proposed general plans for each of the local jurisdictions within the County in contrast to Alternative A and Alternative C. Both of these Alternatives are not consistent with the current and draft general plans in the Fresno region. As a result, the Project Alternatives are ***not feasible, achievable, or implementable*** without local jurisdictions making ***significant revisions*** to adopted and draft general plans. While Scenario's A and C also allow for the meeting of GHG emission's reduction targets, taken into consideration with their feasibility, the reductions alone do not support their identification as the preferred scenario.

5.0 CUMULATIVE EFFECTS

Section 15126.2 of the *CEQA Guidelines* requires that EIRs identify four types of impacts:

- ✓ The significant environmental effects of the project
- ✓ Significant effects of the project which cannot be avoided if the project is implemented
- ✓ Significant irreversible environmental changes which would be caused by the project
- ✓ The growth inducing impacts of the project. Section 15130(a) requires an EIR to provide a discussion of significant cumulative impacts of a project when the project's incremental effect is cumulatively considerable

The significant effects of the Project were identified in Section 3 of this EIR. This section of the EIR identifies the unavoidable impacts, irreversible environmental changes, growth inducing impacts, and cumulative effects of the Project.

5.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL CHANGES

Significant unavoidable environmental changes would result from any of the improvement projects under the Preferred Project Alternative where construction of such projects would utilize non-renewable resources in such a way that reversing the impact of Project implementation is not possible. CEQA Section 15126.2(b) requires a discussion of any significant impacts that cannot be reduced to levels of insignificance. Although mitigation measures have been identified, where feasible, for all of the significant impacts of the proposed Project, the Plans would result in the following impacts that are significant and unavoidable even after implementation of available, feasible mitigation measures:

- ✓ Blocked or impeded scenic resources as seen from the transportation facility or from the surrounding area.
- ✓ Altered appearance of scenic resources along or near designated or eligible scenic highways and/or vista points.
- ✓ Creation of significant contrasts with the overall visual character of the existing landscape setting.
- ✓ New source of substantial light and glare.
- ✓ Land use and growth that may occur in areas not previously envisioned for growth and development (agricultural areas).
- ✓ Increased emissions during the planning period for the Project.
- ✓ Creation of objectionable odors affecting a substantial number of people.
- ✓ Degradation or removal of natural vegetation and wildlife habitat during construction activities.
- ✓ Displacement or removal of riparian or wetland habitat during construction and operation of improvement and future land use development projects.

- ✓ Displacement or removal of riparian or wetland habitat during construction and operation of improvement or future land use development projects as a result of edge effects.
- ✓ Temporary or permanent impacts to terrestrial and aquatic wildlife movements.
- ✓ Potential increase in the siltation of screens and other water resources from exposures of erodible soils during construction activities.
- ✓ Indirect cumulative effect on biological resources.
- ✓ Cumulative Greenhouse Gas Emissions (GHG) impacts.
- ✓ Impacts on cultural and historical sources resulting from increased construction activities.
- ✓ Excavation and earthmoving activities of previously unknown archaeological resources or paleontological materials.
- ✓ Cumulative regional impacts on existing cultural and historical resources.
- ✓ Increased slope failure.
- ✓ Long-term erosion impacts.
- ✓ Impact along alignments and future land use development sites of state owned and state mineral-reserve land.
- ✓ Exposure of people or structures to potential substantial adverse effects related to seismic activity and landslides.
- ✓ Cumulative regional impacts on geologic resources.
- ✓ Hazards to the public or environment through the release of hazardous materials during transportation of such wastes or the release of materials from future land use developments.
- ✓ Cumulative regional impact on water quality, stormwater infiltration, groundwater recharge, flood hazard, wastewater treatment service, and water demand.
- ✓ Energy consumption and conservation impacts.
- ✓ Impacts on land use patterns, potentially causing land use growth and development to occur in areas not previously envisioned for growth and development or to occur at a higher density than planned in general plans.
- ✓ Sensitive receptors located in the urban and rural areas of the Fresno region including residences, educational facilities, medical facilities and places of worship. Construction and implementation of the proposed highway and arterial improvements, transit facilities, and future land use development would impact sensitive receptors located in the vicinities of the individual improvement or future land use development projects.
- ✓ Loss of open space areas.
- ✓ Disturbance or loss of significant agricultural resources throughout the Fresno region.
- ✓ Cumulative regional impacts on existing and planned land use.
- ✓ Noise impacts resulting from construction and grading activities.
- ✓ Exposure to noise for noise-sensitive land uses in excess of normally acceptable noise levels or substantial increases in noise.
- ✓ Cumulative regional impacts on ambient noise levels.
- ✓ Displaced or relocated residences and businesses through acquisition of land and buildings necessary for roadway improvements or for future land use developments.

- ✓ Disrupted or divided communities by separating community facilities, restricting community access and eliminating community amenities.
- ✓ Increases in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- ✓ Recreational facilities or construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
- ✓ Cumulative regional impact to population, housing and employment.
- ✓ Cumulative regional impact on public utilities, other utilities and services systems.
- ✓ Level of Service (LOS) deficiencies (LOS E and F conditions) and congestion along the regionally significant road system.
- ✓ Substantially increase hazards due to a design feature or incompatible uses.
- ✓ Result in inadequate emergency access and parking capacity.
- ✓ Conflict with adopted polices, plans, or programs supporting alternative transportation.

5.2 SIGNIFICANT IRREVERSIBLE IMPACTS

The identification of irreversible impacts is required in Section 15126.2(c) of the CEQA Guidelines. This section states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. In addition, irreversible damage can result from environmental accidents associated with the Project (RTP and SCS). Irretrievable commitments of resources should be evaluated to assure that current consumption is justified.*

CEQA Section 15126.2(c) requires a discussion of any significant impacts that cannot be reduced to levels of insignificance. Although mitigation measures have been identified, where feasible, for all of the significant impacts of the proposed Project, the RTP and SCS would result in the impacts listed above that are significant and irreversible even after implementation of available, feasible mitigation measures.

5.3 GROWTH INDUCING IMPACTS

According to Section 15126.2(d) of the State CEQA Guidelines, an EIR is required to evaluate potential growth-inducing impacts of a proposed project. CEQA Guidelines defines a growth-inducing impact as "the ways in which the proposed project could foster economic or population growth, or the construction

of additional housing, either directly or indirectly, in the surrounding environment." CEQA also requires the analysis of project characteristics that may encourage and facilitate activities that could individually or cumulatively affect the environment. Growth inducement therefore, is any growth, which exceeds planned growth of an area and results in new development, which would not have taken place without the implementation of the proposed project. The growth-inducing potential of a project would be considered significant if it results in growth or a population concentration that exceeds growth forecasts included in general plans, other land use plans, or projections made by regional planning agencies.

The environmental effects of induced growth are indirect impacts of the proposed project. Such effects could result in significant, adverse environmental impacts, which could include increased demand on public services, increased traffic and/or noise, degradation of air and/or water quality, and conversion of agricultural land and open space to other uses.

The socioeconomic growth that the Fresno region has experienced for the past 50 years is expected to continue. The Project will, in and of itself, may incur growth inducing impacts to the Fresno region. New or improved transportation facilities provide access to areas of new development, thereby allowing more people and jobs to locate in growth areas. Without these facilities, the lack of access could force development into areas with existing transportation infrastructure, thereby shifting population and employment growth from one area of the region to another. From this standpoint, the inclusion of new or upgraded transportation facilities in the Project could be considered growth inducing in some localities.

It is anticipated that the Fresno COG region will grow at the same rate, regardless of whether or not the Project is implemented. Specifically, population in Fresno County is expected to increase by approximately 50% regardless of the Project. The region's population will grow from an estimated 930,450 people in 2010 to approximately 1.4 million by the Year 2040. See the Population, Employment, and Housing section (Chapter 3, Section 3.14) for further clarification. Construction of individual improvement projects and future land use development within the County will be subject to further CEQA review and evaluation of growth inducing impacts, and, as mentioned above, the Project, in and of itself, may have growth inducing impacts.

5.4 CUMULATIVE IMPACTS

Cumulative effects, according to CEQA Guidelines are defined as "two or more individual affects that, when considered together, are considerable or which compound or increase other environmental impacts." The cumulative impact from several projects results from the incremental impacts of the proposed project when added to other closely related past, present, and reasonably foreseeable future projects (Section 15255). According to CEQA Guidelines Sections 15130(a) and (b), the purpose of this section is to provide a discussion of significant cumulative impacts resulting from the Project, and to indicate the severity of the impacts and their likelihood of occurrence. The CEQA Guidelines require that

EIRs discuss the cumulative impacts of a project when a project's incremental effect is "cumulatively considerable," meaning that a project's incremental effects are considerable when viewed in connection with effects of past, current, and probable future projects. The CEQA Guidelines provide two methods for analyzing cumulative impacts with the most appropriate method for a program-level RTP EIR being the projection approach. In this approach, the cumulative impact analysis is based on a summary of projections of future development and impacts contained in adopted general planning or related planning documents, or in prior environmental documents that have been certified. These documents must be available to the public and actually describe or evaluate the regional or areawide conditions contributing to the cumulative impact.

Land use and growth projections for the 2014 RTP and SCS, which are the subject of analysis throughout this Draft Program EIR, are combined with the growth projections for Fresno County (and the incorporated cities and communities). In other words, the geographic scope for this cumulative analysis covers the entire Fresno County region plus the projected growth within each community (including both unincorporated and incorporated areas). The general plans for the jurisdictions within Fresno County were used to compile planned land uses for the cumulative impact analysis area. As a regional planning and financing project, the Project would regionally affect development in the same way as other regional planning and financing projects, such as city and county general plans and master plans of water and sanitation agencies would be expected to contribute to cumulative impacts on the same scale as the Project.

Aesthetics

Future development within Fresno County and development in surrounding areas would result in the increased intensity of existing urban land uses as well as conversion of open space into urban land uses, which is expected to result in a less than significant visual impact. The conversion of open space to urban land uses would result in a significant unavoidable impact by causing the obstruction of existing open views as well as potentially obstructing distant panoramic views from existing development; therefore, implementation of the proposed 2014 RTP and SCS will cumulatively contribute significantly to the loss of visual character of the County. Aesthetic impacts associated with implementation of the 2014 RTP and SCS are analyzed in Chapter 3, Section 3.2 of this Draft PEIR.

<u>Impacts:</u>

Fresno County will experience significant growth and development by 2040. The 2014 RTP and SCS influences the pattern of this development, by increasing mobility. At the regional scale, the 2014 RTP's and SCS's contribution to impacts on the overall visual character of the existing landscape setting would be cumulatively significant.

The 2014 RTP and SCS include land use policies that would affect the regional distribution of population,

households, employment, and facilities and could impact aesthetics and views. The primary land use strategy discussed in the 2014 RTP and SCS emphasizes focusing development in accordance with applicable general plans, including increased densities and infill development. Such future development may result in taller buildings that obstruct views. However, an infill strategy will also help preserve open space in the region, thereby protecting many scenic resources.

Fresno County will increase in population and employment by 2040. Some of these people will live in households and work at jobs on land that is currently vacant. This conversion of vacant land to residential or other uses would have a significant impact on aesthetics and views. As a result of the population growth expected to occur in the region over the next 26 years, contrasts with existing visual character will occur either due to increased land use intensity in urban areas or due to development of previously vacant lands. Although implementation of mitigation measures would reduce potential cumulative impacts, the impacts would be considered cumulatively considerable.

Mitigation Measures:

- ✓ Mitigation measures referenced in Chapter 3, Section 3.2 should also be implemented to address cumulative impacts.
- ✓ In visually sensitive site areas and prior to project (future land use development project) approval, local land use agencies should apply development standards and guidelines to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, site grading, etc.
- ✓ Local agencies should develop design guidelines for each type of transportation facility and future land use development type that make light elements of proposed facilities visually compatible with surrounding areas. The following methods should be employed whenever possible:
  - ➢ Transportation systems and future development should be designed in a manner where the surrounding landscape dominates;
  - ➢ Transportation systems and future land use development will be developed to be compatible with the surrounding environment; and
  - ➢ Lighting devices should be employed such as downward facing light, light shields, and amber lumens.

Significance After Mitigation:

Population growth projected by 2040 in combination with the projects in the 2014 RTP and SCS would consume land that is currently vacant resulting in contrasts with the overall visual character of the existing landscape setting. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures

will provide the framework and direction to avoid or reduce the significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Agricultural Resources

As Fresno County and the surrounding areas develop, a greater intensity of land uses may result in cumulative land use compatibility impacts. The proposed 2014 RTP and SCS will result in the conversion of State-designated (Prime, Unique, and Statewide Important) farmland as well as land currently utilized for agricultural productivity Prime Farmlands, Unique Farmlands, or Farmlands of Statewide Importance to a variety of non-agricultural uses. Impacts to agricultural resources associated with implementation of the 2014 RTP and SCS are analyzed in Chapter 3, Section 3.3 of this PEIR.

Impacts:

Implementation of the 2014 RTP and SCS would result in conversion of approximately 92 acres of important farmland to urban use as defined by SB 375. While this represents total agricultural land lost in Fresno County outside of the recorded-year 2008 spheres of influence of each of the local jurisdictions or agencies, neighboring counties would also continue to convert agricultural land due to development outside of Fresno County. This collectively adds to the overall conversion of agricultural lands in the cumulative impact analysis and surrounding area. The contribution of the proposed 2014 RTP and SCS to cumulative loss of agricultural and forest land would be cumulatively considerable. This is considered to be a potentially significant impact.

Mitigation Measures:

- ✓ Mitigation measures referenced in Chapter 3, Section 3.3 should also be implemented to address cumulative impacts.

Significance After Mitigation:

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce the significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-

specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies.

As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Air Quality

Chapter 3, Section 3.4 of this PEIR includes a detailed analysis of the air quality conditions related to implementation of the proposed 2014 RTP and SCS. This includes an analysis of regional and localized air quality impacts such as impacts from air emissions during construction and operation, exposure to toxic air contaminants, and odor impacts. The discussion below addresses cumulative air quality impacts beyond Fresno County.

Fresno County is within the San Joaquin Valley Air Basin which is monitored by the San Joaquin Valley Air Pollution Control District (SJVAPCD). The State has identified specific pollutants for which emissions levels have exceeded applicable federal and state pollutant standards in each of the air basins. Fresno County is nonattainment for Ozone (1 hour and 8 hour) and PM10 and PM2.5. The project will result in beneficial effects of system-wide improvement in traffic flows and reduced congestion, which would reduce the potential for increased air emissions. The SJVAPCD 2007 Ozone Plan, 2007 PM10 Maintenance Plan, and the 2008 PM2.5 Plan all document the SJVAPCD's plans to achieve the state ambient air quality standards, and as such, compliance with the regulations and incentives contained in the SJVAPCD plans results in compliance with the state ambient air quality standards. Based on the air quality analysis documented in Section 3.4 of this Draft PEIR, the 2014 RTP and SCS conforms to the applicable SJVAPCD plans (2007 Ozone Plan, 2007 PM10 Maintenance Plan, and the 2008 PM2.5 Plan) and demonstrates progress toward attainment with the state ambient air quality standards for PM10, PM2.5 and Ozone. As a result, implementation of the 2014 RTP and SCS would result in a less than significant impact to PM10, PM2.5, and Ozone.

Generally, growth within a specific region can not only worsen pollution levels within its own basin but it can also potentially worsen pollution levels within neighboring basins. Pollutant transport can occur as a result of various topographical and atmospheric conditions that cause pollution generated in one location to move to another location outside of the air basin. While the 2014 RTP and SCS does contribute to an ongoing violation, it does not impede the above referenced plans and regulations.

<u>Impacts:</u>

Forecasted growth within Fresno County and its surrounding areas will result in a potentially significant cumulative impact from air emissions adversely affecting a number of air basins. The regional contribution to these cumulative air quality impacts may also be potentially significant.

Mitigation Measures:

- ✓ Implement Mitigation Measures in Chapter 3, Section 3.4. Implementation of these measures will lessen this impact but not to a less than significant level.

Significance After Mitigation:

While population growth is expected to occur in Fresno County and its surrounding areas in the future with and without the Project, implementation of mitigation measures are expected to lessen cumulative impacts, however they will remain significant and unavoidable. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce the significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Biotic Resources

Chapter 3, Section 3.5 of this PEIR includes a detailed analysis of the biotic conditions related to implementation of the proposed 2014 RTP and SCS. While the loss of some special status species and important natural communities habitat in Fresno County is expected as a result of implementation of the 2014 RTP and SCS, surrounding communities may also convert habitat land for development and actions by these surrounding communities may further impact these biological resources. Collectively, this adds to the overall cumulative impacts to biological resources.

Impacts:

Growth and development in Fresno County will increase substantially by 2040. The 2014 RTP and SCS, by increasing mobility, influences the pattern of this growth and development. The 2014 RTP's and SCS's influence on growth potentially contributes to following regional cumulatively considerable impacts:

- ✓ Displacement of natural vegetation.
- ✓ Damage to sensitive species habitat.
- ✓ Habitat fragmentation.
- ✓ Impacts to riparian and wetland habitats.

- ✓ Construction and operational disturbances.
- ✓ Siltation.

The amount of new developed acreage (consuming previously vacant land) would be considerable. This degree of development is reasonably foreseeable; however, to assign this future development to precise locations would be speculative, such that it cannot be estimated which natural vegetation communities would be affected. Despite the inability to predict the acreage of each habitat type that may be affected, it is reasonable to expect that this future development would contribute to the same types (although on a larger scale) of impacts detailed in Chapter 3, Section 3.5.

These indirect impacts on biological resources are associated with population, employment, and household growth forecast by Fresno COG, and they are considered a significant cumulative impact.

Mitigation Measures:

- ✓ The cumulative impacts to biological resources, due to the forecast urban development associated with the 2014 RTP and SCS, would be mitigated using the same measures detailed for impacts referenced in Chapter 3, Section 3.5, in addition to the following measure.
    - ➢ Future impacts to biotic resources will be minimized through cooperation and information sharing between the implementation agency and affected resource agencies.

Significance After Mitigation:

The impacts to biotic resources due to regional scale growth would be reduced through application of the mitigation measures; however, implementation of the 2014 RTP's and SCS's transportation improvement and future land use development projects to accommodate growth and development in Fresno County (as reflected in adopted local agency general plans) would contribute to biotic resource impacts. Impacts to biotic resources from the 2014 RTP and SCS would be cumulatively considerable. The responsibility to mitigate impacts to biotic resources rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce conflicts with any local policies or ordinances protecting biological resources, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Climate Change

Climate change impacts associated with implementation of the 2014 RTP and SCS are analyzed in Chapter 3, Section 3.6 of this PEIR. Climate change impacts tend to be considered exclusively cumulative in nature. Implementation of the 2014 RTP and SCS would be consistent with statewide and regional plans and would achieve the statewide target for future year emissions reductions required under SB 375 and AB 32.

Impact:

Although growth and development in Fresno County and its surrounding communities is likely to result in increases in cumulative GHG emissions and contribute to global climate change, the contribution of the 2014 RTP and SCS to cumulative GHG emissions and global climate change would typically be considered a less than significant impact. However, for reasons considered below, impacts are considered significant and unavoidable.

Mitigation Measure:

- ✓ Implement Mitigation Measures in Chapter 3, Section 3.6. Implementation of these measures will lessen this impact but not to a less than significant level.

Significance After Mitigation:

The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce increased transportation GHG emissions on climate change, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Cultural Resources

Impacts to cultural resources associated with implementation of the 2014 RTP and SCS are analyzed in Chapter 3, Section 3.7 of this PEIR. While some cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific; therefore they are not typically considered cumulatively. However, if a cultural resource represents the last known example of its kind, impacts to it would be considered cumulatively significant.

Impacts:

Growth and development in Fresno County will increase substantially by 2040. The 2014 RTP and SCS, by increasing mobility and by inclusion of transportation measures, influences the pattern of this development. The 2014 RTP's and SCS's influence on growth contributes to regional impacts to existing historic resources and previously undisturbed and undiscovered cultural resources. This impact would be cumulatively considerable.

The amount of new developed acreage (consuming previously vacant, open space/recreation and agricultural land) from transportation and land use policies in the 2014 RTP and SCS would be less than the No Project Alternative. This degree of development is reasonably foreseeable; however, to assign this future development to precise locations would be speculative, such that it cannot be estimated where cultural resources would be affected. Despite the inability to predict the acreage of previously undisturbed land that may be affected, it is reasonable to expect that this future development would contribute to the same types of impacts detailed in Impacts 3.7.1 and 3.7.4, of Chapter 3, Section 3.7. These effects are considered a cumulatively considerable impact.

Mitigation Measures:

The cumulative impacts to cultural resources, due to the forecast growth and development associated with the 2014 RTP and SCS, would be mitigated using the same measures detailed for impacts referenced in Chapter 3, Section 3.7, in addition to the following measure.

- Future impacts to cultural resources will be minimized through cooperation and information sharing between the implementation agency and affected resource agencies.

Significance After Mitigation:

The impacts to cultural resources due to regional scale growth would be reduced through application of the mitigation measures; however, implementation of the 2014 RTP's and SCS's transportation improvement projects to accommodate growth and development in Fresno County (as reflected in adopted local agency general plans) would contribute to cultural resource impacts. The responsibility to

approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce significant impacts on historic resources and human remains, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies.

As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Energy and Energy Conservation

Energy impacts associated with implementation of the 2014 RTP and SCS are analyzed in Chapter 3, Section 3.8 of this PEIR. Demand for electrical power and natural gas has the potential to affect areas outside of Fresno County in a cumulative manner, because energy systems are interconnected and may even crossover into other states and countries. If growth of supplies does not keep pace with demand, the effects of growth and development in the cumulative impact analysis area have the potential to create shortages, resulting in a potentially significant cumulative impact.

Impacts:

To reduce the consumption of energy and maintain consistency with smart growth principals, the 2014 RTP and SCS include a proposed land use plan and transportation system focused on mixed uses, compact development, and multi-modal transportation options. However, implementation of the RTP and SCS is still anticipated to result in a per-capita and total increase in energy use in Fresno County. In addition to other growth and development in Fresno County and the surrounding communities that could result in increases in the demand for energy, the contribution of the 2014 RTP and SCS to cumulative energy impacts is considered significant.

Mitigation Measures:

The cumulative impacts to energy due to the forecast growth and development associated with the 2014 RTP and SCS would be mitigated using the same measures detailed for impacts referenced in Chapter 3, Section 3.8.

Significance After Mitigation:

The responsibility to approve land use development consistent with the general plans and the SCS rests

with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce impacts on energy and energy resources, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Geology/Soils/Mineral Resources

The implementation of the proposed RTP and SCS will contribute to the urbanization of Fresno County, which will result in the direct and/or indirect increase of seismic, slope, soil instability, or wind hazards. This increase would result from urban development and the conversion of vacant land to urban uses. As Fresno County grows, the opportunity for the hazards to occur grows also. Therefore, implementation of the proposed RTP and SCS will cumulatively contribute significantly to the increased exposure of people and property to seismic, slope, soil instability, and wind hazards. Chapter 3, Section 3.9 of this PEIR includes a detailed analysis of the geology and soil conditions related to implementation of the proposed 2014 RTP and SCS.

Impacts:

Growth and development in Fresno County will increase substantially by 2040. The 2014 RTP and SCS, by increasing mobility and including alternative transportation modes, influences the pattern of this urbanization. Implementation of the 2014 RTP and SCS would have the potential to result in a cumulatively considerable adverse effect on human beings and property when considered at the regional scale.

Potentially hazardous geological and seismic factors are found throughout the San Joaquin Valley. Given the regional scale and growth-inducing nature of the projects and programs included in the 2014 RTP and SCS, the cumulative impacts of the 2014 RTP and SCS on geological units and soils as well as the potential exposure to substantial adverse effects to people and property would be significant.

Mitigation Measures:

- ✓ Mitigation measures reference in Chapter 3, Section 3.9. would be applied to this impact in addition to the following measure:

  - ➢ Future impacts to geologic resources will be minimized through cooperation and information sharing between the implementation agency and affected resource agencies.

Significance After Mitigation:

The impacts to geologic resources due to regional scale growth would be reduced through application of the mitigation measures; however implementation of the 2014 RTP's and SCS's transportation improvement and future land use development projects to accommodate growth and development in Fresno County (as reflected in adopted local agency general plans) would contribute to geologic resource impacts. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce damaged transportation infrastructure and other land use development structures from seismic activity, slope failure and soil erosion, and loss of mineral resources, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Hazardous Materials

Development in accordance with the proposed RTP and SCS would cumulatively increase the intensity of development in Fresno County. Compliance with federal, State, and local regulations concerning the storage and handling of hazardous materials and/or waste would reduce the potential for significant public health and safety impacts from hazardous materials to occur. Therefore, the impact of the proposed RTP and SCS in addition to future development in surrounding areas is not expected to affect significantly the number of people exposed to public health and safety risks from exposure to hazardous materials.

Chapter 3, Section 3.10 of this PEIR includes a detailed analysis of the hazardous materials conditions related to implementation of the proposed 2014 RTP and SCS.

Impacts:

Implementation of the investments and policies in the 2014 RTP and SCS could create a potential hazard to the public or the environment by the disturbance of contaminated sites as a result of population and housing growth in the region. The 2014 RTP's and SCS's influence on mobility and its land use-transportation systems would influence population distribution, potentially contributing to a cumulatively considerable impact related to disturbance of contaminated sites by new urban development. This impact is considered to be significant.

Mitigation Measures:

Referenced in Chapter 3, Section 3.10 as implemented by responsible agencies and private developers would address this impact.

Significance After Mitigation:

With appropriate review and clean up or maintenance, this impact would not be cumulatively considerable and therefore would be less than significant. However, the responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce the impacts of hazardous materials, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Hydrology & Water Resources

Chapter 3, Section 3.11 of this PEIR includes a detailed analysis of the hydrology and water quality conditions related to implementation of the proposed 2014 RTP and SCS. Some types of impacts are localized and occur independently; these are not considered cumulative. There are, however, hydrology and water quality impacts that may be additive and cumulative.

Development within a flood hazard area results in continuous and incremental changes over time that could have cumulative adverse effects during a flood. Alterations of the drainage patterns, effects of groundwater withdrawal, and groundwater recharge may be cumulatively affected.

Impacts:

Growth and development will increase substantially by 2040. The 2014 RTP and SCS, by increasing mobility and by including alternative transportation modes, influences the pattern of this development. The 2014 RTP's and SCS's influence on growth would contribute to the conversion of undeveloped land, resulting in impacts to water quality, stormwater infiltration and groundwater recharge, flood hazard impacts, wastewater treatment services, and water demand.

The growth projection associated with the 2014 RTP and SCS would substantially increase the amount of developed land in the County. With the 2014 RTP and SCS, the amount of new developed acreage (consuming previously vacant land) would be considerable.

Mitigation Measures:

- ✓ Mitigation Measures referenced in Chapter 3, Section 3.11 shall be applied to all transportation and future land use development projects, as feasible, in addition to the following measures:

  - Local governments and Caltrans should encourage Low Impact Development and natural spaces that reduce, treat, infiltrate and manage stormwater runoff flows.

  - Local governments and Caltrans should implement green infrastructure and water-related green building practices through incentives and ordinances. Green building resources include the U.S. Green Building Council's Leadership in Energy and Environmental Design, Green Point Rated Homes, and the California Green Builder Program.

  - Local governments and Caltrans should integrate water resources planning with existing greening and revitalization initiatives, such as street greening, tree planting, development and restoration of public parks, and parking lot conversions, to maximize benefits and share costs.

  - Developers, local governments, Caltrans, and water agencies should maximize permeable surface area in existing urbanized areas to protect water quality, reduce flooding, allow for groundwater recharge, and preserve wildlife habitat. New impervious surfaces should be minimized to the greatest extent possible, including the use of in-lieu fees and off-site mitigation.

  - Future impacts to water quality should be avoided through cooperative planning, information sharing, and comprehensive pollution control measure development.

  - Local jurisdictions, Caltrans, and water agencies are encouraged to continue planning for improved stormwater management and groundwater recharge. Future adverse impacts should be avoided through cooperative planning, information sharing, and comprehensive implementation efforts.

  - Local governments and Caltrans should prevent improvement project and future land use development in flood hazard areas that do not have appropriate protections, especially in alluvial fan areas of the region.

- Local jurisdictions should encourage new development and industry to locate in those service areas with existing wastewater infrastructure and treatment capacity, making greater use of those facilities prior to incurring new infrastructure costs.

- Wastewater treatment agencies are encouraged to have expansion plans, approvals and financing in place once their facilities are operating at 80 percent of capacity.

- Local jurisdictions should promote reduced wastewater system demand by: designing wastewater systems to minimize inflow and increase upstream treatment and infiltration to the extent feasible, reducing overall source water generation by domestic and industrial users, deferring development approvals for industries that generate high volumes of wastewater until wastewater agencies have expanded capacity.

- Project developers and agencies should consider potential climate change hydrology and attendant impacts on available water supplies and reliability in the process of creating or modifying systems to manage water resources for both year round use and ecosystem health.

- Local water agencies should continue to evaluate future water demands and establish the necessary supply and infrastructure to meet that demand.

- Developers, local governments, and water agencies should include conjunctive use as a water management strategy when feasible.

- Developers and local governments should reduce exterior uses of water in public areas, and should promote reductions in private homes and businesses, by shifting to drought-tolerant native landscape plantings (xeriscaping), using weather-based irrigation systems, educating other public agencies about water use, and installing related water pricing incentives.

- Future impacts to water supply should be minimized through cooperation, information sharing, and program development.

Significance After Mitigation:

RTP and SCS improvement projects and future land use development expected by 2040 would create adverse impacts on water quality, stormwater infiltration and groundwater recharge, flood hazard impacts, and wastewater treatment service and water demand impacts. The 2014 RTP's and SCS's influence on growth distribution is a cumulatively considerable contribution to this significant impact. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area.

While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce the identified significant impacts identified, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Land Use & Planning

As Fresno County and the surrounding areas develop, a greater intensity of lane uses may result in cumulative land use compatibility impacts. Chapter 3, Section 3.12 of this EIR includes a detailed analysis of the land use and planning conditions related to implementation of the proposed 2014 RTP and SCS.

Impacts:

Growth and development in the County will increase substantially by 2040. The 2014 RTP and SCS, by increasing mobility and enhancing alternative transportation modes, influences the pattern of this urbanization. The 2014 RTP and SCS are in-line with current implementation agencies' adopted land use plans; however, should an agency make changes that reflect a differing development pattern, they could then have the potential to conflict with applicable adopted local land use plans and policies.

While the RTP and SCS are likely to result in a positive outcome related to supportive land use conditions for alternative forms of transportation such as transit, other improvement projects and future land use developments in the RTP and SCS could have significant impacts on land use patterns, land use growth and development. This impact could be especially significant on recreational, open space, agricultural, and other land uses within the County. The 2014 RTP's and SCS's influence on growth contributes to regional cumulatively considerable impacts to land use and would change the intensity of land use in some areas.

Mitigation Measures:

- ✓ The mitigation measures listed in Chapter 3, Section 3.12 would be applied as mitigation for this impact. In addition, the following measure would apply.
  - ➢ Regional planning efforts will be used to build a consensus in the region to support changes in land use to accommodate future population growth while maintaining the quality of life in the region.

Significance After Mitigation:

In order to accommodate the projected population totals assumed for 2040, the region will need to change land uses and increase the intensity of some existing land use. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce impacts on land use and planning, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce impacts identified.

Noise

The 2014 RTP and SCS would result in potential cumulative noise level increases along major roadways and near industrial/commercial zones. Each of these noise impacts would be dealt with separately when new noise sensitive or noise generating developments are proposed. Chapter 3, Section 3.13 of this EIR includes a detailed analysis of the noise conditions related to implementation of the proposed 2014 RTP and SCS.

Impacts:

Cumulative ambient noise levels could increase in the region to exceed normally acceptable noise levels or have substantial increases in noise as a result of the operation of expanded or new transportation facilities and future land use developments.

The 2014 RTP and SCS could have a significant impact on noise in the region. As described under Chapter 3, Section 3.13, many of the projects involve construction, which would result in significant short-term impacts. While the construction noise is temporary and short-term at the project level, the cumulative construction noise region wide could be significant. Over the course of the planning horizon there is likely to be constant construction within the region.

Cumulative transportation noise could also increase. This ambient noise increase could be related to aircraft overflights, railroads, as well as freeway, arterial and transit noise, and finally the operation of future land use developments.

Mitigation Measures:

- ✓ Mitigation measures intended to reduce the noise impacts on sensitive receptors are part of the 2014 RTP and SCS. These include: site design, buffers, soundwalls, etc.

- ✓ Further reduction in noise impacts would be obtained through the implementation of the measures described in Chapter 3, Section 3.13.

Significance After Mitigation:

Mitigation Measures referenced in Chapter 3, Section 3.13 may not reduce noise levels to below regulatory levels in all cases. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce the identified noise impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Population, Housing & Employment

Future increases in population and housing will occur within Fresno County. Development on a scale and intensity permitted under the 2014 RTP and SCS would result in cumulatively significant population increases within the County and region. Chapter 3, Section 3.14 of this PEIR includes a detailed analysis of the population, housing, and employment conditions related to implementation of the proposed 2014 RTP and SCS.

Impacts:

Growth and development in the County will increase substantially by 2040. The 2014 RTP and SCS, by increasing mobility and including transportation measures, influences the pattern of this development.

The 2014 RTP's and SCS's influence on growth contributes to regional cumulatively considerable impacts to population, housing and employment and would change the intensity of land use in some areas.

Mitigation Measures:

- ✓ The mitigation measures listed in Chapter 3, Section 3.14 would be applied as mitigation for this impact. In addition, the following measure would apply.

    - ➢ Regional planning efforts will be used to build a consensus in the region to support changes in population, housing and employment to accommodate future growth while maintaining the quality of life in the region.

Significance After Mitigation:

In order to accommodate the projected population, housing and employment totals assumed for 2040, the region will need to change land uses and increase the intensity of some existing land use. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce impacts on population, housing, and employment, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Public Utilities, Other Utilities & Services Systems

Chapter 3, Section 3.15 of this PEIR includes a detailed analysis of the public utilities, other utilities, and services systems conditions related to implementation of the proposed 2014 RTP and SCS.

Impacts:

The contribution of the proposed 2014 RTP and SCS to cumulative public service impacts in the form of state routes, freeways, and other roads under the jurisdiction of the CHP; rural wildland fire areas protected by CAL FIRE; and regional, state, and federal parks, open space, recreational areas, and other future land uses may be cumulatively considerable. This is considered to be a potentially significant impact.

Mitigation Measures:

- ✓ The mitigation measures listed in Chapter 3, Section 3.15 would be applied as mitigation for this impact.

Significance After Mitigation:

If the implementing agency adopts these mitigation measures, it will reduce the contribution of the proposed 2014 RTP and SCS to cumulative impacts to a less than significant level. However, the responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce impacts public services, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Impacts:

Growth and development in the County will increase substantially by 2040. The 2014 RTP and SCS, by increasing mobility and including alternative transportation modes, influences the pattern of this development. The 2014 RTP's and SCS's influence on growth contributes to regional cumulatively considerable impacts to police and fire and emergency services, solid waste services, and other public services in the County.

Growth and development in the region will require additional police, fire, and other emergency and public services, and additional solid waste services. Such needs will be determined on a transportation project- and future land use development project-level basis by individual service providers.

Mitigation Measures:

The mitigation measures listed in Chapter 3, Section 3.15 would be applied as mitigation for this impact in addition to the following.

- ✓ The growth inducing potential of individual transportation and future land use projects will be carefully evaluated so that the full implications of the projects are understood. Individual environmental documents should quantify indirect impacts (growth that could be facilitated or induced) on public services and utilities to the extent feasible.

- ✓ The California Integrated Waste Management Board should continue to enforce solid waste diversion mandates that are enacted by the Legislature.
- ✓ Local jurisdictions should continue to adopt programs to comply with state solid waste diversion rate mandates and, where possible, should encourage further recycling to exceed these rates.
- ✓ Local jurisdictions should implement or expand city or county-wide recycling and composting programs for residents and businesses. This could include extending the types of recycling services offered (e.g., to include food and green waste recycling) and providing public education and publicity about recycling services.
- ✓ Project implementation agencies should coordinate regional approaches and strategic siting of waste management facilities.
- ✓ Project implementation agencies should prioritize siting of new solid waste management facilities including recycling, composting, and conversion technology facilities in conjunction with existing waste management or material recovery facilities.
- ✓ Project implementation agencies should increase programs to educate the public and increase awareness of reuse, recycling, composting, and green building benefits and raise consumer education issues at the county and city level, as well as at local school districts and education facilities.

Significance after Mitigation:

Adoption of these mitigation measures by implementing agencies would reduce the contribution of the proposed 2014 RTP and SCS to cumulative impacts. However, the responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce impacts public services, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce the significant impacts identified.

Social & Economic Effects

Chapter 3, Section 3.16 of this EIR includes a detailed analysis of the social and economic conditions related to implementation of the proposed 2014 RTP and SCS. While an analysis of the social and economic impacts is not required by CEQA, Title VI of the Civil Rights Act of 1964 established the need for transportation agencies to disclose to the public the benefits and burdens of proposed projects on minority populations. The understanding of civil rights has expanded to include gender, religion, and disability. Title VI was further amended in 1987 to extend non-discrimination requirements for recipients of federal aid to all of their programs and activities, not just those funded with federal funds. In 1994,

President Clinton issued Executive Order 12898 on "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." In 1997, the Department of Transportation followed up with an Order on Environmental Justice designed to implement the Executive Order. In December 1998, the Federal Highway Administration (FHWA) issued its own environmental justice order. As a federally designated metropolitan transportation planning organization (MPO), Fresno COG is required to comply with the rules and policies set forth by FHWA.

Impacts:

Growth and development in the County will increase substantially by 2040. The 2014 RTP and SCS, by increasing mobility and including transportation measures, influences the pattern of this development. Construction of some improvement projects will be located in areas of minority and low-income populations. The improvement and future land use development projects may have direct, short-term impacts on surrounding communities related to construction, including noise, air quality, and traffic. However, none of these projects are expected to have a disproportionate impact on minority or low-income communities. The Project is designed to serve the entire population of the County, and the transportation and future land use development projects are dispersed throughout the region. As a result, short-term impacts are considered less-than-significant.

Furthermore, Fresno COG works with cities, counties, and other implementing agencies to encourage improvement projects that serve those communities with the greatest transit needs, such as low-income or minority communities in urban core areas. It is anticipated that the improvement projects will increase accessibility and address existing problems with the transportation network. The location, design, and alignment of transportation facilities and routes are planned to reduce potential impacts to the extent feasible, and to ensure that if impacts occur, these impacts do not disproportionately affect low-income or minority populations. As a result, long-term impacts are considered less-than-significant.

Mitigation Measures:

- ✓ Mitigation measures have been identified in Sections 3.4, 3.12, and 3.14 to minimize potential impacts and protect the sensitive uses that may be located near the individual improvement and future land use development project sites, including low-income and minority communities. In addition, the following measure would also apply.

    - ➢ Regional planning efforts will be used to build a consensus in the region to support changes in social and economic conditions to accommodate future growth while maintaining the quality of life in the region.

Significance After Mitigation:

Less than significant.

Transportation/Traffic

Chapter 3, Section 3.17 of this PEIR includes a detailed analysis of the transportation/traffic conditions related to implementation of the proposed 2014 RTP and SCS. At the regional level, all transportation and traffic impacts associated with implementation of the 2014 RTP and SCS are considered potentially significant but are expected to provide benefits such as increasing person trips by bicycle, walking, and transit and improving infrastructure and connectivity for pedestrians, bicycles.

Impacts:

The 2014 RTP and SCS are designed to maintain and encourage the balance between jobs and housing within the region. The additional population, housing, and job growth forecasted in 2040 is not a result of the 2014 RTP and SCS, which is a strategy to allocate the forecasted growth in order to achieve a more balanced jobs/housing ratio and to optimize transportation investments that support those land uses. The 2014 RTP and SCS result in a greater mix of alternative modes. The potential for cumulative impacts related to traffic generated within Fresno County and its surrounding communities, to which implementation of the 2014 RTP and SCS might contribute, is potentially significant.

Mitigation Measures:

✓ The mitigation measures listed in Chapter 3, Section 3.17 will be applied as mitigation for this impact.

Significance After Mitigation:

Implementing agency agencies should require measures that increase alternate modes of transportation. The responsibility to approve land use development consistent with the general plans and the SCS rests with the local jurisdictions and the responsibility to design and construct transportation improvements rests with Caltrans, the local jurisdictions, and other responsible agencies with jurisdiction over a project area. While implementation and monitoring of the above referenced mitigation measures will provide the framework and direction to avoid or reduce transportation impacts, it is probable that such impacts could remain significant and unavoidable. As a program-level document, evaluation of all project-specific circumstances is not plausible. Individual projects will require a project-level analysis to determine appropriate mitigation strategies. As appropriate, Fresno COG will encourage the implementation of the above-noted mitigation strategies intended to avoid or reduce impacts identified.

6.0 LIST OF PREPARERS, ORGANIZATIONS, AND AGENCIES REFERENCED OR CONSULTED

6.1 LIST OF PREPARERS

The following provides a list of firms and staff members involved in the preparation process of this document:

COUNCIL OF FRESNO COUNTY GOVERNMENTS

Tony Boren, Executive Director
Barbara Steck, Deputy Director
Michael Bitner, Principal Planner
Rob Terry, Senior Regional Planner, Fresno COG Project Manager
Kristine Kai, Senior Regional Planner
Kathy Chung, Senior Regional Planner
Kai Han, Senior Regional Planner
Clark Thompson, Senior Regional Planner
Lauren Dawson, Senior Regional Planner
Melissa Garza, Senior Regional Planner
Brenda Veenendaal, Senior Regional Planner
Lindsey Monge, Associate Regional Planner
Laurel Fawcett, Associate Regional Planner
Peggy Arnest, Associate Regional Planner
Seth Scott, GIS Specialist

VRPA TECHNOLOGIES, INC. TEAM

VRPA Technologies, Inc.

Georgiena Vivian, Vice President, VRPA Team Project Manager
Erik Ruehr, P.E., Director of Traffic Engineering
Jeff Stine, Senior Transportation Planner
Jason Ellard, Transportation Engineer
Erica Thompson, Transportation/Traffic Engineer
Dena Graham, Research Specialist
Hector Guerra Jr., Intern

Fehr & Peers

Richard Lee, PhD, AICP, Chief Technical Officer
Michael Wallace, Senior Associate, Traffic Modeling Manager

ENVIRON

Steve Messner, Principal
Lit Mian-Chan, Principal Consultant

QUAD KNOPF

Travis Crawford, Principal Environmental Planer
Curtis Uptain, Principal Biologist
Andy Glass, Senior Associate

6.2 ORGANIZATIONS AND AGENCIES REFERENCED OR CONSULTED

The following provides a list of organizations and agencies referenced or consulted during preparation of this Draft EIR:

American Farmland Trust - Fresno, California
AMTRAK
Best, Best & Krieger
Burlington, Northern and Santa Fe Railroad
California Attorney General
California Air Resources Board
California Building Standards Commission, (CBSC)
California Department of Conservation
California Department of Finance
California Department of Fish and Wildlife
California Department of Forestry and Fire Protection
California Department of Health Services
California Department of Parks and Recreation
California Department of Transportation (Caltrans)
California Department of Water Resources
California Division of Oil, Gas and Geothermal Resources
California Division of Mines and Geology
California Employment Development Department
California Energy Commission
California Environmental Protection Agency
California Gas Utilities
California Governor's Office of Planning and Research
California Historical Resources Commission
California Integrated Waste Management Board
California Native American Heritage Commission
California Office of Environmental Health
California Office of Historic Preservation
California Regional Water Quality Control Board

California State University, Bakersfield
California State Water Resources Control Board
California Transportation Commission
City of Fresno (Various Departments)
Clovis Transit
Coalition for Clean Air
County of Fresno (Various Departments)
Fresno COG RTP Roundtable
Fresno Council of Governments (Fresno COG)
ENVIRON
Federal Emergency Management Agency
Federal Highway Administration
Federal Transit Administration
Fehr & Peers
Fresno Area Express
Fresno County Airport Land Use Commission
Fresno County LAFCO
Fresno County Rural Transit Agency
Fresno County Transportation Authority
Fresno Medical Society
Governor's Office of Planning and Research
Greyhound Bus Lines
Institute of Transportation Engineers
National Park Service
National Forest Service
National Transportation Safety Board
Orange Belt Stages
Pacific Gas and Electric (PG&E)
Regional Water Quality Control Board, Central Valley Region
San Joaquin Valley Air Pollution Control District
San Joaquin Valley Railroad
Southern California Edison
Transportation Research Board
Union Pacific Transportation Company
United States Army Corps of Engineers
United States Aviation Administration
United States Bureau of the Census
United State Bureau of Land Management
United States Department of Agriculture, Natural Resource Conservation Service (NRCS)
United States Department of Energy, Energy Information Administration
United States Department of the Interior, Fish and Wildlife Service
United States Department of Transportation
United State Department of Housing and Urban Development
United States Environmental Protection Agency

United States Fish and Wildlife Service
United States Geological Survey
VRPA Technologies, Inc.

APPENDIX A

NOTICE OF PREPARATION

Fresno Council of Governments

2035 Tulare St., Ste. 201 tel 559-233-4148
Fresno, California 93721 fax 559-233-9645

www.fresnocog.org

Notice of Preparation

Date: August 27, 2012

To: Reference List of Recipients

From: Rob Terry, Associate Regional Planner
Fresno Council of Governments (Fresno COG) – Lead Agency
2035 Tulare Street, Suite 201, Fresno, CA 93721
(559) 233-4148
RTerry@fresnocog.org

Subject: Notice of Preparation of a Program Environmental Impact Report (PEIR) for the Fresno Council of Governments 2014 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS)

Fresno Council of Governments (Fresno COG) will be the Lead Agency and will prepare a Program Environmental Impact Report (PEIR) for the 2014 RTP/SCS. Fresno COG is requesting input regarding the scope and content of the environmental information, which is germane to your agency's statutory responsibilities in connection with the proposed project.

The project title, location, environmental review requirements, agency background and overview, project description, and probable environmental issues to be addressed in the PEIR are attached. An Initial Study is not attached and is not required pursuant to State CEQA Guidelines section 15060(d).

City of Clovis
City of Coalinga
City of Firebaugh
City of Fowler
City of Fresno
City of Huron
City of Kerman
City of Kingsburg
City of Mendota
City of Orange Cove
City of Parlier
City of Reedley
City of San Joaquin
City of Sanger
City of Selma
County of Fresno

Your response is requested at the earliest possible date, but not later than 30 days after receipt of this notice or ***by September 28, 2012***. Please send your response to Mr. Rob Terry, Associate Regional Planner, at the office or email (preferred) address shown above. Please identify the name and phone number of a contact person at your agency.

The project is of regional significance; therefore your comments regarding preparation of the PEIR are requested. A scoping meeting will be held on Monday, September 10, 2012 beginning at 1:30 PM in the Sequoia Conference Room at the Fresno COG offices located at the address shown above. The meeting will also be available by teleconference by dialing our Toll Free Number: 877-455-8695, Participant Code: 740166. Public input can be provided in writing at the Scoping Meeting.

Fresno COG looks forward to receipt of your comments regarding this important project for our region.

Attachment

Notice of Preparation

Program Environmental Impact Report
Project Overview and Scope of Environmental Analysis
2014 Regional Transportation Plan &
Sustainable Communities Strategy (RTP/SCS)

August 27, 2012

Project Title

Program Environmental Impact Report (PEIR) for the Fresno Council of Governments 2014 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS).

Location

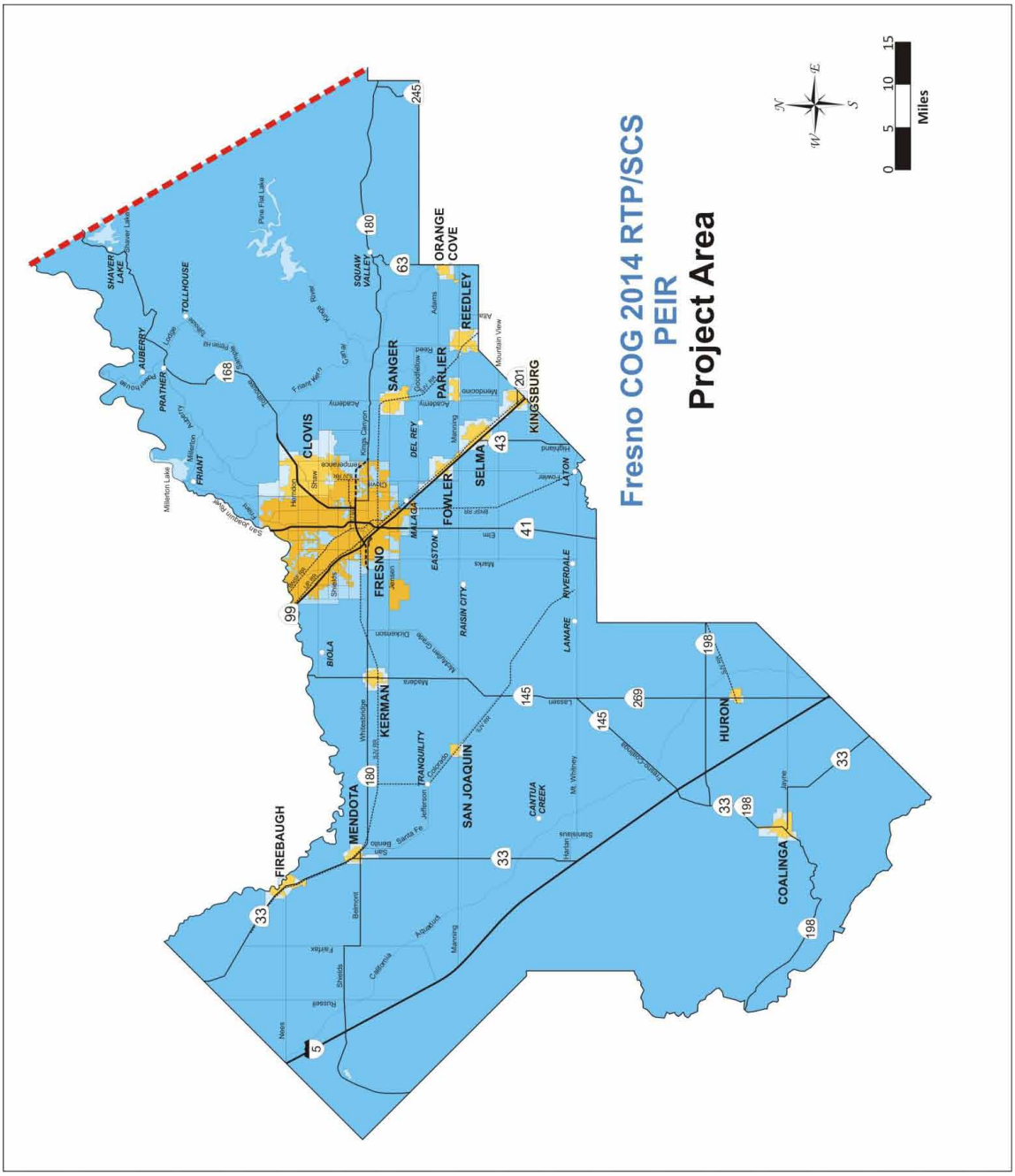
Within the corporate limits of Fresno County, California, including the fifteen (15) incorporated cities (Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger and Selma) and all unincorporated areas under the jurisdiction of the County of Fresno (reference the attached map of Fresno County identifying the area to be addressed by the PEIR and the RTP/SCS). Fresno County is the second largest county in the San Joaquin Valley region of the State of California encompassing approximately 6,000 square miles. The estimated population in 2012 is 945,711, placing Fresno as the tenth most populous county of the 58 counties in California. The Fresno-Clovis Metropolitan Area (FCMA) has a population of about 677,400 and the City of Fresno is now the fifth largest city in the state, with a population of approximately 505,000.

CEQA Requirements

The RTP/SCS PEIR will be prepared in accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines published in 2012. CEQA requires public agencies, such as the Fresno Council of Governments (Fresno COG), to consider the potential environmental impacts of the proposed 2014 RTP/SCS. The objectives of CEQA are to:

- ✓ Disclose to the Fresno COG Board and the public the potential environmental impacts of the proposed RTP/SCS
- ✓ Propose feasible alternatives or mitigation measures that avoid, eliminate or reduce project-related environmental effects
- ✓ Describe the analytical process, which leads to Fresno COG's decision on the project
- ✓ Promote interagency coordination
- ✓ Provide a mechanism for increasing public participation in the planning process

Notice of Preparation – Fresno COG 2014 RTP/SCS PEIR



3

The environmental document will be prepared as a "Programmatic" or "Program" EIR (PEIR), which is a type of first-tier document as defined in CEQA Guidelines Sections 15152 (Tiering) and 15168 (Program EIR). A Program EIR is prepared for an agency program or series of actions that can be characterized as one large project. Typically, such a project involves actions that are closely related geographically and are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program with generally similar environmental effects and mitigation measures. The RTP/SCS would be such a project.

The tiering concept is a multi-level approach to streamlining subsequent environmental reviews. This first-tier PEIR will include an analysis of general matters (i.e., broad policies, the planned regional multi-modal transportation system and related impacts, and program-wide mitigation measures). Subsequent tiers (later EIRs and Negative Declarations) will include an analysis of narrower, subsequent projects by "incorporating by reference" the general discussions from the broader first-tier RTP/SCS PEIR. Second-tier environmental reviews will focus on the impacts of individual improvement projects that implement the RTP/SCS, related programs, and/or policy(ies).

Regional Planning Background and Overview

Fresno COG is a voluntary association of local governments and is one of California's 38 regional transportation planning agencies (RTPAs). Fresno COG was created in 1967 through a Joint Powers Agreement (JPA) composed of elected officials of Fresno County and its fifteen (15) incorporated cities. In addition, Fresno COG is a designated Metropolitan Planning Organization (MPO), which qualifies it for Federal transportation funding as identified in Title 23 U.S.C. Section 134 and Title 23 Code of Federal Regulations (CFR) Part 450.300. MPOs are federally designated while the State designated RTPAs are described under California Government Code Section 29532 et seq. Fresno COG is both an MPO and an RTPA.

As part of the regional transportation planning process, Fresno COG studies potential transportation improvements, forecasts future conditions and needs, and pools the planning resources and expertise of its member agencies to facilitate development of a shared strategic vision for transportation and development in the region. These responsibilities enable Fresno COG to fulfill federal and State planning requirements and maintain the eligibility of the Fresno region for federal and State funding for transportation planning and improvements.

According to the 2010 California Regional Transportation Planning Guidelines, prepared by the California Transportation Commission (CTC), Fresno COG is required to adopt and submit an updated RTP to the CTC and the California Department of Transportation (Caltrans) every four years. The Guidelines state that "Regional transportation improvement projects proposed to be funded, in whole or in part, in the state Transportation Improvement Program (RTIP) must be included in an adopted RTP."

The 2014 RTP is a planning document to be developed by Fresno COG in cooperation with the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Caltrans and other stakeholders, including transportation system users. Following the passage of *Assembly Bill 32 (AB 32) – The California Global Warming Solutions Act of 2006*, which specifies that by the year 2020, greenhouse gas (GHG) emissions within the State must be at 1990 levels, *Senate Bill*

375 (SB 375) – The Sustainable Communities and Climate Protection Act of 2008 was signed into law as the framework for achieving greenhouse gas emissions reductions from land use and transportation planning.

SB 375 includes four primary findings related to the RTP/SCS development process:

- ✓ That the California Air Resource Board (ARB) develop regional GHG emission reduction targets for cars and light trucks for each of the 18 MPOs in California, including Fresno COG
- ✓ That Fresno COG, during the next RTP update, is required to prepare an SCS that specifies how the GHG emissions reduction target set by ARB will be achieved. If the target cannot be met through the SCS, then an Alternative Planning Strategy (APS) shall be prepared by Fresno COG
- ✓ Streamlines CEQA requirements for specific residential and mixed-use developments that are consistent with the Fresno County SCS or APS (as determined by ARB) to achieve the regional GHG emissions reduction target
- ✓ Requires that Fresno COG conduct the Regional Housing Needs Assessment (RHNA) process consistent with the RTP/SCS process and that the RHNA allocations be consistent with the development pattern in the SCS

Project Description

The project, as defined pursuant to Public Resources Code, Section 21065, is the preparation of the 2014 RTP and SCS. Fresno COG is in the process of preparing the RTP/SCS as required by Section 65080 et seq., of Chapter 2.5 of the California Government Code, federal guidelines pursuant to new requirements established in the federal surface transportation reauthorization, "Moving Ahead for Progress in the 21st Century" (MAP-21), the Transportation Conformity for the Air Quality Attainment Plan per 40 CFR Part 51 and 40 CFR Part 93, and requirements set forth in *Assembly Bill 32, The California Global Warming Solutions Act of 2006,* and *Senate Bill 375 The Sustainable Communities and Climate Protection Act of 2008.* Finally, the California Transportation Commission (CTC) has prepared guidelines (most recently adopted by the CTC on April 7, 2010) to assist in the preparation of the RTP and SCS.

The last comprehensive EIR on the RTP was completed in July 2010, which addressed transportation improvement projects, programs, and funding reflected in the 2007 RTP including additional funding from the approved ½ Cent Sales Tax Measure Extension (Measure "C").

The 2014 RTP/SCS will address all transportation modes including motor vehicles, transit (commuter and local), rail (commuter and interregional), goods movement (rail freight and trucking), bicycle and pedestrian facilities, aviation systems, and transportation systems management (TSM) programs and projects considering the horizon year of 2040. In addition, the 2014 RTP/SCS will:

- ✓ Identify the region's transportation goals, objectives, and policies
- ✓ Include the SCS, which demonstrates how the region will meet its GHG reduction target through integrated land use, and housing and transportation planning. *Once adopted by Fresno COG, the SCS becomes an integral part of the RTP*

- ✓ Set forth an action plan of projects and programs to address the needs consistent with the Policy Element
- ✓ Integrate results reflected in the Congestion Management Program (CMP)
- ✓ Document the financial resources needed to implement the plan
- ✓ Reflect results of the Transportation Conformity Analysis
- ✓ Highlight the 2014 RTP/SCS EIR process and results
- ✓ Detail the RTP/SCS public outreach process
- ✓ Include the Environmental Justice analysis process

Specifically, the RTP/SCS will include the following sections, which may be reorganized or modified as a result of staff and consultant review:

1. San Joaquin Valley Regional Transportation Overview
2. Regional Context
3. Policy Element
4. Sustainable Communities Strategy (SCS)
5. Action Element
6. Financial Element
7. Conformity
8. Environmental Impact Report
9. Public Outreach
10. Environmental Justice Analysis Process

Preliminary 2014 RTP Project Alternatives & SCS Alternative Scenarios

The following preliminary 2014 RTP/SCS project alternatives may be addressed in the PEIR:

- ✓ No Project
- ✓ Programmed Projects Plus the Preferred SCS Scenario
- ✓ Planned Multimodal Projects
- ✓ An Alternative Planning Scenario (APS)

CEQA Streamlining (SB 375 and SB 226)

SB 375 and newly enacted SB 226 provide "exemptions" for certain types of projects from CEQA review or projects may qualify for streamlined review if they conform to the regional SCS or the APS (if applicable). Projects qualify for streamlined CEQA review even if they conflict with local plans following adoption of the SCS.

Environmental Issues to be Addressed in the PEIR

The programs and projects to be included in the 2014 RTP/SCS will be analyzed through development of the PEIR. This will allow Fresno COG to analyze the regional or general impacts of the programs and projects. A more detailed or project level environmental assessment (if required) of the various projects included in the RTP/SCS will be conducted by the various responsible agencies including Caltrans, Fresno County, and the cities within the County before the projects are approved for construction and implementation.

Potential environmental impacts that could result from the Project include project impacts to:

- ✓ Aesthetics and Visual Resources
- ✓ Agricultural and Forestry Resources
- ✓ Air Quality
- ✓ Biological Resources
- ✓ Cultural Resources
- ✓ Energy
- ✓ Environmental Justice
- ✓ Geology and Soils
- ✓ Green House Gas Emissions (GHG)
- ✓ Hazards and Hazardous Materials
- ✓ Hydrology and Water Quality
- ✓ Land Use and Planning
- ✓ Mineral Resources
- ✓ Noise
- ✓ Population and Housing
- ✓ Public Services
- ✓ Recreation
- ✓ Transportation and Traffic
- ✓ Utilities and Service Systems
- ✓ Mandatory Findings of Significance

Prepared by: Georgiena M. Vivian, President
VRPA Technologies, Inc.
August 27, 2012

Date: August 27, 2012

Signature: Tony Boren
Tony Boren

Title: Executive Director

Phone: 559 233-4148

7

APPENDIX B

NOTICE OF PREPARATION
COMMENT LETTERS

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

August 30, 2012

Mr. Rob Terry
Fresno County Council of Governments
2035 Tulare Street, Suite 200
Fresno, CA 93721

Re: SCH#2012081070; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the **"201~~4~~ Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Project;"** located in Fresno County, California.

Dear Mr. Terry:

The Native American Heritage Commission (NAHC) is the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604).

This letter includes state and federal statutes relating to Native American historic properties or resources of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC recommends that the lead agency request that the NAHC do a Sacred Lands File search as part of the careful planning for the proposed project.

The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

RECEIVED
SEP 04 2012
BY:
FRESNO COG

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural

significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties, including archaeological studies. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

2

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

3

Native American Contacts
Fresno County
August 30, 2012

Big Sandy Rancheria of Mono Indians
Elizabeth Hutchins Kipp, Chairperson
P.O. Box 337 / 37302 Western Mono
Auberry , CA 93602
ck@bigsandyrancheria.com
(559) 855-4003
(559) 855-4129 Fax

Cold Springs Rancheria of Mono Indians
Robert Marquez, Chairperson
P.O. Box 209 Mono
Tollhouse , CA 93667
(559) 855-5043
559-855-4445 - FAX

North Fork Mono Tribe
Ron Goode, Chairperson
13396 Tollhouse Road Mono
Clovis , CA 93619
rwgoode911@hotmail.com
(559) 299-3729 Home
(559) 355-1774 - cell

Santa Rosa Rancheria
Rueben Barrios Sr., Chairperson
P.O. Box 8 Tache
Lemoore , CA 93245 Tachi
(559) 924-1278 Yokut
(559) 924-3583 Fax

Table Mountain Rancheria
Leann Walker Grant, Chairperson
P.O. Box 410 Yokuts
Friant , CA 93626-0177
(559) 822-2587
(559) 822-2693 FAX

Dumna Wo-Wah Tribal Goverment
Robert Ledger SR., Tribal Chairperson
2216 East Hammond Street Dumna/Foothill
Fresno , CA 93602 Mono
ledgerrobert@ymail.com
559-519-1742 - office

Sierra Nevada Native American Coalition
Lawrence Bill, Interim Chairperson
P.O. 125 Mono
Dunlap , CA 93621 Foothill Yokuts
(559) 338-2354 Choinumni

Choinumni Tribe; Choinumni/Mono
Lorrie Planas
2736 Palo Alto Choinumni
Clovis , CA 93611 Mono

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012081070; CEQA Notice of Preparation (NOP); draft Environmental limpact Report (DEIR) for the 2014 Regional Transportation Plan/ Sustainable Communities Sttrategy (RTP/SCS); located in Fresno County, california.

Native American Contacts
Fresno County
August 30, 2012

Table Mountain Rancheria
Michael Russell, Tribal Administrator
P.O. Box 410 Yokuts
Friant , CA 93626-0177
(559) 822-2587
(559) 822-2693 FAX

Table Mountain Rancheria
Bob Pennell, Cultural Resources Director
P.O. Box 410 Yokuts
Friant , CA 93626-0177
(559) 325-0351
(559) 217-9718 - cell
(559) 325-0394 FAX

Kings River Choinumni Farm Tribe
John Davis, Chairman
1064 Oxford Avenue Foothill Yokuts
Clovis , CA 93612-2211 Choinumni
(559) 307-6430

Dunlap Band of Mono Historical Preservation Soc
Mandy Marine, Board Chairperson
P.O Box 18 Mono
Dunlap , CA 93621
mandy_marine@hotmail.
com
559-274-1705

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. Foothill Yokuts
Salinas , CA 93906 Mono
kwood8934@aol.com Wuksache
831-443-9702

Chowchilla Tribe of Yokuts
Jerry Brown
10553 N. Rice Road North Valley Yokuts
Fresno , CA 93720
559-434-3160

The Choinumni Tribe of Yokuts
Rosemary Smith, Chairperson
1505 Barstow Choinumni
Clovis , CA 96311 Foothill YoKut
monoclovis@yahoo.com

Traditional Choinumni Tribe
David Alvarez, Chairperson
2415 E. Houston Avenue Choinumni
Fresno , CA 93720
davealvarez@sbcglobal.net

(559) 323-6231
(559) 292-5057 FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012081070; CEQA Notice of Preparation (NOP); draft Environmental limpact Report (DEIR) for the 2014 Regional Transportation Plan/ Sustainable Communities Sttrategy (RTP/SCS); located in Fresno County, california.

Native American Contacts
Fresno County
August 30, 2012

Frank Marquez
P.O. Box 565 Mono
Friant , CA 93626 Foothill Yokut
francomarquez@pmr.org
559-213-6543 - cell
559-822-3785

Santa Rosa Tachi Rancheria
Lalo Franco, Cultural Coordinator
P.O. Box 8 Tachi
Lemoore , CA 93245 Tache
(559) 924-1278 - Ext. 5 Yokut
(559) 924-3583 - FAX

Dumna Wo-Wah Tribal Goverment
Eric Smith, Cultural Resource Manager
2216 East Hammond Street Dumna/Foothill
Fresno , CA 93602 Mono
nuem2007@yahoo.com
559-519-1742 - office

Dumna Wo-Wah Tribal Goverment
John Ledger, Assistant Cultural Resource Manage
2216 East Hammond Street Dumna/Foothill
Fresno , CA 93602 Mono
ledger17bonnie@yahoo.com
559-519-1742 - office

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012081070; CEQA Notice of Preparation (NOP); draft Environmental limpact Report (DEIR) for the 2014 Regional Transportation Plan/ Sustainable Communities Sttrategy (RTP/SCS); located in Fresno County, california.

RESOURCE MANAGEMENT AGENCY
PLANNING DEPARTMENT
Norman L. Allinder, AICP
Director

- 2037 W. Cleveland Avenue
- Mail Stop G
- Madera, CA 93637
- (559) 675-7821
- FAX (559) 675-6573
- TDD (559) 675-8970
- mc_planning@madera-county.com

September 27, 2012

ATTN: Rob Terry
Fresno COG
2035 Tulare Street, Suite 201
Fresno CA 93721

RE: Notice of Preparation of a PEIR for Fresno COG 2014 RTP/SCS

Dear Mr. Terry:

We are in receipt of your Notice of Preparation (NOP) for the Program Environmental Impact Report (PEIR) for the Fresno County Council of Governments (Fresno COG) 2014 Regional Transportation Plan and Sustainable Communities Strategy (2014 RTP/SCS). It is important to note the long-term influence that the proposed RTP/SCS will have not only upon Fresno County, but also upon Madera County. The regional transportation goals proposed in the RTP will undoubtedly influence how a large segment of the San Joaquin Valley's population will travel throughout the region. Through the SCS, we anticipate a plan that reduces Fresno's transportation impacts upon surrounding counties and helps to foster a region with increasingly sustainable and interdependent urban areas as promoted by Assembly Bill 32 and Senate Bill 375 and further detailed in the San Joaquin Valley Blueprint.

While we understand the focus of the 2014 RTP/SCS upon Fresno County, it is important to highlight Fresno County's interconnectedness with southern Madera County. From a transportation perspective, the historical and more recent build-out of the northern portion of the City of Fresno has led to slower commute times along major east/west routes, including Herndon Avenue and Shaw Avenue. Therefore, many Valley residents have become reliant upon southern Madera County's major east/west routes, including Avenue 9 and Avenue 12. In addition, due in large part to the significant population of the Fresno/Clovis metropolitan area, Madera County has been experiencing increasing impacts upon other main transportation routes, including State Route 99 and State Route 41.

We would like to offer the following as significant environmental issues of interest relating to the proposed RTP/SCS. We trust that these comments will be addressed in the Draft PEIR and we remain available if you would like to meet concerning any of the issues outlined.

Transportation and Traffic: The proposed RTP/SCS has the potential to cause significant impacts to the County's transportation infrastructure—impacts not anticipated in the Madera County General Plan. A detailed analysis is warranted of the project's direct, indirect, and cumulative impacts on the level of service for the following segments and intersections:

Segments:

- Avenue 9 from Children's Boulevard to State Route 99
- Avenue 12 from State Route 41 to State Route 99
- Avenue 15 from State Route 41 to Road 28
- State Route 145 from Road 206 to Tozer Avenue
- State Route 145 from the City of Madera south to the Madera County line
- State Route 41 from the Madera County line to Yosemite National Park
- State Route 99 from the Madera County line to Merced County
- Road 206 from the Madera County line to State Route 145
- Children's Boulevard from State Route 41 to Avenue 9

Intersections:

- Children's Boulevard & State Route 41
- Avenue 12 & State Route 41
- Avenue 9 & State Route 99
- Avenue 12 & State Route 99
- State Route 145 and State Route 41
- Avenue 15 & State Route 41
- Road 206 & State Route 145

A critical aspect to Smart Growth is the ability for urban areas to have substantially high internal capture rates, thereby reducing the total vehicle miles traveled in the region and promoting alternative modes of transportation within urban centers. The PEIR should involve a detailed analysis of how each urban area in Fresno County will substantially increase their internal capture rates, thereby reducing impacts on Madera County.

Population and Housing: The proposed project will also involve plans to accommodate substantial amounts of population growth. The proposed RTP's transportation goals, objectives, and policies and SCS plans have the potential to induce population growth both directly and indirectly—such potential impacts must be thoroughly analyzed in the PEIR. In particular, this analysis must focus on the impacts of direct and indirect population growth upon Madera County.

Land Use and Planning: The project has the potential to promote the continued growth of commercial development in Fresno County, thereby attracting trips from Madera County for employment, retail, and service opportunities. The July 2012 jobs to housing ratio for the Fresno Metropolitan Service Area (MSA) was 1.067—meaning that the area contains an excess of commercial and industrial uses that attract employment from outside of the MSA (an estimated excess of 21,245 jobs)[1]. Each city within Fresno County must be analyzed to determine the jobs to housing ratio attributable to each urban area. To correct an imbalance, effective and measurable efforts must be taken through the SCS to obtain a jobs to housing balance within the County's urban areas. Such an effort will be important in determining the RTP and SCS's consistency with Blueprint and State greenhouse gas goals.

We appreciate the opportunity to provide comments on the NOP and will follow the project as it proceeds. The County also looks forward to commenting on the DPEIR. After reviewing this letter, if you have any specific questions, feel free to contact me (559-675-7821).

Sincerely,

Norman Allinder, AICP
Planning Director

[1] Data obtained from California Department of Finance housing estimates and California Employment Development Department labor market statistics.

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

FIGHTING FOR JUSTICE, CHANGING LIVES

September 28, 2012

Rob Terry, Associate Regional Planner
Fresno Council of Governments (Fresno COG) – Lead Agency
2035 Tulare Street, Suite 201
Fresno, CA 93722

RE: Comments for Notice of Preparation of a Program Environmental Impact Report (PEIR) for the Fresno Council of Governments 2014 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS)

Dear Fresno Council of Government Board of Directors:

Thank you for the opportunity to provide you with input regarding the scope and content of the environmental information for the 2014 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) Program Environmental Impact Report (PEIR).

California Rural Legal Assistance, Inc. (CRLA) is a statewide organization, which represents low income individuals, families, and communities throughout rural California. CRLA's Community Equity Initiative works to address and eliminate infrastructure and service disparities and deficiencies in disadvantaged, low income communities and, accordingly, address and eliminate barriers to necessary funding and financing for basic infrastructure and services within these communities. Hundreds of thousands of Californians, disproportionately those in small, disadvantaged communities in rural areas, live without adequate - or any – public transportation options or the infrastructure to support access to public transportation.

These comments aim to identify for the COG, as lead agency under the California Environmental Quality Act (CEQA), potentially significant environmental impacts of the 2014 RTP/SCS ("Project") and critical areas of study. Through these comments, we hope to ensure that the PEIR will adequately address environmental impacts, specifically with respect to disadvantaged, low income communities.

California courts have made clear that CEQA has two major purposes: "to require public agencies to adopt feasible mitigation measures to lessen the environmental impacts of the projects they approve" and " to inform the public and decision makers of the

631 Howard Street, Suite 300 · San Francisco, CA 94105 · Phone: 415-777-2752 · www.crla.org LSC

consequences of environmental decisions before those decisions are made." *Woodward Park Homeowners Accociation, Inc. v. City of Fresno*, (2007,)150 Cal. App. 4th 683. In order to satisfy these purposes and the requirements of CEQA, the EIR must provide the public with both general and detailed information about the possible effects the Project is likely to have. This means that, the EIR must include in its evaluation, the potential environmental impacts in subregions of Fresno County in addition to impacts on the region as a whole.

Given the nature of SB375, the PEIR must analyze and accurately assess the potential negative impacts resulting from geographically concentrated resource allocation in the RTP Elements specifically with respect to Policies, Action Plan Projects and Programs, and the SCS Preferred Scenario. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. (Pub. Res. Code. § 21002).

In order to satisfy CEQA informational requirements, the PEIR must "provide enough information to permit informed decision-making." *Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118. The lead agency cannot make an informed decision regarding the feasibility of lessening environmental impact unless the PEIR accurately evaluates and determines impact significance so that corresponding mitigation measures can adequately address these impacts.

While we lay out more specific suggestions below, our overriding concern is that the RTP and SCS addresses environmental justice issues and fully analyzes the impact of the RTP / SCS on environmental justice communities. To ensure this result, the PEIR must

> Analyze and address the distribution of environmental impacts and any disparities affecting low-income people and people of color, to ensure that the benefits and burdens of the RTP / SCS are fairly distributed.
>
> Ensure that the tools and models used to analyze the EIR alternatives are sensitive to differences among the various communities and geographies of the project area, and adopt appropriate mitigation measures to address these differences.
>
> Analyze the health impacts of the alternatives on the region as a whole and subregions of the planning area.

2

The PEIR's consideration must include, but are not limited to an analysis of;

> Increased or sustained high levels of GHG Emissions in subregions and among sensitive populations
>
> Increase or sustained high levels of direct exposure of sensitive receptors to Toxic Hazards and other pollutants, especially in environmental justice communities
>
> Economic, health and social impacts to residents of rural and low-income communities

Additionally, in order to ensure compliance with CEQA and environmental justice considerations in particular, the PEIR should assess the following potential impacts:

Air Quality

Assess the significance of point source impacts at the sub-regional level and on environmental justice communities, including those communities that are not currently served by a high quality transportation system (HQTS), and for whom the RTP and Project Alternatives do not plan for a HQTS.

Land Use/Planning

Assess economic and health impacts of compact development and concentrated resource allocation on low-income and extremely low-income urban and rural populations, including low-income unincorporated communities

Assess impact for areas and subregions that do not enjoy reliable transportation / transit alternatives and for whom the proposed project does not include strategies that allocate resources for alternative transportation options.

Population and Housing

Assess environmental impacts on communities for which the Plan allocates little or no growth and/or resource.

Assess potential displacement of residents, employment options and households.

Assess availability of affordable housing for all income groups throughout the planning area, including high opportunity neighborhoods and existing rural communities.

Transportation and Traffic

Determine impact significance for areas that are not currently served by a high quality transportation system and for which the project does not allocate or plan for street and highway improvement projects.

3

Thank you for your consideration of these comments. Please feel free to call me at (559) 233-6710 ext. 313 if you would like to discuss them further or should you have any questions.

Sincerely,

Ruby Renteria

Ruby Renteria
Community Worker, Community Equity Initiative
CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

4

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
1352 WEST OLIVE AVENUE
P.O. BOX 12616
FRESNO, CA 93778-2616
PHONE (559) 488-7307
FAX (559) 488-4088
TTY (559) 488-4066

Flex your power!
Be energy efficient!

October 4, 2012

2131-IGR/CEQA
6-FRE-GEN
NOP DEIR
FRESNO COUNCIL OF
GOVERNMENTS

Mr. Rob Terry
Fresno Council of Governments
2035 Tulare Street, Suite 201
Fresno, CA 93721

Dear Mr. Terry:

We have completed our review of the Notice of Preparation (NOP) for the proposed 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) draft Environmental Impact Report (EIR). Caltrans has the following comments:

It is indicated that this RTP/SCS will address all transportation modes: motor vehicles, transit (commuter and local), rail (commuter and interregional), goods movement (rail freight and trucking), bicycle and pedestrian, aviation, and transportation systems management programs and projects for the horizon year of 2040. It is also indicated that the RTP/SCS will: identify the region's transportation goals, objectives, and policies; meet its Green House Gas (GHG) reduction targets through integrated land use, housing, and transportation planning; set an action plan of projects and programs to address the needs consistent with the Policy Element; integrate results reflected in the Congestion Management Program (CMP); and document the financial resources needed to implement the plan.

The NOP does not contain a specific scope of work, however, it does specifically identify Senate Bills 375 and 226 for application during the CEQA review. It is indicated that these bills provide exemptions or streamlined reviews for certain types of projects under CEQA review. These certain types of projects could qualify for such exemptions or streamlined reviews if they conform to the regional SCS. Also, projects could qualify for streamlined CEQA review, even if they conflict with local plans following the adoption of the SCS. Therefore, it is recommended that clarification be provided regarding how these two senate bills might impact the intergovernmental planning review process for proposed land us projects.

If you have any questions, please call me at (559) 488-7307.

Sincerely,

JENNIFER BRYAN-SANCHEZ
Office of Transportation Planning
District 06

"Caltrans improves mobility across California"

Appendix D Item 2:
Final PEIR



2014 Regional Transportation Plan and Sustainable Communities Strategy

Final Program Environmental Impact Report

Fresno Council of Governments

Through 2040

Final Program Environmental Impact Report
for the

Fresno COG Regional Transportation Plan and Sustainable Communities Strategy

June 3, 2014

Prepared For:

Fresno Council of Governments

Fresno Council of Governments
2035 Tulare Street, Suite 201
Fresno, CA 93721
Ph: (559) 233-4148 Fax: (559) 233-9654

Prepared By:

VRPA Technologies, Inc.

VRPA Technologies, Inc.
4630 W. Jennifer, Suite 105
Fresno, CA 93722
Ph: (559) 271-1200 Fax: (559) 271-1269

TABLE OF CONTENTS

SECTION 1.0
INTRODUCTION 1-1

1.1 FORMAT AND SCOPE 1-1
1.2 PROJECT DESCRIPTION 1-1

SECTION 2.0
WRITTEN COMMENTS AND FINAL RESPONSES TO COMMENTS 2-1

Response to Comment Letter #1 2-1
Response to Comment Letter #2 2-2
Response to Comment Letter #3 2-3
Response to Comment Letter #4 2-5
Response to Comment Letter #5 2-16
Response to Comment Letter #6 2-20
Response to Comment Letter #7 2-21
Response to Comment Letter #8 2-24
Response to Comment Letter #9 2-27
Response to Comment Letter #10 2-28
Response to Comment Letter #11 2-32
Response to Comment Letter #12 2-37
Response to Comment Letter #13 2-42
Response to Comment Letter #14 2-58
Response to Comment Letter #15 2-62
Response to Comment Letter #16 2-62
Response to Comment Letter #17 2-63
Comment Letters 2-69

SECTION 3.0
CHANGES, ADDITIONS AND CORRECTIONS TO THE DRAFT PEIR 3-1

EXHIBIT A
STATEMENT OF OVERRIDING CONSIDERATIONS A-1

SUMMARY OF SIGNIFICANT, ADVERSE, UNAVOIDABLE IMPACTS A-1
OVERRIDING CONSIDERATIONS A-6
OVERRIDING REASONS A-7

EXHIBIT B
MITIGATION MONITORING PROGRAM B-1

STATUTORY REQUIREMENTS B-1
ADMINISTRATION OF THE MITIGATION MONITORING PROGRAM B-1
MITIGATION MEASURES B-2

EXHIBIT C
LIST OF PREPARERS C-1

SECTION 1.0 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that a Final Program Environmental Impact Report (Final PEIR) must be prepared, certified, and considered by decision-makers prior to taking action on a project. The Final PEIR provides the Fresno Council of Governments (Fresno COG) with an opportunity to respond to comments received on the Draft PEIR and to incorporate any changes or additions necessary to clarify and/or supplement the information contained in that document. This Final PEIR, therefore, represents the culmination of all environmental related issues raised during the comment period on the Draft PEIR for the Fresno COG 2014 Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS). In addition, this Final PEIR contains the Statement of Overriding Considerations (Exhibit A), which identifies the significant, adverse, and unavoidable impacts in the Draft PEIR. Finalize a Mitigation Monitoring and Reporting Program (Exhibit B) is included that identifies the necessary processes that are required to ensure that the mitigation measures recommended in the Draft PEIR are implemented. The Fresno COG Board of Directors is require to balance the benefits of the proposed Project (2014 RTP and SCS) against its unavoidable environmental risks in determining whether to approve the project.

1.1 FORMAT AND SCOPE

This document has been prepared by VRPA Technologies, Inc. (VRPA) to address the required components described above. The fifty-five day Draft PEIR review and comment period began on March 21, 2014 and ended on May 15, 2014. Comments received and staff response to those comments are contained in Section 2 of this Final PEIR. Section 3 provides a listing of changes, additions, and corrections to the Draft PEIR recommended by VRPA. Such changes, additions, and corrections are necessary to address revisions resulting from written comments on the Draft PEIR. In addition, this document also includes a Statement of Overriding Considerations (Exhibit A), and the Mitigation Monitoring and Reporting Program (reference Exhibit B).

The Final PEIR is composed of the following documents, which are incorporated here by reference:

- ✓ Fresno COG 2014 Regional Transportation Plan and Sustainable Communities Strategy, Draft Program Environmental Impact Report, March 21, 2014
- ✓ Fresno COG 2014 Regional Transportation Plan and Sustainable Communities Strategy, March 21, 2014
- ✓ Fresno County Conformity Analysis, March 21, 2014
- ✓ Fresno COG Regional Transportation Plan and Sustainable Communities Strategy, Final Program Environmental Impact Report, May 30, 2014

1.2 PROJECT DESCRIPTION

The Project, as defined by CEQA Statutes, Section 21065, is the preparation of the 2014 RTP and SCS. Fresno COG has prepared the RTP and SCS as required by Section 65080 et seq., of Chapter 2.5 of the California Government Code as well as federal guidelines pursuant to the requirements of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The RPT and SCS must also meet Transportation Conformity for the Air Quality Attainment Plan per 40 CFR Part 51 and 40 CFR Part 93. In addition, the RTP and SCS must address requirements set forth in Assembly Bill 32, The California Global Warming Solutions Act of 2006. Finally, the California Transportation Commission has prepared guidelines (most recently revised in April 20110 including an Addendum addressing Climate Change and Greenhouse Gas Emissions adopted by the Commission on May 29, 2008) to assist in the preparation of the RTPs pursuant to Section 14522 of the Government Code.

As the designated Regional Transportation Planning Agency (RTPA), Fresno COG is mandated by state and federal law to update the RTP every four years. The last comprehensive EIR on the RTP was completed in July 2010, which addressed transportation improvement projects, programs, and funding from federal, State, and local sources including additional funding from the ½ Cent Sales Tax measure (Measure "C" Extension). Measure "C" did receive the 2/3^{rds} voter approval required in order to pass in the November 2006 election. The 2014 revision to the RTP has been prepared to address possible environmental impacts resulting from its implementation and sources of funding that are available for programming and to incorporate for the first time, the Sustainable Communities Strategy (SCS).

The RTP is used to guide the development of the Regional Transportation Improvement Program (RTIP). The RTIP is the programming document used to plan the construction of regional transportation projects and requires State Department of Transportation (Caltrans) approval. No project-level assessments of environmental impacts are addressed by this PEIR. The RTP is also used as a transportation planning document by each of the sixteen member jurisdictions of Fresno COG. Member jurisdictions include the County of Fresno and the cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, and Selma.

The RTP and SCS identifies the region's transportation needs and issues, sets forth an action plan of projects and programs to address the needs consistent with the adopted policies and documents the financial resources needed to implement the plan. Additional areas of emphasis and policy initiatives in the 2014 RTP and SCS includes the SCS. In addition, the 2014 RTP and SCS includes updated project lists and updated performance measures.

The 2014 RTP and SCS consists of required elements referenced in the enabling legislation and is organized into various sections noted below.

- ✓ **Chapter 1.** Building the RTP: Putting the Pieces Together
- ✓ **Chapter 2.** Public Participation: Working Together for a Better Plan
- ✓ **Chapter 3.** Environmental Justice Report: Ensuring Meaningful Involvement for All People
- ✓ **Chapter 4.** Sustainable Communities Strategy: People. Choices. Community.
- ✓ **Chapter 5.** Actions: Assessing Our Transportation Investment Needs
- ✓ **Chapter 6.** Policies: Foundation of the Plan
- ✓ **Chapter 7.** Financing Mobility: Funding Our Transportation Future
- ✓ **Appendices.**

SECTION 2.0 WRITTEN COMMENTS AND FINAL RESPONSES TO COMMENTS

(Comment letters received are provided beginning on Page 2-69)

Comment Letter #1

FROM: Salvador Gonzales, Chief Operating Officer, Lance Kashian & Company and John Kashian, The Kashian Group

DATED: April 15, 2014

RESPONSE #1 *This comment letter and the following response applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

In regards to your inquiry, Fresno COG responded via phone call and email on April 30, 2014 to clarify the formal requests that we edit the 2014 RTP to include improvement on the Shaw and 99 interchange into the RTP as well as to setup a meeting to further discuss.

Fresno COG acknowledges that the Interchange at Shaw and State Route 99 is an integral facility and that is why it is indeed programmed in the RTP. Fresno COG staff provided a direct link to where the project was programmed in the **DRAFT RTP Financially Constrained Project List in Appendix C page 11 of 66 and in the DRAFT Conformity Document: Appendix B (page 64 of the PDF)**. Secondly, per the request of Lance-Kashian & CO, Mr. Tony Boren, representing Fresno COG, held a meeting with Mr. Salvador Gonzales (Kashian & Co), Caltrans (Sharri Ehlert and Michael Navarro), and the City of Fresno (Scott Mozier) on May 12, 2014 to discuss what the transportation plan/vision for the Shaw Interchange is within the life of the RTP and/or beyond. The meeting discussion included an overview of the project's inclusion in the appendix and that it is within the financially constrained project list. Lance-Kashian & Co requested that the project be moved from the Tier II list to the Tier I of the Measure C Urban Program in order to advance it and get it programmed in the Federal Transportation Improvement Program. Fresno COG staff explained that in order to get the project programmed in the FTIP, the project must demonstrate that it has committed funds and it must have member agency support in order to start the process of moving and amending the project from the Tier II Urban to the Tier I Urban Measure C project lists. It was explained that because of financial constraint requirements, this process ultimately will require that other projects be delayed in order to accommodate and advance proposed projects like the Interchange at Shaw and State Route 99. Lance-Kashian & Co will continue working with the City of Fresno on this request.

Reference:

SR 99/Shaw Ave. Interchange as programmed in the 2014 RTP:
RTP Financially Constrained Project List in Appendix C page 11 of 66
http://www.fresnocog.org/sites/default/files/publications/RTP/Draft_RTP/Appendices/2014_RTP_Appendix_C.pdf

FRESNO COUNCIL OF GOVERNMENTS
2014 REGIONAL TRANSPORTATION PLAN
FINANCIALLY CONSTRAINED PROJECT LISTING (In $000)

AGENCY	PROJECT ID	PROJECT TITLE	PROJECT DESCRIPTION	PROJECT TYPE	ESTIMATED OPEN TO TRAFFIC	CI	ESTIMATED TOTAL COST (In $000)
Caltrans	FRE500570	SR 41-Ashlan to Shaw: NB Auxiliary Lane	Add 1 NB Auxiliary Lane	Streets & Roads-Capacity Increasing	2035	Y	$7,000
Caltrans	FRE500521	SR 99 Interchange at Shaw: Improvements	Improve interchange	Streets & Roads-Capacity Increasing	2035	Y	$86,000
Caltrans	FRE500520	SR 99 & SR 43/Floral Rd Interchange: Widen and Replace Bridge	Replace bridge structures and widen Floral	Streets & Roads-Capacity Increasing	2035	Y	$13,000
Caltrans	FRE500490	Ashlan-Grade separation @ UPRR & SR 99 Interchange	Grade separation	Streets & Roads-Capacity Increasing	2035	Y	$7,600

Conformity Document: Appendix B (page 64 of the PDF)
http://www.fresnocog.org/sites/default/files/publications/Air_Quality/Conformity/Fresno_COG_Draft_Conformity_for_2014_RTP_and_2015_FTIP.pdf

Regionally Significant Project Listing

Jurisdiction/Agency	TIP/RTP	CTIPs Project ID	Description			Estimated Cost	Conformity Analysis Year (project open to traffic)							
	Project ID	(if available)	Type of Improvement	Facility Name/Route	Project Limits		2014	2017	2020	2023	2025	2032	2035	2040
Caltrans	FRE021106	10300000176	Near Centerville, from Temperance Avenue to Academy Avenue (Quality). Construct 4 lane expressway on new alignment.	180	Temperance to Quality	$71,813,991	X	X	X	X	X	X	X	X
Caltrans	FRE021108	10300000178	Kings Canyon Expressway-Segment 3 (Near Centerville and Minkler, on Route 180 from west of Smith Avenue to east of Frankwood Avenue. Construct 4 lane expressway on existing alignment.) [Measure C Project D in the Rural Regional Program]	180	Trimmer Springs to Frankwood	$90,948,000			X	X	X	X	X	X
Caltrans	FRE021105	10300000175	In and near Fresno from Clovis Ave to Temperance Ave. Construct 6-lane freeway from Clovis Ave to Fowler Av and 4-lane freeway from Fowler Ave to Temperance Ave.	180	N/A to N/A	$98,530,170	X	X	X	X	X	X	X	X
Caltrans	FRE500490		Grade seperation	Ashlan	UPRR to SR 99	$7,600,000							X	X
Caltrans	FRE111352	20300000752	American Ave @ SR 99-Interchange Improvements	N/A	Interchange Cross Streets:American Ave & SR 99	$10,385,000						X	X	X
Caltrans	FRE500520		Replace bridge structures and widen Floral	N/A	Interchange Cross Streets:SR 99 & SR 43	$13,000,000							X	X
Caltrans	FRE111351	20300000748	Interchange Improvements	N/A	Interchange Cross Streets:I5 & SR 198	$18,236,000						X	X	X
Caltrans	FRE500518		Upgrade Interchange	N/A	Interchange Cross Streets:Central & Chestnut	$72,500,000						X	X	X
Caltrans	FRE111355	20300000756	North/Cedar/SR 99-Improve Interchange	N/A	North Ave to Cedar	$81,605,000						X	X	X
Caltrans	FRE500521		Improve interchange	N/A	Interchange Cross Streets:SR 99 & Shaw	$86,000,000							X	X
Caltrans	FRE500513		Passing Lanes	SR 180 W	James to Lake	$11,782,000			X	X	X	X	X	X
Caltrans	FRE500514		2 Lane on New E-W Alignment	SR 180 W	I-5 to Junction SR 33/SR180	$223,000,000							X	X
Caltrans	FRE500570		Add 1 NB Auxiliary Lane	SR 41	Ashlan to Shaw	$7,000,000							X	X

Comment Letter #2

FROM: Len Marino, P.E., Chief Engineer, State of California, California Natural Resources Agency, Central Valley Flood Protection Board

DATED: April 18, 2014

RESPONSE #2: Information presented in the comment letter (including impact statements and mitigation measures), have been identified as changes to the Draft Program Environmental Impact Report (PEIR) as referenced in Chapter 3 of this Final PEIR.

Comment Letter #3

FROM: Stephanie Frederick, Transportation Director, League of Women Voters of Fresno

DATED: April 24, 2014

RESPONSE #3A-G *This comment letter and the following responses apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE #3A: Thank you for your comments. Your congratulations to the Fresno COG Committees, Boards and Staff is sincerely appreciated.

RESPONSE #3B: Thank you for the detailed comment. The policy element identifies goals, objectives and policies that direct the course of action that will provide efficient integrated multimodal transportation systems that will serve the mobility needs of people, including accessible pedestrian and bicycle facilities, freight, and direction to minimize mobile sources. The *plan* for addressing the identified needs and issues that are consistent with the goals, policies and objectives of the policy element is found in the action element, and the actual projects that strive to achieve the goals and objectives are found within the project lists.

For example, Table 6-1G addresses Air Quality. The identified Goal is to be in attainment and maintenance of federal and state ambient air quality standards. One of the objectives within this goal is to implement all appropriate Transportation System Management, Transportation Demand Management, and Transportation Control Measure strategies as technologically and economically feasible. One of the policies to reach this goal is to improve vehicular flow and efficiency of the region's circulation system using intelligent transportation systems (ITS) where feasible. So, the action element further discusses what are intelligent transportation systems and the tools and techniques that are being implemented or expected to be implemented throughout the Fresno County region and the San Joaquin Valley (see ITS planning and program section of the action element). Lastly, the project lists that are part of the financial element connect the policies and actions of the RTP as they relate to ITS by programming projects that meet the goals, objectives, policies and actions of the RTP. An example of an ITS project can be found in

the financially constrained project list (see FRE500135: McKinley Ave from SR 99 to Clovis). A detailed project list that identifies all of the Transportation Demand Management and Transportation Control Measure projects can be found in the conformity document.

The project list selection went through its own committee process. The top 10 SCS performance indicators were not applied in how projects were selected/prioritized. These indicators were used in comparing the overall impacts from land use and transportation projects. Impact from individual project would be too small to be reflected by the traffic model.

RESPONSE #3C: This is a very good recommendation. As a requirement of MAP-21, a performance measure system will be implemented and incorporated in the 2018 RTP that can track the process of the plan. A rule making process for establishing such performance measure and performance targets is taking place at the national level. The key for such performance measures is the availability of data. Performance measure established for the MAP 21 requirement will have data available and collected by responsible agencies. That way, such data could be compared over time, and thus the effectiveness of the RTP/SCS could be assessed. Vehicle miles travelled is a good potential performance measure. Unfortunately, the performance indicators established during the 2014 RTP/SCS process are mostly modeled number, and currently we do not know sources that collect such data over time. As such evaluations will be done in the future, not in July 2014 as you suggested immediately after the adoption of the 2014 RTP. Due to the requirement of the MAP 21, there will be changes in the performance measures in the 2018 RTP/SCS.

RESPONSE #3D: To make the 2014 RTP project list more accessible, Fresno COG staff agrees that the scoring criteria for each mode should be included with the project list. It will be added to Appendix C.

RESPONSE #3E: Thank you for the thoughtful approach and detailed comments on the Policy Element of the 2014 RTP. Fresno COG also thanks the League for the two in office meetings on April 22, 2014 and on May 1, 2014. As staff explained in the May 1, 2014 meeting, substantive changes to the document at this point in time would necessitate a recirculation of the 2014 RTP/ 2015 FTIP/ the PEIR and the Transportation Conformity document. The League agreed that working toward these changes would best be served in future documents rather than delay the adoption of the current work. The benefits of changing the order of the chapters in the document could be discussed in the future, as long as there is not a conflict with any new RTP guidance that will be released prior to

the 2018 RTP cycle.

For further information regarding performance measures/performance indicators and measurable objectives please see response under 3C above.

RESPONSE #3F: In order to address the Community Equity Coalition Policies a clarification will be made to the Policy Element in Table 6.1C General Transportation, Environmental Justice. The policy will be clarified to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs." This clarification will address both the proposed sustainable infrastructure planning and infrastructure program as well as the needs assessment proposal.

In addition a clarification will be incorporated in Table 6-1E General Transportation, Regional Transportation Network. The policy will be clarified to read:

"Under the direction of the Policy Board, identify and coordinate a strategy and methodology to assist member agencies in avoiding or fully mitigating all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources by identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities."

In addition, on May 29, 2014 the Policy Board directed staff to establish a well-balanced ad hoc committee to assist member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities.

For further information regarding performance measures/performance indicators and measurable objectives please see the response under 3C above.

RESPONSE #3G: Thank you for your commentary on the 2014 RTP.

Comment Letter #4

FROM: Gavin Feiger, Senior Associate, Sierra Nevada Alliance
DATED: May 9, 2014
RESPONSE #4A *The following response for this comment letter applies only to the 2014 RTP/SCS*

and is not related to the Draft or Final PEIR.

Policy clarifications regarding the following proposals:

1. Proposed Sustainable Planning and Infrastructure Grant Program
2. Needs Assessment Proposal

To be clarified in the Policy Element:

Table 6-1C General Transportation, Environmental Justice / Policies will be clarified to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs."

Policy clarifications regarding the following proposal:

3. Natural and Working Lands Conservation Policy

To be clarified in the Policy Element:

Table 6-1E General Transportation, Regional Transportation Network / Policies will be clarified to read:

"Under the direction of the Policy Board, identify and coordinate a strategy and methodology to assist member agencies in avoiding or fully mitigating all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources by identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities."

In addition, on May 29, 2014 the Policy Board directed staff to establish a well-balanced ad hoc committee to assist member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities.

RESPONSE #4B: Referencing Chapter 2 of the Draft PEIR (Page 2-13, Bullet 1), **"**Scenario "D" was proposed by the Coalition of Community Organizations after Scenario's A, B and C were presented and vetted through the public process, and as such, was only reviewed by the Fresno COG committee. While Fresno COG Staff did work with the proposing group to model scenario results and discuss basic information in regards to this scenario, Scenario D is not formally analyzed within this PEIR, due

to the lack of public process vetting."

In addition, Scenario D was not fully analyzed for a collection of reasons. First, and as noted above, the scenario was developed after the public process of determining and analyzing Scenario's A, B and C – and did not go through the proper vetting process the other scenarios went through (which fully included the participation of the group that later developed Scenario D – who also heavily influenced scenario's A and C, as well). Second, the scenario did not include approved developments within Fresno County, such as Friant Ranch and Millerton – removing such developments from the map, would usurp local land use authority. In addition to not including such developments, the scenario placed much larger amounts of development in areas that historically had not received such levels of development interest, in areas that lack sufficient infrastructure, and in areas that are significantly further from existing transportation connections and utility services. All of these reasons resulted in a scenario that is considered inconsistent with the adopted general plans of many of the cities, as well as the general plan of the County of Fresno.

SB 375 states that the preferred scenario must meet the reduction targets, while also being ambitious and achievable. Overall, Scenario D may have been ambitious, but the scenario was not considered achievable or feasible due to the aforementioned issues.

RESPONSE #4C: The Program EIR was prepared to reflect a regional analysis of impacts related to the proposed project, as appropriate. The responsibility to nominate, potentially fund or partially fund, design, environmentally assess, and construct or implement transportation improvements listed in the Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS) is the responsibility of local agencies in Fresno County (15 incorporated cities and the County of Fresno), the Fresno County Transportation Authority (FCTA), and Caltrans.

The local agencies are also responsible for preparing general plans to guide land use development and are responsible for approving proposed land use developments consistent with their general plans or amending their general plans to accommodate proposed developments. Each of these local agencies, FCTA, other regional agencies, and Caltrans actions requires subsequent environmental review.

Fresno COG, as the regional transportation planning agency, is only responsible for preparing the RTP and SCS, working with federal, state, other regional

agencies (including the FCTA), and local funding agencies to identify and program funding for transportation improvement projects nominated by Caltrans, the FCTA (consistent with the Measure C Expenditure and Implementation Plans), other regional agencies such as the Fresno County Rural Transit Agency (FCRTA), and local agencies. Fresno COG has no authority to prepare final design services, environmentally review, acquire right-of-way, or construct any transportation improvements listed in the RTP and SCS other than those it administers under contract with the FCTA (Vanpools, Rideshare Programs, etc.).

As a result of the responsibilities noted above, Fresno COG can only identify appropriate mitigation measures that should be carried out by the local agencies, other regional agencies, and Caltrans and further reference the need for subsequent environmental analysis. Where Fresno COG has responsibility to address an impact, it has identified mitigation measures that it has the authority to carry out or implement.

Regarding the "model 'Natural Working Lands Conservation Policy", no additional statements or agriculture resource-related mitigation measures will be added to the Draft PEIR. As the following existing Draft PEIR mitigation measure reflects (Mitigation Measure associated with Impacts 3.3.1 through 3.3.3 found beginning on Page 3-34 of the Draft PEIR), Fresno COG is continuing to work with several organizations, including the Sierra Alliance, as well as its member agencies (15 cities and the County of Fresno), to develop appropriate policies that will protect agricultural resources potentially impacted by transportation projects throughout Fresno County.

Impact and Mitigation Measures 3.3.1 through 3.3.3: "*As part of the RTP and SCS formulation process; and at the request of a collection of community-based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on possible policies aimed at preservation of agricultural, natural and working lands; sustainable planning and infrastructure programs; and needs assessment activities, for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:*

- *Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects.*
- *Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities*."

In addition, on May 29, 2014 the Policy Board directed staff to establish a well-balanced ad hoc committee to assist member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities. It is expected that such policies will be developed by the COG during Fiscal Years 2013/14 and 2014/15.

RESPONSE #4D: *The following responses for this comment letter applies only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

Specifically, how was the information presented to the COG Board?

Response: All of the workshop comments, online comments, scenario selection results from public workshops and online surveys and professional survey results were presented to and discussed with Fresno COG's Policy Board for their review and consideration when choosing a "preferred" Draft Sustainable Communities Strategy and at various points during development of the Regional Transportation Plan. Below is a listing of when the Fresno COG Policy Board received public outreach data or feedback at their open, monthly meetings. They also received updates and recommendations forwarded from the RTP Roundtable at many meetings:

- ✓ **November 2013**—Fresno COG Policy Board receives presentation on Regional Transportation Plan and Sustainable Communities Strategy: 2012 Survey Report conducted by AIS Market Research. Results also available continually available online since this date.
- ✓ **July 2013**—Policy Board receives presentation of all May/June 2013 RTP/SCS workshop public comments and collected presentation clicker data. They were given handouts of the comments and compiled data results as well as an upcoming August/September 2013 workshop listing
- ✓ **September 2013** – Policy Board receives presentations on Scenarios, lists of all SCS Workshop and Online Comments submitted. Workshop and online polling data charts, and complete tallies of all SCS Workshop Results.

Responses and comments available on Fresno COG website continually since then.

- ✓ **October 2013** – Policy Board receives presentation on all four scenarios.
- ✓ **November 21, 2013**—Policy Board received presentation on all four scenarios, public outreach conducted, requested policies, deadlines and work completed in development of RTP.

Additionally, we would like to note that the local agency planners, city managers and elected officials who are responsible for incorporating land use principals into their General Plans did receive, review and consider all of the public input. Much of the SCS process was influenced by comments made throughout the process as Scenarios A, C and D were all essentially built by the public or community organizations in response to public comment.

Why was Scenario B chosen even though it did not have the support of the community?

Response:
Ultimately the Policy Board selected a scenario that they found to be ambitious and achievable, as directed in SB 375. After considering the TTC, PAC and RTP Roundtable recommendations to approve Scenario B, and after reviewing the data, comments, workshop and survey results, as well as additional information supplied by local agency and Fresno COG staff's two year RTP process, the Policy Board found Scenario B to be their best option. Fresno COG staff also recommended Scenario B based upon the following criteria:

- ✓ It meets the greenhouse gas emission reduction requirements of Senate Bill 375 ambitious an achievable goals
- ✓ Scenario B was based on the current planning assumptions (General Plans) of all 16 cities and Fresno County, without requiring the cities and the County to update their general plans which are lengthy and expensive processes
- ✓ It is a significant step forward compared to the status quo of previous planning
- ✓ It is a growth plan that acknowledges the local land use authority of the cities and the county
- ✓ It is on track to meet the goals set in the San Joaquin Valley Blueprint Plan
- ✓ It is realistic and feasible growth scenario that allows the Fresno County region grow at its own pace and with its own characteristics

Between when Scenario B was chosen and the draft documents came out, what steps were taken to incorporate the public input?

Response: The public input collected was used to build Scenarios A, C & D, and it was presented to the Policy Board prior to the selection of a preferred scenario. Beyond that, in response to public comment a Policy Advisory Committee Subcommitee met to consider and discuss three additional policies. As a result, Policy modifications were made or added to the Regional Transportation Plan in the chapters referenced below, as well as other steps taken to begin implementation of the new policies.

1. ***Sustainable Planning and Infrastructure Grant Program*** - A funding structure is needed to implement this type of program, and Fresno COG staff as well as members from interested community based organizations, are exploring possible funding streams. Fresno COG is committed to continuing to work with member agencies and other stakeholders to develop and implement a new funding program in the near future. The intent for developing this program is reflected in the Policy Element, Table 6-1C General Transportation, Environmental Justice.

2. ***Needs Assessment Proposal*** – The following was clarified in the Policy Element: Table 6-1C General Transportation, Environmental Justice / Policies will be clarified to read:

   "Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs."

Additionally, in the 2014-14 Fresno COG Overall Work Program – Work Element 313 Environmental Justice, Task 313.10 –the following was added: Conduct needs assessment in disadvantaged communities ($100,000 consultant budget)

1. ***Natural and Working Lands Conservation Policy*** - *In the 2014 RTP- PEIR, Table 1-1 - Summary of Impacts the following was added:*

3.3.3 Other Changes in the Existing Environment

As part of the RTP and SCS formulation process; and at the request of a collection of community based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county

administrator) to form a sub-committee to analyze, discuss and provide recommendation on agricultural mitigation measures for inclusion into the transportation planning process at Fresno COG.

Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:

- ✓ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects.
- ✓ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities.

Policy Element, Table 6-1E General Transportation, Regional Transportation Network the policies will be clarified to read:

"Under the direction of the Policy Board, identify and coordinate a strategy and methodology to assist member agencies in avoiding or fully mitigating all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources by identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities."

In addition, on May 29, 2014 the Policy Board directed staff to establish a well-balanced ad hoc committee to assist member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities.

Even though added roadway capacity was not a highlight of any public input, why is the largest category of funds, almost 40% of the RTP budget (based on the fiscally constrained project list, Appendix C), targeted at "Streets & Roads-Capacity Increasing" compared to less than 23% going to "Streets & Roads-Operations & Maintenance?"

Response: Although capacity increasing projects still have the largest percentage of funds among all the modes in the 2014 RTP/SCS, it has decreased

compared to 2011 RTP/SCS by 16%, about $1 billion total investment. Our region is forecast to have over 1.3 million population by 2035. To accommodate the growth and at the same time achieve the GHG reduction target, the 2014 RTP/SCS is designed with a more compact development, which is reflected in higher density and more mixed development that are suitable for the Fresno market. The new growth will take place within existing sphere of influence of the cities, some as infill development, some as greenfield development. Capacity increasing projects are needed to support some of the new growth. Alternative transportation, such as transit, bike and pedestrian projects, are also heavily invested to divert necessary travel into alternative mode other than single-occupancy vehicle. The transit and bike & pedestrian projects combined account for 38% of the 2014 RTP/SCS revenue, just 1% less than capacity increasing projects. In short, Fresno COG SCS tries to have a balanced approach in addressing growth and GHG reduction: while accommodating part of the market demand for single family homes, thus, some greenfield homes, thus capacity increasing projects in the urban fringe, Fresno COG SCS also invests heavily in transit, bike & pedestrian, and other operational improvement, and ride share programs to reduce travel. Investment of capacity increasing projects in the rural and small urban cities is to accommodate growth and goods movement.

RESPONSE #4E: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

(Q2): Please reference the above paragraph (the last paragraph from Response 4D).

(Q3): Fresno COG SCS will still be able to make the targets without the BRT in Fresno.

RESPONSE #4F: Reference Response to Comment 4C above. In addition, Fresno COG is authorized by federal law (23 U.S.C. Subsection 134, which establishes six core functions of a Metropolitan Planning Organization [MPO] such as Fresno COG):

1. Establish a setting – establish and manage a fair and impartial setting for effective regional decision-making
2. Evaluate alternatives – evaluate transportation alternatives, scaled to realistically available options
3. Maintain a Long-Range Transportation Plan (LRTP) – develop and update a fiscally constrained long-range transportation plan covering a planning horizon of at least twenty years

4. Develop a Transportation Improvement Program – develop a fiscally constrained program based on the long-range transportation plan and designed to serve the region's goals
5. Protect air quality – transportation plans, programs, and projects must conform with the State Implementation plan (SIP)
6. Involve the public – involve the general public and all the significantly affected sub-groups in the functions listed above

Each MPO is also required to operate consistent with provisions contained in its Joint Powers Agreement (JPA) with its member agencies (local agencies or the cities and the County). The Fresno COG JPA mandates Fresno COG's responsibilities as carrying out comprehensive areawide planning processes with respect to items such as transportation, land use, housing, open space, water quality and air quality management; as well, as additional activities when authorized to do so by the Policy Board. The JPA further states that the aforementioned activities shall be prepared, to the greatest extent possible, by the member agencies. This description reinforces the introductory language provided within the JPA, which states that the Fresno Council of Governments is established to develop consensus regarding policy questions and common problems with respect to issues that transcend municipal borders; and to allow for a coordinated course of action without infringing on the political traditions and powers of the individual governments. To change Fresno COG's responsibilities from that of planning and programming, a majority of the member agencies (the cities and the County of Fresno), representing a majority of the region's population, would have to approve an amendment to the Fresno COG JPA that directs Fresno COG to not only fund, but to also design, environmentally assess, and construct improvement projects contained in the RTP and RTIP. To date, none of the local agencies have requested that Fresno COG expand its responsibilities beyond planning and programming functions.

Finally, it is the COG's position that policies contained in the RTP and SCS are advisory to the extent that they are to be followed by Fresno COG to identify, prioritize, plan, and program candidate transportation improvement projects nominated by its local agencies, other regional agencies, and Caltrans to address state and federal planning and programming requirements.

RESPONSE #4G, Q5, Q6, & Q7:

Fresno COG will not be adding any additional mitigation measures to the Final PEIR at this time as noted and explained in Response to Comment 4C above.

RESPONSE #4H – Q8

The linear length in lane miles has been identified as a change to the Draft PEIR in Chapter 3 to this Final PEIR. The linear length in lane miles associated with new or expanded transportation improvements is 615. All project alternatives (except the No Project) have the same set of improvement projects. As a result, there are no differences in terms of impacts among the alternatives studied. The linear lane miles associated with the No Project alternative is 968. For purposes of the analysis, it is not possible to accurately reflect the amount of agricultural land that would be impacted by new or expanding transportation improvement projects. There are a number of key factors that must be considered in order to make such a calculation including, but not limited to the following:

- ✓ Amount of Right-of-way (ROW already acquired by the affected local agency or Caltrans
- ✓ Amount of ROW impacting agricultural operations vs. vacant of any use
- ✓ How wide the expanded or new facility will be
- ✓ Whether traveler safety is an issue that would require wider lanes, shoulders or median treatments
- ✓ The need for truck acceleration and deceleration lanes
- ✓ Extent of intersection improvements
- ✓ Bike lane requirements, lane type and width
- ✓ Pedestrian and streetscape improvements
- ✓ Provision for parking and type of parking
- ✓ Need for bus turnouts
- ✓ Staging area requirements
- ✓ Location of utility easements and relocation
- ✓ Road alignment
- ✓ The need for roundabouts now required along Caltrans facilities where warranted – require more ROW
- ✓ The need for passing lanes
- ✓ The need for continuous left turn lanes
- ✓ Other turn lanes
- ✓ The extent of drainage facilities and culverts
- ✓ Bridge requirements and footprint
- ✓ Overcrossing and undercrossing requirements and footprint
- ✓ Other considerations

While other MPOs may have estimated the impact of new facilities on agricultural operations, the estimates are rough considering the above. The exact extent of agricultural land impact by type of farmland can only be known

once design plans and environmental review of each individual transportation improvement project is complete. It is not possible at the regional scale of the Fresno COG 2014 RTP and SCS PEIR. As such, mitigation measures to be carried out by those agencies responsible for implementing RTP and SCS transportation improvement projects are included in the Draft PEIR and will reduce the severity of potential significant impacts if they are carried out in accordance with the measures noted. The extent to which the measures will be effective can only be determined as environmental documents are prepared for individual improvement projects.

RESPONSE #4I: *The following response for this comment letter applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Figure 4-23, on page 4-26 of the Draft EIR is a visual representation of ALL capacity increasing projects within the plan. No additional details were given regarding a singular project on the map in order for staff to respond with a specific notation within the project list. If indeed a specific location is identified, staff is happy to discuss its project list details and description.

RESPONSE #4J – Q10 The Draft PEIR will be changed as noted in Chapter 3 of this Final PEIR to reflect "Implementing Agencies" instead of "Implantation Agencies" as noted on various pages reflected in the comments.

Comment Letter #5

FROM: Gavin Feiger, Senior Associate, Sierra Nevada Alliance

DATED: May 9, 2014

RESPONSE #5A1: The responsibility to nominate, potentially fund or partially fund, design, environmentally assess, and construct or implement transportation improvements listed in the Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS) is the responsibility of local agencies in Fresno County (15 incorporated cities and the County of Fresno), the Fresno County Transportation Authority (FCTA), and Caltrans.

The local agencies are also responsible for preparing general plans to guide land use development and are responsible for approving proposed land use developments consistent with their general plans or amending their general plans to accommodate proposed developments. Each of these local agencies, FCTA, and Caltrans actions requires subsequent environmental review.

Fresno COG, as the regional transportation planning agency, is only responsible for preparing the RTP and SCS, working with federal, state, other regional

(including the FCTA), and local funding agencies to identify and program funding for transportation improvement projects nominated by Caltrans, the FCTA (consistent with the Measure C Expenditure and Implementation Plans), other regional agencies such as the Fresno County Rural Transit Agency (FCRTA), and local agencies. Fresno COG has no authority to prepare final design services, environmentally review, acquire right-of-way, or construct any transportation improvements listed in the RTP and SCS other than those it administers under contract with the FCTA (Vanpools, Rideshare Programs, etc.).

As a result of the responsibilities noted above, Fresno COG can only identify appropriate mitigation measures that should be carried out by the local agencies, other regional agencies, and Caltrans and further reference the need for subsequent environmental analysis. Where Fresno COG has responsibility to address an impact, it has identified mitigation measures that it has the authority to carry out or implement.

In addition, it is the local agencies, Caltrans, and other responsible agencies that are responsible for mitigating impacts reflected in the Draft PEIR, not Fresno COG. While Fresno COG staff provides technical planning expertise during the review and prioritization of transportation improvement projects submitted for inclusion in the RTP and SCS, it is the Fresno COG RTP/SCS roundtable, Transportation Technical Committee (TTC), Policy Advisory Committee (PAC), and Policy Board that ultimately decide on the evaluation criteria to be applied to projects. Furthermore, it is the TTC, PAC and Policy Board that decide which projects will ultimately be funded, not COG staff. These committees are represented by the member agencies who submit candidate projects for evaluation and funding and work collaboratively through Fresno COG to improve the multi-modal transportation system in Fresno County.

Measure C is a completely different program developed and implemented in accordance with the Measure C Expenditure Plan and Implementation Plan. Any revision of the Measure C program requires a review by the Fresno COG committees and Board, the affected Measure C committees, and by the Fresno County Transportation Authority (FCTA).

RESPONSE #5A2: Agree that “Sierra Nevada” is singular. This change is reflected in Chapter 3 of this Final EIR.

RESPONSE #5B: Agree. The following sentence should be added to the paragraph - “However, only the flow-through volume is renewable.” This change is reflected in Chapter 3 of this Final PEIR.

RESPONSE #5C: Agree. The following words and sentences should be added to the paragraph - "serious overdraft", and "The California Water Plan Update 2013 identifies the Tulare Lake Basin, which the majority of Fresno County is in, as being in a critical condition of overdraft." These changes are reflected in Chapter 3 of this Final PEIR.

RESPONSE #5D: Agree. The following sentence should replace the sentence currently in the Draft PEIR – "Construction of the proposed projects and future land use development could cause water quality impacts, because individual improvement projects and future developments would increase the area of paved surface." This change is reflected in Chapter 3 of this Final PEIR.

RESPONSE #5E-I: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 5E: The local agencies are responsible for preparing general plans to guide land use development and are responsible for approving proposed land use developments consistent with their general plans or amending their general plans to accommodate proposed developments. Each of these local agencies, the Fresno County Transportation Authority (FCTA), and Caltrans actions requires subsequent environmental review.

Some of the informal concerns that have been raised in the past from implementing agencies in regards to requiring mitigation plans is that projects go through at least CEQA and, if federally funded, the NEPA process. Until funding has been committed, in which implementing agencies can seek reimbursement, and until a project can be designed and constructed, projects will not go through any environmental review and mitigation measures cannot be planned until the environmental technical studies have been completed. Also, requiring such a mitigation plan upfront could also add additional burdens on to disadvantaged communities, given the upfront funding that would be required to provide such analysis. For these reasons, providing a mitigation plan before receiving funds has not been a concept that was considered practical.

However, Fresno COG welcomes the idea to further discuss this item in order to develop consensus since it would require making changes to the scoring and ranking criteria of RTP and FTIP projects. It will be a discussion that will need to be vetted through the committee process and will need to include discussions with federal, state, other regional (including the FCTA), transit, local agencies and stakeholders.

RESPONSE 5F: Fresno COG will not be adding any additional mitigation measures to the Final PEIR at this time. As the following existing Draft PEIR mitigation measure reflects (Mitigation Measure associated with Impacts 3.3.1 through 3.3.3 found beginning on Page 3-34 of the Draft PEIR), Fresno COG is continuing to work with several organizations, including the Sierra Nevada Alliance, as well as its member agencies (15 cities and the County of Fresno), to develop appropriate policies that will protect agricultural resources potentially impacted by transportation projects throughout Fresno County.

Impact and Mitigation Measures 3.3.1 through 3.3.3: "As part of the RTP and SCS formulation process; and at the request of a collection of community-based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on possible policies aimed at preservation of agricultural, natural and working lands; sustainable planning and infrastructure programs; and needs assessment activities, for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy. It is expected that such policies will be developed by the COG during Fiscal Years 2013/14 and 2014/15.

RESPONSE 5G: Fresno COG will not be adding any additional mitigation measures to the Final PEIR at this time as noted and explained in Response to Comment 4C. However, Fresno COG welcomes the idea to further discuss this item in order to develop consensus since it would require making changes to the scoring and ranking criteria of RTP and FTIP projects. It will be a discussion that will need to be vetted through the committee process and will need to include discussions with federal, state, other regional agencies (including the FCTA), local agencies and stakeholders.

REPSONSE 5H: Fresno COG welcomes the idea to further discuss this item in order to develop consensus since it would require making changes to the scoring and ranking criteria of RTP and FTIP projects. It will be a discussion that will need to be vetted through the committee process and will need to include discussions with federal, state, other regional agencies (including the FCTA), transit, local agencies and stakeholders.

RESPONSE 5I: Fresno COG will not be adding any additional mitigation measures to the Final PEIR at this time as noted and explained in Response to Comment 5F.

As a sub-note, it is important to keep in mind that local implementing agencies, through informal discussions, have expressed concerns with suggestions as the one provided here because if a project is going to impact directly or indirectly any surface or subsurface water, the permitting agencies such as the Army Corp of Engineers or the State Water Resources Control Board review the plans and issue permits to prevent any contamination. Also, a Storm Water Pollution Prevention Plan is implemented to prevent any discharge from the construction site. These measures are always taken when a project is being constructed and cannot take place during the RTP project submittal process when there are no funds committed to the project.

Comment Letter #6

FROM: Nick Paladino

DATED: April 10, 2014

RESPONSE #6A-F: *This comment letter and the following responses apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 6A: The project titles and descriptions of FRE500855 and FRE500856 have been changed to reflect Class II Bike Lanes.

RESPONSE 6B: Projects with estimated open to traffic dates prior to 2014 were incorrectly listed in the Draft RTP. It was determined that some projects had the wrong date and are not completed yet and some were completed and should be removed from the list.

RESPONSE 6B-1: The City of Fresno confirmed that project FRE090108 will be considered fully completed in June of 2014 and will not be removed from the project list. However, project FRE500257 is complete and was removed from the project list.

RESPONSE 6B-2: The 10 projects cited as duplicates were duplicated. The 5 projects with the prefix "FRE500"were removed and the remaining projects are active and programmed in the FTIP with the appropriate costs. The projects changes did impact the bike and pedestrian total; therefore, the updated numbers will be reflected in all applicable areas of the final document.

REPSONSE 6B-4: The projects changes did impact the bike and pedestrian total; therefore, the updated numbers will be reflected in all applicable areas of the final document.

REPSONSE 6C: The correct number is 91.8 and the chapter text has been updated.

RESPONSE 6D: The Shaw BRT Corridor is the second BRT corridor. However, the East side boundary of that BRT line has been corrected to reflect SR-168 instead of Fowler Avenue.

RESPONSE 6E: A policy regarding the Regional Active Transportation Plan that COG will develop has been added under the goal of maximizing bicycling and walking on Page 6-14.

RESPONSE 6E-1: The duplicate sentence has been removed from Page 6-15.

RESPONSE 6F: The top line of text was misplaced due to formatting factors and has been corrected on Page 7-4.

RESPONSE 6F-1: An explanation of the Active Transportation Program (ATP) has been added to the State Funding discussion on Page 7-10.

RESPONSE 6F-2: The correct Measure C figure is $1.4 billion and has been corrected where applicable, including Page 7-10.

Comment Letter #7

FROM: Jennifer Bryan-Sanchez, Transportation Planning North Branch, District 6, Caltrans

DATED: May 14, 2014

RESPONSE #7A-B: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 7A: Chapter 5 will be amended to include a discussion pertaining to an Active Transportation Plan. The following will be added to Chapter 5 Section 5.7 Non-Motorized Transportation on page 5-98 as a proposed action for future planning activities:

"Bikeways and pedestrian facilities, including trails, have become increasingly important to the Fresno County region over the past several years largely

because of air quality, economic development and quality of life (health) considerations. Consequently, Fresno COG has become more involved in integrating active transportation into the regional transportation planning processes. Recognizing walking and bicycling as healthy, accessible and sustainable forms of transportation, Fresno COG will embark on a new effort to develop a Regional Active Transportation Plan (ATP), which will integrate member agency complete Bicycle Master Plans combined with targeted pedestrian and safe routes to school planning efforts. The Regional Active Transportation Plan will guide efforts to improve bicycling and walking conditions at the local level throughout the Fresno County region and will serve as a blueprint for the future of walking and bicycling in the region. The Plan will provide a countywide understanding of existing conditions and countywide priority bicycle and pedestrian networks as well as existing conditions analysis and recommended network for the unincorporated areas in Fresno County and each of the Fresno COG member agencies. Developing an ATP will require coordination and collaboration with a variety of active transportation stakeholders and elected officials that will essentially form an Active Transportation Subcommittee. The Regional ATP will be the roadmap for developing pedestrian and bicycle infrastructure in the region, with an emphasis on promoting walking and bicycling as viable transportation options and fostering a practical, safe, and enjoyable environment that will encourage walking and bicycling for recreational and commuter trips with the goal to establish specific policies and programs."

Additionally, in May 2014, Fresno COG submitted an application to Caltrans during the Active Transportation Program call for projects. Furthermore, Fresno COG has already requested funding in the FY 14/15 Overall Work Program to begin the development of a Regional Active Transportation Plan.

Response 7B: That's correct. SB743 is not expected to take effect until 2015, and is not directly applicable to the 2014 RTP EIR.

RESPONSE #7C: Agree with all statements. In addition, SR 269 has been added as a north-south access route as identified in Chapter 3 of this Final PEIR.

RESPONSE #7D-K: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 7D: The RTP Checklist has been updated to include final page numbers and content locations, where applicable.

RESPONSE 7E: Fresno COG staff involved federal land management agencies during the preparation of the RTP for the following consultation and coordination efforts:

- ✓ Modeling staff consulted with them regarding interregional trips
- ✓ Through the quarterly meetings of the San Joaquin Valley Interagency Consultation Group (combination of previous Model Coordinating Committee and Programming Coordinating Group). The San Joaquin Valley Interagency Consultation (IAC) Group has been established by the Valley Transportation Planning Agency's Director's Association to provide a coordinated approach to valley transportation planning and programming (Transportation Improvement Program, Regional Transportation Plan, and Amendments), transportation conformity, climate change, and air quality (State Implementation Plan and Rules). The purpose of the group is to ensure Valley wide coordination, communication and compliance with Federal and California Transportation Planning and Clean Air Act requirements. Each of the eight Valley MPOs and the Air District are represented. In addition, the Federal Highway Administration, Federal Transit Administration, the Environmental Protection Agency, the California Air Resources Board and Caltrans (Headquarters, District 6, and District 10) are all represented.
- ✓ All relevant agencies and stakeholders were all sent the Regional Transportation Plan Notice of Preparation for the Environmental Impact Report, officially providing them an opportunity to comment and/or engage in the process.
- ✓ Throughout the entire process California Department of Transportation and Rideshare program coordinators attended public meetings and sat on advisory committees
- ✓ At many points during the development of the Sustainable Communities Strategy staff spoke with the California Air Resources Board
- ✓ California Department of Conservation review grant summary documents of work completed for development of Sustainable Communities Strategy materials.

Federal Highway Administration and Federal Transit Administration staff attended Regional Transportation Roundtable and other standing committee meetings during the development of the 2014 Regional Transportation Plan.

RESPONSE 7F: Comment Noted. This item will further be discussed with stakeholders, transit agencies and implementing agencies as potential criteria for the scoring, ranking, and selection process of RTP projects.

RESPONSE 7G: Comment Noted. The two sections will be updated to reflect the change request.

RESPONSE 7H: Correct. Chapter 4 is the SCS chapter. The SCS is mentioned and referred to throughout the RTP.

RESPONSE 7I: Comment noted. Our current model does not produce VMT for transit buses, school buses and heavy duty vehicles. This could be considered in the next model improvement if there is enough interest.

RESPONSE 7J: Fresno COG has made the assumption that the Measure C will be extended based on the previous success that it has had throughout its existence. It has passed twice by the voters and the current Measure passed with a success rate of 78% as voters strongly believe that promises made are promises kept. Financial assumptions are always based on uncertainty and the federal and state funding sources used to develop the financial constrained revenue projections are all also based on assumptions that Congress and the State of California will continue to appropriate funds. When funding sources or programs are eliminated, or when Congress passes new transportation reauthorization legislation the RTP is updated to reflect those changes.

REPSONSE 7K: Thank you for your comments regarding the incorporation of aviation as an important mode of transportation in Fresno County. Fresno COG will continue efforts to work with airport sponsors to meet Capital Improvement Plan (CIP) to ensure eligibility for California Aid to Airports Program (CAAP) eligibility requirements for available State and Federal funds. Further, Fresno COG is working with local agencies and actively seeking to identify any other funding sources to improve the land use compatibility plans that the ALUC is mandated to maintain.

Comment Letter #8

FROM: Steven Frisch and Kerri Timmer, Sierra Business Council

DATED: May 15, 2014

RESPONSE #8A: *The following response for this comment letter applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

The Blueprint planning process has been seen as the precursor to the Sustainable Communities Strategy and has already had a profound effect on local agency general plans. Both the city of Fresno and the city of Clovis have integrated the Blueprint's Smart Growth Principles into their general plan updates that are slated for adoption in the coming year. Development patterns

in these two jurisdictions, which constitute about 70% of the county's population, have an enormous impact on vehicle miles traveled and conservation of farmland as well as greenhouse gas reductions. We are confident that our member agencies have stepped up to the challenge of addressing the aspirations of SB 375.

The Blueprint principles are also referenced in the 2014 RTP Policy Element on page 6-2 and 6-3. Table 6-1D includes a policy to "ensure that planning efforts are as consistent as feasible with planning efforts such as: Blueprint Planning Principles …"

RESPONSE #8B: Fresno COG is committed to conducting transportation planning activities that are mindful of environmental justice (EJ) topics and communities. Fresno COG further understands that addressing the needs and concerns of EJ communities requires multiple strategies and efforts. To this end, Fresno COG has made significant efforts to provide for inclusion and participation from individuals and groups within EJ communities. As an on-going activity, Fresno COG organizes the efforts of the Environmental Justice Task Force to address EJ specific needs, challenges and opportunities. The 2014 Regional Transportation Plan (RTP) has included the current Environmental Justice Report, in full, as a chapter with the document itself – the first MPO in the State to do so – in a pointed effort to highlight the agencies commitment to equity throughout the transportation planning process.

In addition, Fresno COG is also responding to the financing concerns raised by the EJ communities by proposing both a Needs Assessment to determine infrastructure deficiencies, and a grant program that could earmark certain funding amounts to directly address the findings delivered by this assessment, both of which have been incorporated into the 2014 RTP (see 8-D below). Fresno COG understands that some smaller communities do not have the staff or expertise to submit transportation projects for funding consideration, which can further exacerbate the deficiencies within an EJ community, and create perceived fair-share funding inequalities. To address this need immediately, Fresno COG has hired a consultant team (circuit planners) charged with assisting smaller agencies with both the planning and programming of activities associated with Fresno COG. The intent of this program is to increase both the quantity and quality of project submittals for these agencies, greatly improving their ability obtain projects selected for funding.

The list of transportation projects identified in the Draft PEIR was determined based on a submission of projects by the local agencies (cities and the County)

and Caltrans to Fresno COG. Each of the projects were then evaluated and prioritized based upon a set of evaluation criteria approved by the RTP/SCS Roundtable. While it is true that there are significant numbers of low-income and minority populations located in Parlier, Mendota, and Huron, the financially-constrained projects were determined to be those with a reasonably available source of funding, while also meeting the needs, goals, policies, and objectives of the RTP as reflected the evaluation criteria. These three (3) communities were not specifically targeted to receive less than their "fair share" of transportation funding. This was just the result of the project submission and evaluation process. There are a number of projects that will benefit each of these communities including the following:

- ✓ 39 total projects in Huron, including bicycle and pedestrian, street and road capacity increasing and operations and maintenance
- ✓ 7 total projects in Parlier, including bicycle and pedestrian, street and road operations and maintenance
- ✓ 5 total projects in Mendota, including bicycle and pedestrian, street and road capacity increasing and operations and maintenance

In addition, it can be challenging for agencies with limited staff to submit projects during the call for project period. Often, these agencies will seek an amendment to the RTP as they identify projects, and are able to allocate staff resources to formulate the project. Seeing this need, in November of 2013, Fresno COG secured the services of a circuit planner, whose role is to provide planning and programming assistance to assist these communities, providing them with greater flexibility and project delivery capabilities.

RESPONSE #8C-D: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 8C: Thank you for your detailed suggestion. Staff agrees with your recommendation and has been discussing this issue throughout the process. After the adoption of the 2014 RTP/SCS, staff will be able to more efficiently develop and incorporate adopted policies and strategies into the evaluation criteria and weighting system before projects are submitted to the next update of the RTP/SCS.

RESPONSE 8D: Policy clarifications regarding the following proposals:

- ✓ *Proposed Sustainable Planning and Infrastructure Grant Program*
- ✓ *Needs Assessment Proposal*

To be clarified in the Policy Element:
Table 6-1C General Transportation, Environmental Justice / Policies will be clarified to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs."

Policy clarifications regarding the following proposal:

- ✓ *Natural and Working Lands Conservation Policy*

To be clarified in the Policy Element:
Table 6-1E General Transportation, Regional Transportation Network / Policies will be clarified to read:

"Under the direction of the Policy Board, identify and coordinate a strategy and methodology to assist member agencies in avoiding or fully mitigating all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources by identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities."

In addition, on May 29, 2014 the Policy Board directed staff to establish a well-balanced ad hoc committee to assist member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities.

Comment Letter #9

FROM: Dennis Jacobs, FTIP Coordinator, California Department of Transportation (Caltrans)

DATED: May 15, 2014

RESPONSE #9A-L: *This comment letter and the following responses apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 9A: Comment noted; we will make the change.

RESPONSE 9B: Comment noted; we will make the change.

RESPONSE 9C: We will make the change in all of the FTIP documents.

RESPONSE 9D: The Draft FTIP did not reflect the projected revenues for the Active Transportation Program (ATP) because the amounts were not yet confirmed when the Draft FTIP document was released for public review. The projected revenues have been added into the final document.

RESPONSE 9E: Fresno COG has verified the most recent revenue apportionment estimates provided by Caltrans for FFY14/15-17/18 and are $13,167 for the CMAQ program. Changes have been made to FFY 16/17 and FFY 17/18 to reflect the latest estimated apportionments.

RESPONSE 9F: Fresno COG has verified the most recent revenue apportionment estimates provided by Caltrans for FFY14/15-17/18 should be $11,201 for the RSTP. Changes have been made to FFY 16/17 and FFY 17/18 to reflect the latest estimated apportionments.

RESPONSE 9G: These projects are available for the public's review because they are not closed out and are anticipated to possibly require an AMOD.

RESPONSE 9H: The alley project being referred to was reviewed by FHWA and on 2/28/12 FCOG received confirmation that FRE130045 was eligible for CMAQ funding.

RESPONSE 9I: The projects that show funds in FFY 18/19 or beyond are active and either have funds programmed in the current 4 year element or in prior years. They are not considered closed out projects.

RESPONSE 9J: FRE111337 is a shoulder stabilization project in which the City cannot put curb and gutter so they will pave a 4' wide shoulder instead.

RESPONSE 9K: Thank you, we will.

RESPONSE 9L: Thank you, we will.

Comment Letter #10

FROM: Adam Livingston, Coordinator, Southern Sierra Partnership and Daniel O'Connell, PhD, San Joaquin Valley Program Manager, American Farmland Trust

DATED: May 15, 2014

RESPONSE #10A-D: *This comment letter and the following responses apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 10A: Fresno COG is committed to conducting transportation planning activities that are conscious and mindful of environmental justice (EJ) topics and communities. Fresno COG further understands that addressing the needs and concerns of EJ communities requires multiple strategies and efforts. As such, Fresno COG has made significant efforts to provide for inclusion and participation from individuals and groups within EJ communities. As an on-going activity, Fresno COG organizes the efforts of the Environmental Justice Task Force to address EJ specific needs, challenges and opportunities. The 2014 Regional Transportation Plan (RTP) has included the most recently conducted Environmental Justice Report, in full, as a chapter with the document itself – the first MPO in the State to do so – in a pointed effort to highlight the agencies commitment to equity throughout the transportation planning process.

In addition to the Task-Force activities and report highlighting, Fresno COG is also responding to the financing concerns raised by the EJ communities by proposing both a Needs Assessment to determine infrastructure deficiencies, and a grant program that could earmark certain funding amounts to directly address the findings delivered by this assessment, both of which have been incorporated into the 2014 RTP. Fresno COG understands that often times smaller communities do not have the staff or expertise to submit transportation projects for funding consideration, which can further exacerbate the deficiencies within an EJ community, and create perceived fair-share funding inequalities. To address this need immediately, Fresno COG has allocated funding in both the 2013/2014 and 2014/2015 Overall Work Program to retain the services of a consultant team charged with assisting smaller agencies with both the planning and programming activities associated with Fresno COG. The intent of this program is to increase both the quantity and quality of project submittals for these agencies, greatly improving their ability to obtain projects selected for funding.

The list of transportation projects identified in the Draft PEIR was determined based on a submission of projects by the local agencies (cities and the County) and Caltrans to Fresno COG. Each of the projects were then evaluated and prioritized based upon a set of evaluation criteria approved by the RTP/SCS Roundtable. While it is true that there are significant numbers of low-income and minority populations located in Huron, Mendota, Parlier, Orange Cove and San Joaquin, the financially-constrained projects were determined to be those with a reasonably available source of funding, while also meeting the needs, goals, policies, and objectives of the RTP as reflected the evaluation criteria. These five (5) communities were not specifically targeted to receive less than their "fair share" of transportation funding. This was just the result of the

project submission and evaluation process. There are a number of projects that will benefit each of these communities including the following:

- ✓ 38 total projects in Huron, including bicycle and pedestrian, street and road capacity increasing and operations and maintenance
- ✓ 6 total projects in Mendota, including bicycle and pedestrian, street and road capacity increasing and operations and maintenance
- ✓ 8 total projects in Parlier, including bicycle and pedestrian, safe routes to school, street and road operations and maintenance
- ✓ 20 total projects in Orange Cove, including bicycle and pedestrian like rails to trails, street and road capacity increasing and operations and maintenance
- ✓ 52 total projects in San Joaquin, including bicycle and pedestrian, new streets and roads, alternative fueling stations, and intersection improvements

In addition, it can be challenging for agencies with limited staff to submit projects during the call for project period. Often, these agencies will seek an amendment to the RTP as they identify projects, and are able to allocate staff resources to formulate the project. Seeing this need, as previously mentioned, in November of 2013, Fresno COG secured the services of a circuit planner, whose role is to provide planning and programming assistance to assist these communities, providing them with greater flexibility and project delivery capabilities.

RESPONSE 10B: Thank you for your detailed suggestion. Staff agrees with your recommendation and has been discussing this issue throughout the process. After the adoption of the 2014 RTP/SCS, staff will be able to more efficiently develop and incorporate adopted policies and strategies into the evaluation criteria and weighting system before projects are submitted to the next update of the RTP/SCS. The evaluation criteria and weighting factors are revisited before a call for RTP projects occur, and it is during that process that staff will work with stakeholders on the mechanisms and strategies that will be used to evaluate and rank projects for funding.

RESPONSE 10C:
In 2014 RTP, Chapter 7: Financing Mobility.

Section 7.7 – Sustainable Planning and Infrastructure Grant Program
During the 2014 RTP planning process, interested members of the community discussed the need for a Sustainable Planning and Infrastructure Program to

further complement the goals of the RTP/SCS. The purpose of such a program would be to support and enhance the implementation of the SCS across Fresno County. The implementation of such a program would be of great value for the Fresno County region; however, in order to undergo such a process to create a new regional program, extensive coordination between stakeholders, local member agencies, project sponsors and the COG Policy Board is needed to allow for a transparent and equitable approach. In addition, a funding structure is needed to implement this type of program, and Fresno COG staff as well as members from interested community based organizations, are exploring possible funding streams. Fresno COG is committed to continuing to work with member agencies and other stakeholders to develop and implement a new funding program in the near future. The development of an SCS infrastructure grant program is reflected in the Policy Element, Table 6-1C General Transportation, Environmental Justice.

To be clarified in the Policy Element:
Table 6-1C General Transportation, Environmental Justice / Policies will be clarified to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs."

RESPONSE 10D:
In 2014 RTP- PEIR, Table 1-1 - Summary of Impacts…

3.3.3 Other Changes in the Existing Environment
As part of the RTP and SCS formulation process; and at the request of a collection of community based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on agricultural mitigation measures for inclusion into the transportation planning process at Fresno COG.

Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:

- ✓ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide

importance, and farmland of local importance associated with their proposed projects.

- ✓ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities.

To be clarified in the Policy Element:
Table 6-1E General Transportation, Regional Transportation Network / Policies will be clarified to read:

"Under the direction of the Policy Board, identify and coordinate a strategy and methodology to assist member agencies in avoiding or fully mitigating all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources by identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities."

In addition, on May 29, 2014 the Policy Board directed staff to establish a well-balanced ad hoc committee to assist member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities.

Comment Letter #11

FROM: Tim Gibbs, Director of Campaign Initiatives, American Cancer Society Cancer Action Network
Bonnie Holmes-Gen, Senior Director, Policy and Advocacy, American Lung Association
Heidi R. Flori, MD, FAAP, President, California Thoracic Society
Praveen Buddiga, MD, Chair, Air Quality Committee, Fresno-Madera Medical Society
Eric Lerner, Climate Director, Health Care Without Harm
Sara Satinsky, MPH, MCRP, Senior Research Associate, Human Impact Partners
Harry Wang, MC, President, Sacramento Chapter, Physicians for Social Responsibility
Jeremy Cantor, MPH, Program Manager, and Sandra Viera, Program Manager, Prevention Institute
Linda Rudolph, MD, MPH, Co-Director, Center for Climate Change & Health, Public Health Institute

Azibuike Akaba, Policy Analyst, Regional Asthma Management & Prevention (RAMP)
Marty Martinez, MPP, Bay Area Policy Manager, Safe Routes to School National Partnership

DATED: May 15, 2014

RESPONSE #11A-C: *This comment letter and the following responses apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 11A: Fresno COG is committed to conduct a county-wide transportation needs assessment, and evaluate such needs in the disadvantaged communities. The commitment is reflected in Table 6-1C of the Policy Element and $100,000 is budgeted in Fresno COG's 2014-2015 Overall Work Plan for this item. Because Fresno COG's Planning (PL) fund can only be used in transportation related expenses, the needs assessment will be focused on transportation infrastructure. Other infrastructure items such as water and health information will be collected through the collaboration with other government agencies that has expertise and data in such areas. The San Joaquin Valley Higher Density Residential Housing Market Study was funded by Blueprint grant from Caltrans that is not limited to transportation related projects.

In 2014-14 Overall Work Program – Work Element 313 Environmental Justice

Task 313.10 Conduct needs assessment in disadvantaged communities ($100,000 consultant budget)

To be clarified in the Policy Element
Table 6-1C General Transportation, Environmental Justice / Policies will be clarified to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs."

RESPONSE 11B:

"The RTP/SCS should place top priority on investing resources in making existing communities more sustainable, where needs are greatest pursuant to the results of the needs assessment, and should include a specified minimum funding level for active transportation projects in these neighborhoods. Currently programmed active transportation projects and funding fell well short of the

budgeted amounts."

Response: Fresno COG agrees that developing a program, such as a Sustainable Planning and Infrastructure Grant Program, will be an important resource that will address the transportation and infrastructure investment needs of Fresno County residents, including those in disadvantaged communities that will be identified through a Needs Assessment that has been discussed.

Our region's population is forecast to be over 1.3 million by 2035. To accommodate the growth and at the same time achieve the GHG reduction target, the 2014 RTP/SCS did increase the program of projects for active transportation, such as transit, bike and pedestrian projects, from about 16% in the 2011 RTP to 38% in the 2014 RTP/SCS (1% less than capacity increasing projects). In short, Fresno COG's 2014 RTP/SCS tries to have a balanced approach in addressing growth and GHG reduction and invests heavily in transit, bike & pedestrian projects, and ride share programs to reduce travel.

Fresno COG solicits eligible projects for the RTP and relies on implementing agencies to provide RTP projects for scoring and ranking. During the 2014 RTP Call for Projects, Fresno COG aggressively encouraged member agencies to submit every single project that their jurisdiction could foresee being implemented over the life of the RTP, including active transportation projects. Throughout the development of the RTP, Fresno COG received confirmation from the member agencies that they provided the information that was adequate, available and accessible to them at the time of project submittal. The revenue surplus is a combination of expected funding sources that are both flexible and non-flexible. There are for example, over $141 million currently available for bike and pedestrian projects in the RTP, and member agencies acknowledge that it is very likely that additional projects or programs may be amended into the RTP to further maximize the available eligible estimated funding sources.

"The first priority for the RTP/SCS funding should be to invest in existing communities' transit, road, active transportation, housing and other infrastructure needs rather than funding new growth areas. In order to ensure this happens, the Policy Chapter (Chapter 6) of the RTP/SCS should include clear commitment to create the Sustainable Planning and Infrastructure Program proposed by community organizations and approved through COG advisory committees in May for allocating funding per the results of the needs assessment."

Response: Since Fresno COG is committed to conduct a county-wide transportation needs assessment, and evaluate such needs in the disadvantaged communities as reflected in Table 6-1C of the Policy Element and since $100,000 has been budgeted in the 2014-2015 OWP, Fresno COG along with its member agencies and stakeholder groups will continue to actively discuss the development and implementation of a grants program that would invest in active transportation, transit, planning, and other SCS related activities that are essential to safety and health as well as essential to the reduction of air pollution. Fresno COG is eager and committed to continue working with member agencies and other stakeholders to develop and fully implement this new funding program per the results of the needs assessment. The commitment to develop this program is consistent with the policy element and the financial element. A clarification will be made to the Policy Element in Table 6.1C General Transportation, Environmental Justice / Policies to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs." This clarification will address both the proposed sustainable infrastructure *planning* and the infrastructure *grant* program proposals submitted to Fresno COG by a coalition of health, equity, conservation and sustainable business organizations throughout the development of the RTP/SCS process.

This commitment is also reflected in Chapter 7 of the 2014 RTP: Financing Mobility, in Section 7.7 – Sustainable Planning and Infrastructure Grant Program.

"The Sustainable Planning and Infrastructure Program process should look at every opportunity to provide more residents, and especially our most disadvantaged communities with the lowest household transportation budgets, with more, and more cost-effective, reliable and safe transportation choices, affordable housing, safe routes to schools and other basic municipal services."

Response: Comment Noted.

"We strongly support moving forward with the City of Fresno's Bus Rapid Transit project to revitalize the urban core, but we must also allow for similar high quality mobility strategies to be funded in communities throughout the County, where sidewalks, bike lanes and more basic transit service could produce significant benefits."

Response: Comment Noted.

"As with conducting the needs assessment described above, the final plan should include clear policy element language to ensure this program is developed, funded and implemented within the context of this RTP/SCS."

Response: The following will be added to the final RTP in the Policy Element in Table 6-1C General Transportation, Environmental Justice / Policies and will be clarified to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs."

RESPONSE 11C: Thank you for your clear and detailed comments on the 2014 RTP. Fresno COG recognizes the need to support the integration of clean transportation vehicles and infrastructure where ever feasible. We believe your comment is addressed under Table 6-1G:

Goal: Attainment and maintenance of federal and state ambient air quality standards (criteria pollutants) as set by the Environmental Protection Agency and the California Air Resources Board.

Objective: Integrate land use planning, transportation planning, and air quality planning to make the most efficient use of public resources and to create a more healthy and livable environment.

Policies:

- ✓ Consider the air quality impacts of mobile sources when planning transportation systems to accommodate expected growth in the community thereby reducing the consumption and dependence upon non-renewable energy resources used by mobile sources of emissions.
- ✓ **Non-single occupancy and lower/zero emission vehicle modes shall be pursued as preferred alternatives where feasible.**
- ✓ **Support the development of infrastructure required for alternative fueled vehicles as well as zero emission vehicles.**
- ✓ Continue Fresno COG's established policy to fund cost-effective projects that facilitate air quality improvement through emission reductions with Congestion Mitigation and Air Quality Improvement funds.

Comment Letter #12

FROM: Janaki Jagannath, Community Worker, California Rural Legal Assistance, Inc. – Community Equity Initiative

DATED: May 15, 2014

RESPONSE #12A-D: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 12A: The "new development outside of existing communities" refers to the Friant Ranch and Millerton New Town projects that were approved by the Fresno County Board of Supervisors before the SCS was developed. Fresno COG does not have land use authority, nor did SB 375 give Fresno COG such authority. By leaving out such entitled projects, Fresno COG would not be properly recognizing the County's land use authority.

RESPONSE 12B: The Fresno Health Impact Assessment (HIA) team launched the project's full partners' meeting in January 2012, and the project was completed in March 2014. During the entire project development process, Fresno COG was not invited to any of the meetings, and thus did not have any input on any part of the study. The HIA report was submitted to Fresno COG on May 15th of 2014. The study contained highly technical information that came from a modified Bay Area Integrated Transportation and Health Impact Modeling (ITHIM) tool. Fresno COG is currently working closely with Dr. Neil Maizlish of the State Health Department on developing a Fresno ITHIM model that is calibrated to health conditions in Fresno County, and thus could not comment on any specific technical details or outcomes from the HIA report.

However, the methodology applied in the HIA study, either the accessibility portion or the active travel portion, is debatable. Fresno COG's traffic forecast model is a regional model, and is appropriate for use in analysis for the entire region, such as the indicator analysis during the SCS process. In order for the model to produce meaningful results for sub-regional analysis such as the analysis for the selected communities in the HIA, it has always been recommended by practitioners that models be re-calibrated for the sub-regions before any outputs from the model are directly applied in any sub-regional analysis. The HIA failed to use a re-calibrated sub-regional model to conduct the analysis for the selected communities of Lanare, Laton, Riverdale and West Fresno.

RESPONSE 12C: Fresno COG is striving to meet the goals of SB 375 by engaging the Fresno County Rural Transit Agency (FCRTA) to work with community

representatives especially those from the communities of Lanare, Laton, Riverdale, Huron and West Fresno County. As a result of these collaborative efforts there is one new service (Lanare Transit) planned and programed for the Lanare, Riverdale communities which will be a transit shuttle service connecting those communities along this southern corridor of Fresno County with intra community and Inter-City transportation needs to those residents.

This service will connect passengers to the Coalinga Transit into Fresno daily and Kings Area Rural Transit (KART) into Hanford as well as scheduled stops within Lanare and Riverdale. The service has been in the works since first meeting with the residents of the Lanare community in September of 2012 with multiple meetings through February of 2014 and surveys taking place in cooperation with the Leadership Council staff and former CRLA staff. The service is set to commence after July of 2014 once all the scheduling, days and hours of service is confirmed. Another change in rural service is the expansion of the Huron Transit Inter-City into Coalinga which currently operates from 9am to 3pm for 5 hours per day. As of July 1, 2014 the Huron transit Inter-City will operate from 9am to 5pm for 7 hours per day so Huron residents will be able to attend college classes and extended business in Coalinga. These new and expanded transit services will enable the residents of disadvantaged unincorporated communities better access to public transit in the rural areas of Fresno County. These new and expanded services will be monitored on a demonstration basis for ridership and cost effectiveness to determine continuation of these services for a period of ninety days after start up.

REPSONSE 12D: The key reason that projected revenues, which total $6.5 billion are not fully allocated to programs or projects is because when Fresno COG released the call for projects, implementing agencies submitted projects that totaled up to $4.5 billion and not $6.5 billion. Fresno COG solicits eligible projects for the RTP and relies on implementing agencies to provide projects for scoring and ranking. During the 2014 RTP Call for Projects, Fresno COG aggressively encouraged member agencies to submit every single project that their jurisdiction could foresee being implemented over the life of the RTP. Throughout the development of the RTP, Fresno COG received confirmation from the member agencies that they provided the information that was adequate, available and accessible to them at the time of project submittal. The revenue surplus is a combination of expected funding sources that are both flexible and non-flexible. There are for example, over $141 million available for bike and pedestrian projects in the RTP, and member agencies acknowledge that it is very likely that additional projects or programs may be amended into the RTP to further maximize the available eligible estimated funding sources.

Fresno COG has committed to working with its member agencies and interested members of the public to create a funding program that will assist all Fresno County communities with SCS implementation type projects. Though there are surpluses of expected revenue resources, it is important to reiterate that not all of the expected revenue sources are flexible. As the revenue projection table shows, there are many different fund types that make up the different funding categories (Bike and Pedestrian, Capacity Increasing, Operations and Maintenance, and Transit) and some of those fund types would not be eligible to use on a SCS Implementation type program. As we continue to work with our member agencies and stakeholder groups to develop and implement an SCS infrastructure grant program we will be looking at both the available and eligible funding sources as well as those that we expect throughout the life of the RTP. The needs assessment that has been budgeted in the overall work program will also serve as a tool to identify specific needed projects that can benefit from the available and eligible funding sources and that can be used in existing communities.

RESPONSE #12E: The Program EIR was prepared to reflect a regional analysis of impacts related to the proposed project, as appropriate. The responsibility to nominate, potentially fund or partially fund, design, environmentally assess, and construct or implement transportation improvements listed in the Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS) is the responsibility of local agencies in Fresno County (15 incorporated cities and the County of Fresno), the Fresno County Transportation Authority (FCTA), and Caltrans.

The local agencies are also responsible for preparing general plans to guide land use development and are responsible for approving proposed land use developments consistent with their general plans or amending their general plans to accommodate proposed developments. Each of these local agencies, FCTA, and Caltrans actions requires subsequent environmental review.

Fresno COG, as the regional transportation planning agency, is only responsible for preparing the RTP and SCS, working with federal, state, other regional (including the FCTA), and local funding agencies to identify and program funding for transportation improvement projects nominated by Caltrans, the FCTA (consistent with the Measure C Expenditure and Implementation Plans), other regional agencies such as the Fresno County Rural Transit Agency (FCRTA), and local agencies. Fresno COG has no authority to prepare final design services, environmentally review, acquire right-of-way, or construct any transportation

improvements listed in the RTP and SCS other than those it administers under contract with the FCTA (Vanpools, Rideshare Programs, etc.).

As a result of the responsibilities noted above, Fresno COG can only identify appropriate mitigation measures that should be carried out by the local agencies, other regional agencies, and Caltrans and further reference the need for subsequent environmental analysis. Where Fresno COG has responsibility to address an impact, it has identified mitigation measures that it has the authority to carry out or implement.

Regarding the "model 'Natural Working Lands Conservation Policy", no additional statements or agriculture resource-related mitigation measures will be added to the Draft PEIR. As the following existing Draft PEIR mitigation measure reflects (Mitigation Measure associated with Impacts 3.3.1 through 3.3.3 found beginning on Page 3-34 of the Draft PEIR), Fresno COG is continuing to work with several organizations, including the Sierra Alliance, as well as its member agencies (15cities and the County of Fresno), to develop appropriate policies that will protect agricultural resources potentially impacted by transportation projects throughout Fresno County.

Impact and Mitigation Measures 3.3.1 through 3.3.3: "As part of the RTP and SCS formulation process; and at the request of a collection of community-based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on possible policies aimed at preservation of agricultural, natural and working lands; sustainable planning and infrastructure programs; and needs assessment activities, for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:

- ✓ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects.
- ✓ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities."

In addition, on May 29, 2014 the Policy Board directed staff to establish a well-balanced ad hoc committee to assist member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities. It is expected that such policies will be developed by the COG during Fiscal Years 2013/14 and 2014/15.

RESPONSE #12F-1: Figure 4-23, on page 4-26 of the Draft EIR is a visual representation of ALL capacity increasing projects within the plan. No additional details were given regarding a singular project on the map in order for staff to respond with a specific notation within the project list. If indeed a specific location is identified, staff is happy to discuss its project list details and description.

Responding to the comment related to EIR Impact 3.3.3, mitigation measures reflected in Chapter 3, Section 3.3, and in Impacts 3.3.1 through 3.3.3 are appropriate and applicable to address cumulative impacts noted. Further, cumulative and growth-inducing impacts have also been identified and mitigation measures have been referenced in Chapter 5 of the Draft PEIR beginning on Page 5-3 and on Page 5-7.

RESPONSE #12F-2: CEQA does not require, nor does it identify a requirement to analyze social and economic impacts. While many of the transportation projects identified in the Draft PEIR are located near minority and low-income communities and households, there are a significant number of projects that are expected to provide a benefit to these communities in the form of increased and improved transit services and other active transportation systems. It should also be noted that the preferred project alternative would provide a better mix of single and multi-family housing units which would result in increased housing affordability and housing choice which would also benefit these communities.

The preferred project alternative (SCS Scenario B) is consistent with the draft and/or adopted general plans of the cities and the County of Fresno. Each of the communities throughout the County will experience growth and development between 2014 and 2040 considering market conditions, planned land use development, the location of jobs, other amenities, and the provision of adequate and/or enhanced access via a multimodal transportation system. Increased VMT to new towns included in draft and/or adopted general plans will not be at the expense of existing communities. The cities and the County plan for housing and employment development to address a demand and to ensure that the growth is logical, justified, and enhances the quality of life within the County. The new towns will not only include the development of housing but

other community amenities and services including shopping, office, light industrial development and public services. These amenities will result in localized trips vs. longer trips to existing communities for services.

Comment Letter #13

FROM: Dan O'Connell, American Farmland Trust
Heather Dumais, San Joaquin Valley Advocacy Coordinator, American Lung Association in California
Wendy L. Alfsen, Executive Director, California Walks
Cesar Campos, CCEJN Coordinator, Central California Environmental Justice Network (CCEJN)
Carey Knecht, Associate Director, Climate Plan
Sabina Gonzales, Regional Director, Communities for a New California (CNC)
Rev. Sophia DeWitt, Interim Co-Director, Fresno Interdenominational Refugee Ministries (FIRM)
Sarah Sharpe, Director of Programs, Fresno Metro Ministry
Veronica Garibay, Co-Director, Leadership Counsel for Justice and Accountability
Gavin Feiger, Senior Associate, Sierra Nevada Alliance
Rey León, Executive Director, Valley LEAP

DATED: May 15, 2014

RESPONSE #13A-B: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 13A: In order to receive funding, projects must be consistent with the RTP and FTIP. Fresno COG's member agencies have the land use authority to grant entitlements to these projects. At any given time, many projects have been entitled by local agencies and are awaiting development. Fresno COG does not have the authority to ignore this fact and pretend that there is not a legitimate claim on the part of developers. Instead, the COG's role is to craft the most ambitious and achievable Sustainable Communities Strategy possible that will provide equitable distribution of resources in meeting the greenhouse gas reduction targets established by ARB. The following policy statements will be clarified in the RTP in response to the CBO proposals and to help achieve that goal.

Policy clarifications regarding the following proposals:

1. Proposed Sustainable Planning and Infrastructure Grant Program
2. Needs Assessment Proposal

To be clarified in the Policy Element:

Table 6-1C General Transportation, Environmental Justice / Policies will be clarified to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs."

Policy clarifications regarding the following proposal:

3. Natural and Working Lands Conservation Policy

To be clarified in the Policy Element:

Table 6-1E General Transportation, Regional Transportation Network / Policies will be clarified to read:

"Under the direction of the Policy Board, identify and coordinate a strategy and methodology to assist member agencies in avoiding or fully mitigating all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources by identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities."

RESPONSE 13B: Please Reference Response 13M. In addition, the percentage of capacity increasing projects in the 2014 RTP/SCS decreased compared to 2011 RTP/SCS by 16%, about $1 billion total investment. Our region's population is forecast to be over 1.3 million by 2035. To accommodate the growth and at the same time achieve the GHG reduction target, the 2014 RTP/SCS increased the program of projects for active transportation, such as transit, bike and pedestrian projects, from about 16% in the 2011 RTP to 38% in the 2014 RTP/SCS (1% less than capacity increasing projects). In short, Fresno COG's 2014 RTP/SCS tries to have a balanced approach in addressing growth and GHG reduction and invests heavily in transit, bike & pedestrian projects, and ride share programs to reduce travel.

RESPONSE 13C: Please Reference Response 13N.

RESPONSE #13D-P: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 13D: Fresno COG agrees that there are many unmet transportation and infrastructure needs throughout the Fresno County region as discussed in the financial chapter of the RTP. However, a funding structure is required in order to implement a robust grant program that will address the unmet needs. Fresno COG staff continues to seek new and existing eligible funding sources that can be used to adequately address the unmet transportation and infrastructure needs within the Fresno County region.

RESPONSE 13E: Regarding the "model 'Natural Working Lands Conservation Policy", no additional statements or agriculture resource-related mitigation measures will be added to the Draft PEIR or RTP/SCS. As the following existing Draft PEIR mitigation measure reflects (Mitigation Measure associated with Impacts 3.3.1 through 3.3.3 found beginning on Page 3-34 of the Draft PEIR), Fresno COG is continuing to work with several organizations, as well as its member agencies (15 cities and the County of Fresno), to develop appropriate policies that will protect agricultural resources potentially impacted by transportation projects throughout Fresno County.

Impact and Mitigation Measures 3.3.1 through 3.3.3: "As part of the RTP and SCS formulation process; and at the request of a collection of community-based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on possible policies aimed at preservation of agricultural, natural and working lands; sustainable planning and infrastructure programs; and needs assessment activities, for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:

- ✓ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects.
- ✓ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities."

It is expected that such policies will be developed by the COG during Fiscal Years 2013/14 and 2014/15.

RESPONSE 13F: Please reference response 13A.

RESPONSE 13G: The Fresno Health Impact Assessment (HIA) team launched the project's full partners' meeting in January 2012, and the project was completed in March 2014. During the entire project development process, Fresno COG was not invited to any of the meetings, and thus did not have any input on any part of the study. The HIA report was submitted to Fresno COG on May 15th of 2014. The study contained highly technical information that came from a modified Bay Area Integrated Transportation and Health Impact Modeling (ITHIM) tool. Fresno COG is currently working closely with Dr. Neil Maizlish of the State Health Department on developing a Fresno ITHIM model that is calibrated to health conditions in Fresno County, and thus could not comment on any specific technical details or outcomes from the HIA report.

However, the methodology applied in the HIA study, either the accessibility portion or the active travel portion, is debatable. Fresno COG's traffic forecast model is a regional model, and is appropriate for use in analysis for the entire region, such as the indicator analysis during the SCS process. In order for the model to produce meaningful results for sub-regional analysis such as the analysis for the selected communities in the HIA, it has always been recommended by practitioners that models be re-calibrated for the sub-regions before any outputs from the model are directly applied in any sub-regional analysis. The HIA failed to use a re-calibrated sub-regional model to conduct the analysis for the selected communities of Lanare, Laton, Riverdale and West Fresno.

RESPONSE 13H: The graphic referenced does not particularly correspond with the five cities listed in the text of the formal comment. Nonetheless, Fresno COG is committed to conducting transportation planning activities that are conscious and mindful of environmental justice (EJ) topics and communities. Fresno COG further understands that addressing the needs and concerns of EJ communities requires multiple strategies and efforts. As such, Fresno COG has made significant efforts to provide for inclusion and participation from individuals and groups within EJ communities. As an on-going activity, Fresno COG organizes the efforts of the Environmental Justice Task Force to address EJ specific needs, challenges and opportunities. The 2014 Regional Transportation Plan (RTP) has included the most recently conducted Environmental Justice Report, in full, as a chapter with the document itself – the first MPO in the State

to do so – in a pointed effort to highlight the agencies commitment to equity throughout the transportation planning process.

In addition to the Task-Force activities and report highlighting, Fresno COG is also responding to the financing concerns raised by the EJ communities by proposing both a Needs Assessment to determine infrastructure deficiencies, and a grant program that could potentially designate funding allocations to directly address the findings delivered by this assessment, both of which have been incorporated into the 2014 RTP. Fresno COG understands that often times smaller communities do not have the staff or expertise to submit transportation projects for funding consideration, which can further exacerbate the deficiencies within an EJ community, and create perceived fair-share funding inequalities. To address this need immediately, Fresno COG allocated funding in both the 2013/2014 and 2014/2015 Overall Work Program to retain the services of a consultant team charged with assisting smaller member agencies with both the planning and programming activities associated with Fresno COG. The intent of this program is to increase both the quantity and quality of projects, greatly improving their ability to obtain projects that are shelf-ready and more competitive for eligible funding.

The list of transportation projects identified in the Draft PEIR was determined based on a submission of projects by the local agencies (cities and the County) and Caltrans to Fresno COG. Each of the projects were then evaluated and prioritized based upon a set of evaluation criteria approved by the RTP/SCS Roundtable. While it is true that there are significant numbers of low-income and minority populations located in Huron, Mendota, Parlier, Orange Cove and San Joaquin, the financially-constrained projects were determined to be those with a reasonably available source of funding, while also meeting the needs, goals, policies, and objectives of the RTP as reflected the evaluation criteria. These five (5) communities were not specifically targeted to receive less than their "fair share" of transportation funding. This was just the result of the project submission and evaluation process. There are a number of projects that will benefit each of these communities including the following:

- ✓ 38 total projects in Huron, including bicycle and pedestrian, street and road capacity increasing and operations and maintenance
- ✓ 6 total projects in Mendota, including bicycle and pedestrian, street and road capacity increasing and operations and maintenance
- ✓ 8 total projects in Parlier, including bicycle and pedestrian, safe routes to school, street and road operations and maintenance
- ✓ 20 total projects in Orange Cove, including bicycle and pedestrian like rails

to trails, street and road capacity increasing and operations and maintenance

- ✓ 52 total projects in San Joaquin, including bicycle and pedestrian, new streets and roads, alternative fueling stations, and intersection improvements

In addition, it can be challenging for agencies with limited staff to submit projects during the call for project period. Often, these agencies will seek an amendment to the RTP as they identify projects, and are able to allocate staff resources to formulate the project. Seeing this need, as previously mentioned, in November of 2013, Fresno COG secured the services of a circuit planner, whose role is to provide planning and programming assistance to assist these communities, providing them with greater flexibility and project delivery capabilities.

RESPONSE 13I: Fresno COG is striving to meet the goals of SB 375 by engaging the Fresno County Rural Transit Agency (FCRTA) to work with community representatives especially those from the communities of Lanare, Laton, Riverdale, Huron and West Fresno County. As a result of these collaborative efforts there is one new service (Lanare Transit) planned and programed for the Lanare, Riverdale communities which will be a transit shuttle service connecting those communities along this southern corridor of Fresno County with intra community and Inter-City transportation needs to those residents. This service will connect passengers to the Coalinga Transit into Fresno daily and kings Area Rural Transit (KART) into Hanford as well as scheduled stops within Lanare and Riverdale. The service has been in the works since first meeting with the residents of the Lanare community in September of 2012 with multiple meetings through February of 2014 and surveys taking place in cooperation with the Leadership Council staff and former CRLA staff. The service is set to commence after July of 2014 once all the scheduling, days and hours of service is confirmed. Another change in rural service is the expansion of the Huron Transit Inter-City into Coalinga which currently operates from 9am to 3pm for 5 hours per day. As of July 1, 2014 the Huron transit Inter-City will operate from 9am to 5pm for 7 hours per day so Huron residents will be able to attend college classes and extended business in Coalinga. These new and expanded transit services will enable the residents of disadvantaged unincorporated communities better access to public transit in the rural areas of Fresno County. These new and expanded services will be monitored on a demonstration basis for ridership and cost effectiveness to determine continuation of these services for a period of ninety days after start up.

RESPONSE 13J: Fresno COG adheres to all directives on Environmental Justice and will work closely with regional partners/stakeholders to identify ways to improve our EJ analysis, as feasible and appropriate. An environmental justice analysis was completed and is included in Chapter 3 of the RTP/SCS.

RESPONSE13K: Fresno COG did host a total, combined number of 748 people and community organization representatives at 18 workshops held during the development of the 2014 Regional Transportation Plan. Those attendees represented a vast cross section of under-represented communities throughout the County of Fresno. Chapter 2 of the 2014 Regional Transportation Plan outlines the outreach to those communities in detail.

Fresno COG also commissioned a professional, partial stratified sample survey of participants who were reflective of Fresno County's demographics, including the homeless and non-English speaking populations from the urban and rural areas of the Fresno County region. The survey assessed overall community values and transportation spending priorities.

All of the workshop comments, online comments, scenario selection results from public workshops and online surveys, and professional survey results were presented to and discussed with Fresno COG's Policy Board for their review and consideration when choosing a "preferred" Draft Sustainable Communities Strategy. Three of Fresno Council of Governments' standing committees, the Regional Transportation Plan Roundtable, the Transportation Technical Committee and the Policy Advisory Committee, made recommendations to the Policy Board to adopt Scenario B as that preferred scenario. Fresno COG staff also recommended Scenario B based upon the following criteria:

- ✓ It meets the greenhouse gas emission reduction requirements of Senate Bill 375 ambitious an achievable goals
- ✓ Scenario B was based on the current planning assumptions (General Plans) of all 16 cities and Fresno County, without requiring the cities and the County to update their general plans which are lengthy and expensive processes
- ✓ It is a significant step forward compared to the status quo of previous planning
- ✓ It is a growth plan that acknowledges the local land use authority of the cities and the county
- ✓ It is on track to meet the goals set in the San Joaquin Valley Blueprint Plan
- ✓ It is realistic and feasible growth scenario that allows the Fresno County region grow at its own pace and with its own characteristics

Ultimately the Policy Board had to select a scenario that they found was ambitious and achievable. After reviewing the data, comments, workshop and survey results, and additional information supplied by local agency and Fresno COG staff's two year RTP process, the Policy Board found Scenario B to be their best option.

Additionally, we would like to note that the local agency planners, city managers and elected officials who are responsible for incorporating land use principals into their General Plans did receive, review and consider all of the public input. Much of the SCS process was influenced by comments made throughout the process as Scenarios A, C and D were all essentially built by the public or community organizations in response to public comment.

RESPONSE 13L: The 2014 RTP/SCS Environmental Justice analysis evaluates region-wide impacts on low-income and minority populations in Fresno County. The RTP/SCS is intended to address all the communities in an equitable manner throughout the region. Project impacts are addressed in detail during subsequent project-level environmental review, based on more precise information regarding project specifications. Fresno COG will continue to evaluate and monitor environmental justice impacts at a regional scale.

RESPONSE 13M: The key reason that projected revenues, which total $6.5 billion are not fully allocated to programs or projects is because when Fresno COG released the call for projects, implementing agencies submitted projects that totaled up to $4.5 billion and not $6.5 billion. Fresno COG solicits eligible projects for the RTP and relies on implementing agencies to provide projects for scoring and ranking. During the 2014 RTP Call for Projects, Fresno COG aggressively encouraged member agencies to submit every single project that their jurisdiction could foresee being implemented over the life of the RTP. Throughout the development of the RTP, Fresno COG received confirmation from the member agencies that they provided the information that was adequate, available and accessible to them at the time of project submittal. The revenue surplus is a combination of expected funding sources that are both flexible and non-flexible. There are for example, over $141 million available for bike and pedestrian projects in the RTP, and member agencies acknowledge that it is very likely that additional projects or programs may be amended into the RTP to further maximize the available eligible estimated funding sources.

When Fresno COG initiates a call for projects for the MPO administered competitive funding programs, member agencies and partnering agencies take

advantage of the near term funding opportunity and submit their priority projects to be scored, ranked and hopefully selected for funding. These are projects that can be implemented within the four years of the Federal Transportation Improvement Program (FTIP), which represents the short range implementation plan of the RTP. Member agencies prepare detailed project plans hoping to receive a commitment of appropriated funds that will provide the funding resources needed to be able to provide their communities with tangible projects requiring design, right of way clearance, and full construction of a project that can be utilized and accessed by the public. When funds do become available, through appropriated means, the Fresno COG will not receive enough funding to award every project in need. That is, for instance, Fresno COG received $49.5 million worth of projects during the recent CMAQ call for projects, but only $18.5 million was made available to award, leaving a large sum of projects unfunded. Unfortunately, member agencies continue to demonstrate that there is a substantial higher transportation need and the funds that are made available are not enough to address the concerns in their communities.

Fresno COG has committed to working with its member agencies and interested members of the public to create a funding program that will assist all Fresno County communities with SCS implementation type projects. Though there are surpluses of expected revenue resources, it is important to reiterate that not all of the expected revenue sources are flexible. As the revenue projection table shows, there are many different fund types that make up the different funding categories (Bike and Pedestrian, Capacity Increasing, Operations and Maintenance, and Transit) and some of those fund types would not be eligible to use on a SCS Implementation type program. As we continue to work with our member agencies and stakeholder groups to develop and implement an SCS infrastructure grant program we will be looking at both the available and eligible funding sources as well as those that we expect throughout the life of the RTP. The needs assessment that has been budgeted in the overall work program will also serve as a tool to identify specific needed projects that can benefit from the available and eligible funding sources and that can be used in existing communities.

Please reference Response 13B for information on how spending for transit and active transportation compare to 2011.

Please Reference Response 13P. Furthermore, though the highest dollar is allocated to Streets & Roads – Capacity Increasing projects, it is important to note that Table 7-2 of the RTP reflects the distribution of the total projects

programmed per mode, categorized by percentage of total dollar amount and percentage of total projects. It is illustrated in two ways to highlight the difference in project cots because certain types of projects simply cost more than others. For example, there are 95 fewer bike and pedestrian projects than capacity increasing projects. Though capacity increasing projects make up close to 40% of the funding allocation and cost significantly more than standalone bike and pedestrian projects, they may also include a bike and pedestrian component that is integrated into the overall cost of the project. Many of Fresno COG's member agencies have a Complete Streets policy; which means when a widening project is constructed or a maintenance project is implemented- such as a road paving; a sidewalk and/or bike lane is also added.

The 2014 RTP Transportation Project List represents an increase in active transportation and transit spending compared to the 2011 RTP. A comparison of the two can be found in Chapter 4, the SCS.

RESPONSE 13N: Fresno COG is committed to conduct a county-wide transportation needs assessment, which is reflected in Table 6-1C of the Policy Element, and $100,000 is budgeted in the 2014-2015 OWP for this item. Because Fresno COG's PL fund can only be used in transportation related expenses, the needs assessment will be focused on transportation infrastructure. Other infrastructure items such as water, health information will be collected through the collaboration with other government agencies that has expertise and data in such areas. The San Joaquin Valley Higher Density Residential Housing Market Study was funded by Blueprint grant from Caltrans that is not limited to transportation related projects.

RESPONSE 13O: Fresno COG, along with its member agencies and stakeholder groups, have actively discussed the development and implementation of a grants program that would invest in active transportation, transit, planning, and other SCS related activities that are essential to safety and health as well as essential to the reduction of air pollution. Fresno COG is eager and committed to continue working with member agencies and other stakeholders to develop and fully implement this new funding program in the near future. The commitment to develop this program is consistent with the policy element and the financial element. A clarification will be made to the Policy Element in Table 6.1C General Transportation, Environmental Justice / Policies to read:

"Seek to ensure the fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs."

This clarification will address both the proposed sustainable infrastructure planning and the infrastructure grant program proposals submitted to Fresno COG by a coalition of health, equity, conservation and sustainable business organizations throughout the development of the RTP/SCS process.

This commitment is also reflected in Chapter 7 of the 2014 RTP: Financing Mobility, in Section 7.7 – Sustainable Planning and Infrastructure Grant Program.

RESPONSE 13P: The status-quo scenario (the 2011 RTP) would reduce GHG by 8.4% in 2035, instead of 2040. It should be pointed out that not everything in the 2011 RTP was against principles of SB 375. The regions have started looking at sustainable development before the passing of SB375. In the 2011 RTP, the City of Fresno had elements such as mid-rise corridors along Blackstone Ave, BRT along Blackstone-Kings Canyon-Ventura corridor, etc. that contributed to GHG reduction. All the elements in the 2011 RTP plus the new changes in the new planning assumptions, in the general plans updates, in additional investments in transit, and in active transportation contribute to the 11% GHG reduction by the SCS, which meets the targets, set by the California Air Resource Board.

Although the SCS shows modest increase in bike, walk and transit trips compared to the 2011 RTP, the majority of the reduction in vehicle travel reduction and GHG reduction comes from the decrease of travel distance, which resulted from more compact development and more mixed use developments in the SCS.

The growth forecast in the 2014 RTP/SCS does assume the economy will pick up at a various rate into the future. The economic downturn did not continue into the future as claimed, and was not the major factor contributing to the GHG reduction. The fuel forecast applied in Fresno COG's SCS modeling was consistent with the Four Big MPOs (MTC, SACOG, SANDAG & SCAG) in the State. The fuel price forecasts by Department of Energy and Department of Conservation were incorporated in the forecast used by the MPOs. Test runs show that Fresno Region would not be able to reach the GHG reduction targets without City of Fresno new general plan update, which speaks to the fact that land use changes do contribute heavily to the region's ability to achieve 11% of GHG reduction by 2035. In addition, unlike the bedroom communities in the north and south end of the Valley, Fresno region is relatively self-sufficient. Therefore, there are far less inter-regional long-distance commutes in Fresno.

The long-distance commute seems to create high GHG reduction numbers in the north and south end of the Valley due to housing and job imbalance in the Bay Area and Southern California, which does not apply in Fresno County. The following shows the per capita GHG emission:

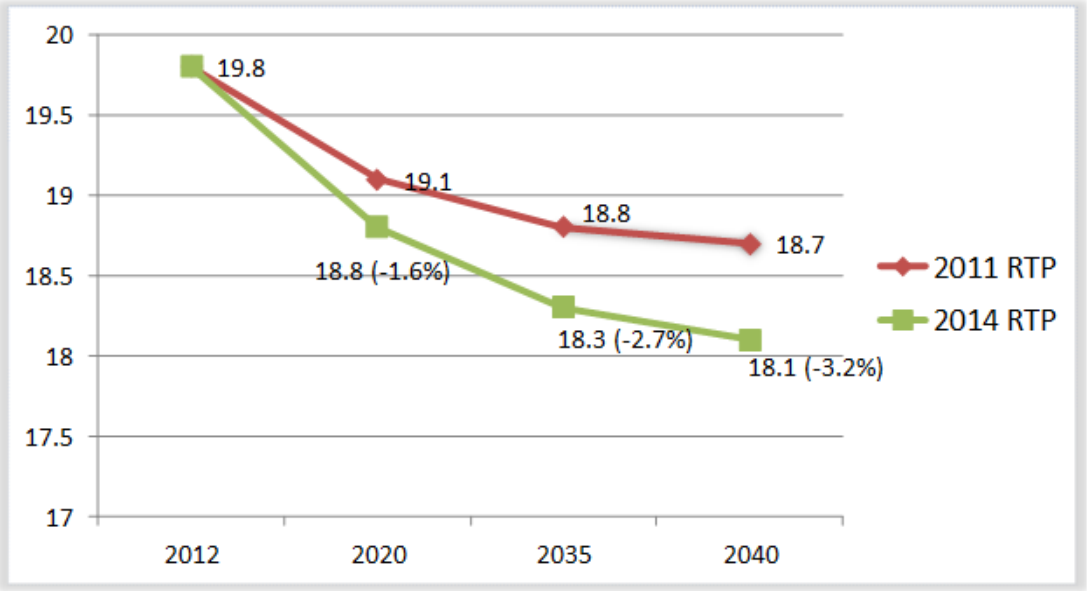
	2011 RTP(Status Quo)	2014 RTP/SCS
Base Year (2005)	15.8	15.8
EIR Base Year (2012)	15.6	15.6
RTP Interim Year (2020)	14.5	14.4
RTP Interim Year (2035)	14.4	14.0
RTP/EIR Horizon Year (2040)	14.4	13.9

It is also worth noting, per capita GHG reduction curves are not linear, and it gets harder when the number gets smaller. It is incorrect to conclude "77% of the reductions would come from business as usual" by taking the percentage numbers at their face value. In fact, the table shows that Status Quo scenario will leave us stuck at 2020 level by the year 2040. That means Status Quo could set us back by 20 years. In other words, the policies implemented by SCS moved us forward 20 years.

Due to the fact that many SCS strategies/policies impact on each other, it is hard and misleading to separate such strategies out. For example, residential density itself would not reduce travel or travel related GHG emission. But if combined with transit strategy, mixed-use, and placing jobs closer to residential, then density would play a big role in reducing travel and travel related GHG. The CARB has sponsored multiple research efforts to provide information on potential mechanisms to reduce exposure to criteria pollutants and reduce greenhouse gas emission through improved land use and transportation strategies. The completed searches are published on the website at: www.arb.ca.gov.

Fresno COG's SCS modeling shows that Fresno Region is on a solid downward trajectory, either by VMT or GHG emission reduction. The GHG reduction table on page 4-5 of the RTP shows the GHG reduction downward trend, and the VMT comparison chart presented in the SCS public hearing (also shown as follows) also demonstrated a downward trajectory.

Per Capita Daily VMT



The EJ analysis for the SCS also shows that the EJ communities, including low-income and minority groups, will not be burdened disproportionately by high and adverse effect. The accessibility measure in the EJ report analyzed the ease of reaching destinations such as schools, major job centers, parks and medical facilities.

Although gentrification has been the focus of attention lately in the San Francisco area, which is caused by high salaried workers moving into the area, Fresno County region has yet to experience that kind of high growth. In fact, the Fresno Region has been trying very hard to attract higher-paid knowledge-based jobs, but without much success. Gentrification is an issue that will need to be dealt with carefully to ensure the existing residents would not be harmed by the new growth, which is desired by the region as economic development and higher tax revenue. For now, it is believed that the priority of Fresno, one of the poorest regions in the State, is to create more jobs, especially higher-paid knowledge based jobs.

RESPONSE #13Q: The Draft PEIR does not make any reference to 17 square miles of farmland or rangeland consumed by RTP and SCS projects nor does it reference the City of Sanger in Section 3.3. Furthermore, the RTP and SCS will only impact approximately 91.8 acres of agricultural land outside the current spheres of influence (SOI) or .14 square miles, and a total of approximately 9,853 acres region wide (within and outside of the SOIs). This translates into 15.4 square miles of agricultural land. The reference to almonds in the comment reflects the highest value per acre of all agricultural commodities grown in Fresno County. Referencing the 2012 Agricultural Crop and Livestock Report for Fresno County, the value of crops has consistently increased since 1992 except in 2012 when field and vegetable crops declined. Fruit and Nut tree production value has steadily increased from less than $1 million to over $3 million since 1992. While it is understood that any impact is significant (as reflected in the Draft PEIR), Fresno COG is in the process of working with other agencies and local agencies (the cities and the County of Fresno) to develop farmland preservation policies. Development of these policies is a mitigation measure contained in Impact sections 3.3.1 through 3.3.3 of the Draft PEIR.

The Program EIR was prepared to reflect a regional analysis of impacts related to the proposed project, as appropriate. The responsibility to nominate, potentially fund or partially fund, design, environmentally assess, and construct or implement transportation improvements listed in the Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS) is the responsibility of local agencies in Fresno County (15 incorporated cities and the County of Fresno), the Fresno County Transportation Authority (FCTA), and Caltrans.

The local agencies are also responsible for preparing general plans to guide land use development and are responsible for approving proposed land use developments consistent with their general plans or amending their general plans to accommodate proposed developments. Each of these local agencies, FCTA, and Caltrans actions requires subsequent environmental review.

Fresno COG, as the regional transportation planning agency, is only responsible for preparing the RTP and SCS, working with federal, state, other regional (including the FCTA), and local funding agencies to identify and program funding for transportation improvement projects nominated by Caltrans, the FCTA (consistent with the Measure C Expenditure and Implementation Plans), other regional agencies such as the Fresno County Rural Transit Agency (FCRTA), and local agencies. Fresno COG has no authority to prepare final design services,

environmentally review, acquire right-of-way, or construct any transportation improvements listed in the RTP and SCS other than those it administers under contract with the FCTA (Vanpools, Rideshare Programs, etc.).

As a result of the responsibilities noted above, Fresno COG can only identify appropriate mitigation measures that should be carried out by the local agencies, other regional agencies, and Caltrans and further reference the need for subsequent environmental analysis. Where Fresno COG has responsibility to address an impact, it has identified mitigation measures that it has the authority to carry out or implement.

In addition, on May 29, 2014 the Policy Board directed staff to establish a well-balanced ad hoc committee to assist member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities. It is expected that such policies will be developed by the COG during Fiscal Years 2013/14 and 2014/15.

For additional details, please reference Response to Comment 13E.

RESPONSE #13R: Figure 4-23, on page 4-26 of the Draft EIR is a visual representation of ALL capacity increasing projects within the plan. No additional details were given regarding a singular project on the map in order for staff to respond with a specific notation within the project list. If indeed a specific location is identified, staff is happy to discuss its project list details and description.

Responding to the comment related to EIR Impact 3.3.3, mitigation measures reflected in Chapter 3, Section 3.3, and in Impacts 3.3.1 through 3.3.3 are appropriate and applicable to address cumulative impacts noted. Further, cumulative and growth-inducing impacts have also been identified and mitigation measures have been referenced in Chapter 5 of the Draft PEIR beginning on Page 5-3 and on Page 5-7.

In addition, the cumulative impacts of transportation improvements have been identified and mitigation measures have been developed as reflected in Chapter 5 of the Draft PEIR beginning on Page 5-16. The transportation improvements identified in the RTP and SCS are reflective of growth and development planned in accordance with locally adopted general plans; including adopted or draft land use and circulation elements. Local agencies, other regional agencies, and Caltrans, as noted in Response to Comment 4C above, construct transportation improvement projects. As a result, Fresno COG's role is to encourage implementation of the mitigation measures listed under each of the impacts

noted in Section 3.11 of the Draft PEIR and in Chapter 5 of the Draft PEIR. Furthermore, in most cases, the funding for projects includes funding for preliminary design and environmental clearance. It would not be possible for Fresno COG to require a mitigation plan from local agencies before they receive funding through the COG.

Furthermore, local agencies must provide environmental clearance for each project it implements. As a result, appropriate environmental evaluation and mitigation will be identified by the local agencies, other regional agencies, and Caltrans. They are also required to address the growth inducing impacts of individual transportation improvement projects. It would not be possible for Fresno COG to address the growth inducing effects or impact of each individual improvement project in the RTP and SCS given its lack of project-related data and project design implications. Growth inducing impacts are also listed in Chapter 5 of the PEIR starting on Page 5-3.

The RTP and SCS do follow Blueprint principles noted on Page 3-174 of the Draft PEIR. Implementation of the RTP and SCS has shown to reduce GHG impacts consistent with targets set forth by the California Air Resources Board (CARB). Mitigation measures reflected are appropriate for the impacts identified. Fresno COG has already identified a mitigation measure in the Draft PEIR that addresses development of a grant program to reduce GHG emissions from transportation projects. Specifically, the mitigation measure states:

- ✓ **Continue Development of a GHG Reduction Funding Program**

Fresno COG will continue to develop a GHG Reduction Funding Program to reduce GHG emissions from transportation projects. Fresno COG member agencies (the cities and the County) will be eligible to apply for the funding through a formal funding application process.

CEQA does not require, nor does it identify an environmental checklist for analysis of social and economic impacts. While many of the transportation projects identified in the Draft PEIR are located near minority and low-income communities and households, there are a significant number of projects that are expected to provide a benefit to these communities in the form of increased and improved transit services and other active transportation systems. It should also be noted that the preferred project alternative would provide a better mix of single and multi-family housing units which would result in increased housing affordability and housing choice which would also benefit these communities.

The preferred project alternative (SCS Scenario B) is consistent with the draft and/or adopted general plans of the cities and the County of Fresno. Each of the communities throughout the County will experience growth and development between 2014 and 2040 considering market conditions, planned land use development, the location of jobs, other amenities, and the provision of adequate and/or enhanced access via a multimodal transportation system. Increased VMT to new towns included in draft and/or adopted general plans will not be at the expense of existing communities. The cities and the County plan for housing and employment development to address a demand and to ensure that the growth is logical, justified, and enhances the quality of life within the County. The new towns will not only include the development of housing but other community amenities and services including shopping, office, light industrial development and public services. These amenities will result in localized trips vs. longer trips to existing communities for services.

In addition, Fresno County requires new development to pay for the community services that it requires through assessment districts, impact fees, and other funding mechanisms.

RESPONSE #13S-T: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 13S: Thank you for the detailed comments provided in Appendix 1 to your May 15, 2014 comment letter. Due to the federal and State deadlines that Fresno COG is required to meet, the numerous changes requested for the Policy Element cannot be incorporated at this time, since it would require taking the requested Policy revisions through our committee and Board processes as well as recirculating the 2014 Regional Transportation Plan and associated documents. It is anticipated by Fresno COG staff that these suggestions will provide meaningful substance as we move toward work on our next update to the Regional Transportation Plan.

RESPONSE 13T: Comment noted

Comment Letter #14

FROM: Daniel O'Connell, San Joaquin Valley Program Manager, American Farmland Trust

DATED: May 15, 2014

RESPONSE #14A-B1: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

The linear length in lane miles has been identified as a change to the Draft PEIR in Chapter 3 to this Final PEIR. The linear length in lane miles associated with new or expanded transportation improvements is 615. All project alternatives (except the No Project) have the same set of improvement projects. As a result, there are no differences in terms of impacts among the alternatives studied. The linear lane miles associated with the No Project alternative is 968. For purposes of the analysis, it is not possible to accurately reflect the amount of agricultural land that would be impacted by new or expanding transportation improvement projects. There are a number of key factors that must be considered in order to make such a calculation including, but not limited to the following:

- ✓ Amount of Right-of-way (ROW already acquired by the affected local agency or Caltrans
- ✓ Amount of ROW impacting agricultural operations vs. vacant of any use
- ✓ How wide the expanded or new facility will be
- ✓ Whether traveler safety is an issue that would require wider lanes, shoulders or median treatments
- ✓ The need for truck acceleration and deceleration lanes
- ✓ Extent of intersection improvements
- ✓ Bike lane requirements, lane type and width
- ✓ Pedestrian and streetscape improvements
- ✓ Provision for parking and type of parking
- ✓ Need for bus turnouts
- ✓ Staging area requirements
- ✓ Location of utility easements and relocation
- ✓ Road alignment
- ✓ The need for roundabouts now required along Caltrans facilities where warranted – require more ROW
- ✓ The need for passing lanes
- ✓ The need for continuous left turn lanes
- ✓ Other turn lanes
- ✓ The extent of drainage facilities and culverts
- ✓ Bridge requirements and footprint
- ✓ Overcrossing and undercrossing requirements and footprint
- ✓ Other considerations

While other MPOs may have estimated the impact of new facilities on agricultural operations, the estimates are rough considering the above. The exact extent of agricultural land impact by type of farmland can only be known

once design plans and environmental review of each individual transportation improvement project is complete. It is not possible at the regional scale of the Fresno COG 2014 RTP and SCS PEIR. As such, mitigation measures to be carried out by those agencies responsible for implementing RTP and SCS transportation improvement projects are included in the Draft PEIR and will reduce the severity of potential significant impacts if they are carried out in accordance with the measures noted. The extent to which the measures will be effective can only be determined as environmental documents are prepared for individual improvement projects.

RESPONSE 14B-1: The Program EIR was prepared to reflect a regional analysis of impacts related to the proposed project, as appropriate. The responsibility to nominate, potentially fund or partially fund, design, environmentally assess, and construct or implement transportation improvements listed in the Regional Transportation Plan and Sustainable Communities Strategy (RTP and SCS) is the responsibility of local agencies in Fresno County (15 incorporated cities and the County of Fresno), the Fresno County Transportation Authority (FCTA), and Caltrans.

The local agencies are also responsible for preparing general plans to guide land use development and are responsible for approving proposed land use developments consistent with their general plans or amending their general plans to accommodate proposed developments. Each of these local agencies, FCTA, and Caltrans actions requires subsequent environmental review.

Fresno COG, as the regional transportation planning agency, is only responsible for preparing the RTP and SCS, working with federal, state, other regional (including the FCTA), and local funding agencies to identify and program funding for transportation improvement projects nominated by Caltrans, the FCTA (consistent with the Measure C Expenditure and Implementation Plans), other regional agencies such as the Fresno County Rural Transit Agency (FCRTA), and local agencies. Fresno COG has no authority to prepare final design services, environmentally review, acquire right-of-way, or construct any transportation improvements listed in the RTP and SCS other than those it administers under contract with the FCTA (Vanpools, Rideshare Programs, etc.).

As a result of the responsibilities noted above, Fresno COG can only identify appropriate mitigation measures that should be carried out by the local agencies, other regional agencies, and Caltrans and further reference the need for subsequent environmental analysis. Where Fresno COG has responsibility to

address an impact, it has identified mitigation measures that it has the authority to carry out or implement.

Regarding the "model 'Natural Working Lands Conservation Policy", no additional statements or agriculture resource-related mitigation measures will be added to the Draft PEIR. As the following existing Draft PEIR mitigation measure reflects (Mitigation Measure associated with Impacts 3.3.1 through 3.3.3 found beginning on Page 3-34 of the Draft PEIR), Fresno COG is continuing to work with several organizations, including American Farmland Trust, as well as its member agencies (15cities and the County of Fresno), to develop appropriate policies that will protect agricultural resources potentially impacted by transportation projects throughout Fresno County.

Impact and Mitigation Measures 3.3.1 through 3.3.3: "As part of the RTP and SCS formulation process; and at the request of a collection of community-based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on possible policies aimed at preservation of agricultural, natural and working lands; sustainable planning and infrastructure programs; and needs assessment activities, for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:

- ✓ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects.
- ✓ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities."

It is expected that such policies will be developed by the COG during Fiscal Years 2013/14 and 2014/15.

RESPONSE #14B-2: Reference Response to Comment 14A and 14B-1 above**.**

RESPONSE #14B-3 - C: *The following responses for this comment letter apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

RESPONSE 14B-3: Reference Response 14B-1, above. In addition, information and strategies provided by the American Farmland Trust, examples of which are referenced in the response, will continue to be valuable to the formulation of potential policy options and actions by the Fresno COG Policy Advisory Committee (PAC) and subsequent ad hoc committee established by the COG Policy Board for this purpose.

RESPONSE 14B-4: Reference Response 14B-1 and additional commentary as noted under 14B-3 immediately above.

RESPONSE 14-C: Reference Response 14B-1 and additional commentary as noted under 14B-3, above.

Comment Letter #15

FROM: Vincent P. Mammano, Division Administrator, U.S. Department of Transportation, Federal Highway Administration

DATED: May 19, 2014

RESPONSE #15 *This comment letter and the following response apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

Thank you for your interest in the Fresno Council of Government's Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). Fresno COG appreciates your time and will be sure to keep you updated throughout the Regional Transportation Planning Process. We look forward to your continued involvement and detailed comments to come.

Comment Letter #16

FROM: Scott Morgan, Director, State Clearinghouse

DATED: May 16, 2014

RESPONSE #16 *This comment letter and the following response apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

Thank you for your interest in the Fresno Council of Government's Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). Fresno COG appreciates your time and will be sure to keep you updated throughout the Regional Transportation Planning Process. We look forward to your continued involvement and detailed comments to come.

Public Hearing Comments #17

FROM: Heather Dumais, American Lung Association - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17A: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

There is always room to improve. There are lessons learned during the 2014 RTP/SCS process, and they could become valuable experience for the 2018 RTP/SCS.

FROM: Heather Dumais, American Lung Association - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17B-C: *The following responses for this public hearing comment apply only to the 2014 RTP/SCS and are not related to the Draft or Final PEIR.*

References to programs will be included in Policy element and RTP.

FROM: Jamie Moncayo, Leadership Counsel for Justice and Accountability - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17D: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

References to programs will be included in Policy element and RTP.

FROM: Jamie Moncayo, Leadership Counsel for Justice and Accountability - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17E: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Scheduled for Policy Board consideration on May 22, 2014

FROM: Stephanie Frederick, League of Women Voters - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17F: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

This was received in the "Final Commentary on the 2014 RTP" letter dated 4/24/14 from the League and has been responded to as part of that letter.

FROM: Stephanie Frederick, League of Women Voters - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17G: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

As a requirement of MAP 21, a performance measurement system will be implemented and incorporated in the 2018 RTP that can track the process of the plan. A rule making process for establishing such performance measures and performance targets is taking place at the national level. The key for such performance measures is the availability of data. Performance measure established for the MAP 21 requirement will have data available and collected by responsible agencies. That way, such data could be compared over time, and thus the effectiveness of the RTP/SCS could be assessed. Vehicle miles travelled is a good potential performance measure. Unfortunately, the performance indicators established during the 2014 RTP/SCS process are mostly modeled number, and currently we do not know sources that collect such data over time. Due to the requirement of the MAP 21, there will be changes in the performance measures in the 2018 RTP/SCS.

FROM: Stephanie Frederick, League of Women Voters - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17H: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

To make the 2014 RTP project list more accessible, Fresno COG staff agrees that the scoring criteria for each mode should be included with the project list. It will be added to Appendix C.

FROM: Stephanie Frederick, League of Women Voters - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17I-1: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Reference Response in 17H above.

FROM: Stephanie Frederick, League of Women Voters - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17I-2: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

All three policy proposals will be reflected in the policy element in a way that's consistent with the Board action and will not be considered significant changes to the RTP/SCS document.

FROM: Stephanie Frederick, League of Women Voters - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17J: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Thank you.

FROM: Craig Breon, Private Citizen - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17K: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Comment noted.

FROM: Cesar Compos, Central California Environmental Justice Network - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17L: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

We are working on SCS implementation program that would include such grants.

FROM: Cesar Compos, Central California Environmental Justice Network - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17M Reference Response to Comment #12F-2. In addition, the comment is not completely understood and to develop such a metric would be outside of the scope of this PEIR. As noted in Response to Comment #12F-2, CEQA does not require an analysis of social and economic effects, and any such analysis would have to be "project specific."

FROM: Cesar Compos, Central California Environmental Justice Network - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17N Reference Response to Comment #12F-2. In addition, Chapter 3, Section 3.16, provides an overview of the impacts and benefits of regional projects. Chapter 3 and RTP Appendix I also provide further details and analysis.

FROM: Cesar Compos, Central California Environmental Justice Network - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17O: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Comment noted.

FROM: Mike Wells, Coalition for Clean Air - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17P: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

References to programs will be included in Policy element and RTP.

FROM: Sarah Sharpe, Fresno Metro Ministry - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17Q: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

This comment was made in reference to the upcoming SCS Workshop Fresno Metro Ministries hosted on May 5, 2014. Fresno COG presented the RTP/SCS information at the workshop. FMM has made it a goal to help engage more members of the community in understanding and giving feedback on transportation issues such as the SCS.

FROM: Sarah Sharpe, Fresno Metro Ministry - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17R: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

The targets are not easy to hit. Without City of Fresno and other jurisdiction's latest general updates and much more investment in transit and active transportation, Fresno COG would not have been able to reach the targets. City of Fresno went through hundreds of workshop for the general plan update; hundreds of people testified at the City Council meeting to support the general plan update. There are still forces who doubt the feasibility of the plan and try to go back to status quo. Implementation will be the key.

FROM: Sarah Sharpe, Fresno Metro Ministry - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17S: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Needs assessment appears in 2014-15 OWP; Program appears in Chapter 7 of RTP.

FROM: Christine Barker, Citizen - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17T Opinion noted and reference Response to Comment #12F-2.

FROM: Gavin Feiger, Sierra Nevada Alliance - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, April 24, 2014

RESPONSE #17U: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

All of the comments from public workshops and online surveys were given to each committee who voted on the SCS Scenarios during open, public meetings which included local agency planners, city managers and elected officials. These three groups of committee members are responsible for incorporating land use principals into their General Plans which are reflected in Scenario B. Much of the SCS process was influenced by comments made throughout the process. Scenarios A, C and D were all essentially build by the public or community organizations in response to public comment. The comments themselves are included in Appendix J of the RTP Appendices.

FROM: Veronica Garibay, Leadership Counsel for Justice and Accountability - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, May 7, 2014

RESPONSE #17V: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

References to programs will be included in Policy element and RTP.

FROM: Veronica Garibay, Leadership Counsel for Justice and Accountability - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, May 7, 2014

RESPONSE #17W: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

This is an ambitious and achievable plan for Fresno County.

FROM: Veronica Garibay, Leadership Counsel for Justice and Accountability - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, May 7, 2014

RESPONSE #17X: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Transit Priority Area (TPAs) is defined in SB743. Transit Priority Project (TPP) is defined by SB375, which covers the work of 2014 RTP/SCS. Although as stated in the SCS, there are corridors in Fresno County that meet the location criteria of TPP, the strict land use and environmental criteria for TPP makes it extremely hard for projects in the Fresno area to qualify.

FROM: Jeff Roberts, Granville Homes - Statement at Fresno COG 2014 RTP/SCS and Draft PEIR Public Hearing, May 7, 2014

RESPONSE #17Y: *The following response for this public hearing comment applies only to the 2014 RTP/SCS and is not related to the Draft or Final PEIR.*

Comment noted.

Lance-Kashian & Co.
265 E. River Park Circle, Suite 150 • Fresno, California 93720
Voice: (559) 438-4800 • Facsimile: (559) 438-4802

#1

April 15, 2014

Honorable Amarpreet Dhaliwal, Chairman
Fresno County Council of Governments
2035 Tulare Street Suite 201
Fresno, CA 93721

RE: 2014-2040 Draft Regional Transportation Plan Comments and Request

Dear Mr. Chairman,

We have taken time to review the 2014-2040 Draft Regional Transportation Plan and wanted to convey both our support and concerns that we would like to address.

First, and as you may know, Lance-Kashian & Company is celebrating our 50th year of doing business having started on April 30, 1964. We have developed the built environment here in Fresno and across California. With that in mind, we believe that the Fresno County Council of Governments has been progressive and is making great strides in moving our infrastructure plan forward. Particularly, the Intelligent Transportation Systems. It is the technology infrastructure that will move not only Fresno County, but our great State to the forefront of moving people and goods.

However, we are very concerned as property owners of the interchange at Shaw and Highway 99, since there is no mention of improving this all-to-integral facility. The volumes of traffic, safety of the drivers, congestion and continued deferral of this location of our City is of grave concern. There is no mention of its improvement. Moreover, with the High Speed Rail Authority now beginning we believe that there will be even more impacts to be considered. Our request of the Fresno County Council of Governments is to edit the 2014-2040 Regional Transportation Plan to include the Shaw and 99 facility. Furthermore, we would like to meet with you and your staff about moving the interchange forward and increasing its priority on the Council of Government's list. 1

Again, thank you very much for the work that the COG is doing to move our great County forward when it comes to Transportation Planning for the future. We very much look forward to working together in the near future.

Very truly yours,

Lance Kashian & Company

Salvador Gonzales,
Chief Operating Officer

The Kashian Group

John Kashian

RECEIVED
APR 17 2014
BY: FRESNO COG

#2

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-2380 FAX: (916) 574-0682

April 18, 2014

RECEIVED
APR 1 2 2014
BY:

Ms. Barbara Steck
Fresno County Council of Governments
2035 Tulare St., Suite 201
Fresno, California 93721

Subject: CEQA Comments: 2014 Regional Transportation Plan/Sustainable Communities Strategy, Draft EIR, SCH No. 2012081070

Location: Fresno County

Dear Ms. Steck:

Central Valley Flood Protection Board (Board) staff has reviewed the subject document and provides the following comments:

The proposed transportation plan may result in projects located adjacent to or within the following regulated streams under Board jurisdiction pursuant to Title 23, California Code of Regulations (23 CCR), Section 112:

Stream	County - Limits
Alta Main Canal	Fresno
Byrd Slough	Fresno
Cameron Slough	Fresno - within the Kings River designated floodway
Cole Slough	Fresno
Cresent Bypass	Kings and Fresno - North Fork Kings River
Dog Creek	Fresno
Dry Creek	Fresno
Five Mile Slough	Fresno
Fresno Slough	Kings and Fresno
Globe Slough	Fresno
James Bypass	Kings and Fresno
Lower San Joaquin River Flood Control Project	Fresno, Madera, and Merced
Sand Creek	Tulare and Fresno
San Joaquin River	Friant Dam to West End of Sherman Island

RECEIVED
APR 21 2014
BY: FRESNO COG

The Board enforces its regulations for the construction, maintenance, and protection of adopted plans of flood control that protect public lands from floods. Adopted plans of flood control include federal-State facilities of the State Plan of Flood Control, regulated streams, and designated floodways. The geographic extent of Board jurisdiction includes the Central Valley, and all tributaries and distributaries of the Sacramento and San Joaquin Rivers, and the Tulare and Buena Vista basins (23 CCR, Section 2). 2

A Board permit is required prior to working in the Board's jurisdiction for the following:

- Placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction,

encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee (23 CCR Section 6);

- Existing structures that predate permitting, or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (23 CCR Section 6);

- Vegetation plantings require submission of detailed design drawings; identification of vegetation type; plant and tree names (both common and scientific); quantities of each type of plant and tree; spacing and irrigation method; a vegetative management plan for maintenance to prevent the interference with flood control operations, levee maintenance, inspection, and flood fight procedures (23 CCR Section 131).

2 (cont.)

Other local, federal and State agency permits may be required and are the responsibility of the applicant to obtain.

Board permit application forms and our complete 23 CCR regulations can be found on our website at http://www.cvfpb.ca.gov/. Maps of the Board's jurisdiction including all tributaries and distributaries of the Sacramento and San Joaquin Rivers, and Board designated floodways are also available on a Department of Water Resources website at http://gis.bam.water.ca.gov/bam/.

Additional Considerations Related to Potential Impacts of Vegetation and Hydraulics

Accumulation and establishment of woody vegetation that is not managed may have negative impacts on channel capacity and may increase the potential for levee over-topping or other failure. When vegetation develops and becomes habitat for wildlife, maintenance to initial baseline conditions typically becomes more difficult as the removal of vegetative growth may be subject to federal and State resource agency requirements for on-site mitigation. The proposed project should include mitigation measures to avoid decreasing floodway channel capacity.

Adverse hydraulic impacts of proposed encroachments could impede flood flows, reroute flood flows, and/or increase sediment accumulation. The proposed project should include mitigation measures for channel and levee improvements and maintenance to prevent and/or reduce hydraulic impacts. If possible off-site mitigation outside of the Board's jurisdiction should be used when mitigating for vegetation removed at the project location.

If you have any questions please contact James Herota at (916) 574-0651, or via email at james.herota@water.ca.gov.

Sincerely,

for Len Marino, P.E.
Chief Engineer

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, California 95814

Letter #3

The League of Women Voters of Fresno

1345 Bulldog Lane, Fresno, CA 93720 (559) 226-VOTE (8683)

To: Policy Board, Fresno Council of Governments

From: League of Women Voters, Fresno

Date: April 24, 2014

Subject: Final Commentary on the 2014 Draft RTP

The forecasts of what the San Joaquin Valley must expect in the years ahead are bleak: water shortages, longer wildfire seasons, more intense heat waves, increased energy use, more polluted air (RTP, Page 4-21). These developments are already extracting their costs.

Although we can no longer stave off climate change, we can – with political will – lessen the severity of its consequences for ourselves, our children, and the generations that follow.

Here the RTP can be an invaluable tool. Along with its EIR, it contains huge amounts of information about how we govern ourselves, what our transportation systems and services provide, what our air quality targets should be, how we protect ourselves, how to cleanse the environment – air, land, water – on which we depend for existence. 3-A

We congratulate the board and staff on the creation of this compendium of critical information.

The League of Women Voters offers the following suggestions for rendering the RTP an even more useful tool to improve our economy and our quality of life.

Integrate RTP Components

The League believes that the components of future RTPs must be integrated with one another. At present, the various elements of the plan appear to stand in isolation from one another. For example, it is not clear how the policy element 3-B

relates to the project list, or how the project list meets the needs described in the transportation element. It is not clear whether the projects were used as inputs in the creation of the four SCS scenarios, or whether the SCS-B performance indicators determined how projects were prioritized for funding.

If the components of the RTP were better integrated, the RTP could become an analytical tool for the COG Policy Board. Input in the form of consistent policies, scoring criteria, and transportation needs will result in lists of projects that are extensive descriptions of existing transportation services and public outreach – can be placed in appendices to make the plan itself more accessible to policymakers.)

3-B (cont.)

Report on Success of RTP

The amazing modeling capacity and databases developed to create the SCS can be used to evaluate the effectiveness of the RTP projects and of land-use decisions throughout the county. We suggest that the COG begin by tracking the top ten SCS performance indicators over each four-year interval between RTPs and report on them. Progress – or the lack of it – will provide invaluable information to the COG Policy Board.

With this progress information, and with clear-cut indicators clearly in mind, the COG Policy Board will know what inputs in the form of revised policies, scoring criteria, and transportation needs should be entered into the next RTP to create lists of projects that achieve more desirable outcomes.

The League suggests that the first reporting interval might begin as early as July 2014, after adoption of the 2014 RTP.

3-C

Scoring Criteria

To make the 2014 RTP project list accessible, the League suggests that the scoring criteria for each mode be presented along with the project list. Then it will be possible to see the relationship of the scoring criteria to the top ten indicators of the current SCS, and to have a better understanding of which criteria are given more weight. For example, is congestion reduction favored over reduction of vehicle miles traveled? We might be better able to understand the decisions that support the County of Fresno's intent to spend 64% of its capacity-enhancing dollars on projects located only in north Fresno County, where the projects will considerably enhance the value of the land.

3-D

Policy Element

The policy element is rightly labeled "Foundation of the Plan." Since it is so critical, the League suggests that it be placed early in the plan, immediately following the introductory chapter. In keeping with eventually making the RTP into an analytical tool, the League feels that two sets of policies should be incorporated into the existing policy element.

- SCS Policies. The policy element should incorporate the land use, transportation, healthy environment, and social equity performance indicators of the SCS. These would find an excellent home in Table 6-1 D, whose policy is to support SB 375. In fact, an existing paragraph already declares, "Planning and programming processes should incorporate performance measures and outcomes as integral components." The indicators can be added immediately beneath this paragraph. 3-E

  The resource conservation performance indicators of the SCS should be incorporated into Table 6-1 E, whose first policy is to "Avoid or fully mitigate all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources."

- Community Equity Coalition (CEC) Policies. The League believes that three policies of the CEC can and should be incorporated into the policy element. Two of them – infrastructure needs assessment and planning grants for small, disadvantaged communities – fit perfectly into Table 6-1 C, whose objective is to "incorporate concern for environmental justice into transportation decisions." The third policy – conservation of farmland – belongs in Table 6-1E, along with the farmland conservation indicator of the SCS. 3-F

With these additions, the policy element will be tied even in the 2014 RTP to the adopted SCS, and will incorporate the concerns of the community coalition.

For future RTPs, the League also suggests that the policy element be evaluated for greater specificity and more measurable objectives. At this time, almost nothing about the policy element is measurable. The addition of the SCS performance indicators, which are measurable, will be a step in the direction of a more forceful, specific policy element. The goal should be to create a set of policies that bear directly on prioritizing the transportation projects listed in the RTP for future funding.

Conclusion

The League of Women Voters of Fresno believes that this highly valuable 2014 RTP can be strengthened by clarifying scoring criteria and by incorporating SCS and community coalition policies into the existing policy element. The League further believes that future RTPs can be restructured to be invaluable analytical tools. These will enable the COG Policy Board to make decisions that will help to support our economy and quality of life in the challenging years that lie ahead. 3-G

Respectfully submitted,

Stephenie Frederick
Transportation Director
League of Women Voters of Fresno

#4

May 9, 2014

Barbara J. Steck
Deputy Director
Fresno County Council of Governments (FresnoCOG)
2035 Tulare Street, Suite 201
Fresno, CA 93721
bjsteck@fresnocog.org

SIERRA NEVADA ALLIANCE
Keeping light in the range.

Subject: Comments on Fresno RTP/SCS and DEIR

Mrs. Steck and Board Members,

On behalf of the Sierra Nevada Alliance, we write to provide both policy comments on the Fresno COG 2014 Regional Transportation Plan and Sustainable Community Strategy (RTP/SCS) and to provide comments on the Draft Environmental Impact Report (DEIR) supporting the RTP/SCS. The Sierra Nevada Alliance has been participating in a local coalition regarding the RTP/SCS for more than a year now, providing oral and written comments to the COG Board, the PAC, and the PAC Subcommittee, largely regarding working lands and open space conservation.

Since 1993 the Sierra Nevada Alliance has been protecting and restoring Sierra lands, water, wildlife and communities. Our mission is to protect and restore the natural resources of the Sierra Nevada for future generations while promoting sustainable communities. We are truly an Alliance, with over ninety-five Member Groups that span the entire 400 mile mountain range. Our members and groups who live in Fresno County engage in a range of conservation activities including protection of communities from air and water pollution, protection of wildlife species and habitat, preservation of open space and farmland, and partner with those within our communities historically disadvantaged and frequently bearing the greatest burden of negative health and environmental impacts. New Towns and other conversion of working lands and open space, and those effects on water resources, are our paramount concerns in Fresno County.

We appreciate all of the work the COG and the PAC/TTC have done so far. Unfortunately, the RTP/SCS and DEIR do not meet the legal requirements of SB 375 or CEQA and do not reflect the community input gathered by the COG over the last two years. We are looking forward to continuing to work together to strengthen Scenario B in this 2014 RTP/SCS and the comments and recommendations here will help the COG revise the RTP/SCS and DEIR to legally adequate documents reflecting what your constituents are expecting.

We are asking for an *explicit commitment in this RTP/SCS* to move forward with three policies/programs: A needs assessment, a grant program, and a land conservation policy.

In order to achieve these goals, we supported Scenario D because it is fiscally prudent, responsible and equitable, and protects farmland and open space. Given limited financial resources, we want to make sure not to divert taxpayer money into supporting the development of new areas that the County cannot afford to maintain. We want the COG to focus future growth and funding to existing cities and low-income rural communities, so that all of us can benefit from having complete communities. It is imperative that we protect our economy by preserving farm and range land and conserving the water that helps us feed the nation and the world. 4-A

Post Office Box 7989, South Lake Tahoe, California 96158
Phone: 530.542.4546 Fax: 530.542.4570 info@sierranevadaalliance.org www.sierranevadaalliance.org

Due to loss of state planning and redevelopment funds, it is increasingly difficult to find funding to determine what our communities need and how to invest in them. The goal of the first two policies is to provide funding to allow all communities to do long range planning and provide certainty that there is funding available to implement aggressive ideas and help all of our communities. The third policy ensures that our agriculture land and open space continues to benefit our economy and community while incentivizing investment in existing communities. We are very excited to see the PAC recommend moving forward on the Needs and Assessment and Grant Program in the 2014 RTP, based on the May 9, 2014 PAC meeting. **This third policy, land conservation, is the focus of these RTP/SCS and DEIR comments.**

4-A (cont.)

We are disappointed that Scenario D was not fully analyzed in the DEIR. Scenario B consumes 75 percent more valuable agricultural land than Scenario D. Because Scenario B sends more growth to the foothills and quality agricultural land, it uses 50 percent more land than Scenario D to accommodate the same amount of growth. Instead of building in existing communities that want growth, Scenario B converts quality agricultural land into urban pavement. Scenario B paves over 75% more high quality agricultural land than Scenario D.[1] Removing land from agricultural production translates into 57 million more dollars lost from our agricultural economy *each year* – a loss that would not occur under Scenario D.[2] Directing new growth to existing communities uses less water and protects Sierra watersheds. Fresno's agricultural economy in particular relies on access to freshwater. By protecting more land, Scenario D supports agricultural economy. Growing more within existing city and town boundaries and investing in agricultural communities supports farmers, conserves water, and preserves Fresno County's proud agricultural heritage.

4-B

Because the COG consistently defers any authority over projects listed in the RTP/SCS and analyzed in the DEIR, this document is not an adequate program-level analysis of the impact of the RTP/SCS transportation projects. In order to address this and because Scenario B results is the most land consumed of any the four scenarios considered, we are asking the COG to address the comments and incorporate the language outlined here and, specifically in the "Model 'Natural and Working Lands Conservation Policy'" submitted by the Sierra Nevada Alliance to the PAC for the May 9, 2014 meeting.

4-C

These comments are organized as follows and questions requesting a response are indicated by a bold "Q#":

- Lack of meaningful public engagement
- Intent of the RTP/SCS and lack of internal consistency
- Authority over transportation projects versus land use projects
    - With this authority, the need to analyze land conversion impacts from transportation projects, including growth-inducing impacts
- Appendix: Model Natural and Working Lands Conservation Policy (language for the Policy Chapter of the RTP/SCS and for the EIR):
    - Identify specific impacts due to transportation projects
    - The hierarchy of land conservation (avoid, reduce, mitigate)
    - Respecting local land use authority

Under each of these categories, comments and suggested language are provided for the RTP/SCS (*Chapter 6, Policies: Foundations of the Plan*, unless otherwise specified) and, where appropriate, the EIR.

---

[1] Source: Comparative GIS analysis by technical consultant David Ausherman using the State of California's Farmland Mapping & Monitoring Program data for Prime Farmland, Unique Farm Land, and Farmland of Statewide Significance. This differs from the COG's performance measures because those only show farmland *outside* spheres of influence.

[2] Scenario B loses approx. 6 sq. mi. more than Scenario D would, and that extra land lost translates into $57m lost that would not be lost under Scenario D. Every acre of farmland contributes up to $15,000 to the economy annually, according to The Growth Alternatives Alliance's report, *A Landscape of Choice*. The title page for that report lists these participating organizations: Fresno Business Council, American Farmland Trust, Fresno County Farm Bureau, the Building Industry Association, and Fresno Chamber of Commerce.

Post Office Box 7989, South Lake Tahoe, California 96158
Phone: 530.542.4546 Fax: 530.542.4570 info@sierranevadaalliance.org www.sierranevadaalliance.org

Lack of *meaningful* public engagement

Elected officials are not listening to the public
In public workshops, participants overwhelmingly preferred scenarios that restricted growth in new towns. Yet, Scenario B diverts taxpayer money to develop new areas we can't afford to maintain instead of directing funding for streets and other infrastructure to existing communities. The Community-wide SCS workshop results[3]:

A: 19.12%
B: 23.9%
C: 56.97%

Beyond this simple vote, which is not "scientific" as compared to the 2012 AIS survey commissioned by the COG, there were overwhelming comments[4] asking for no growth in the foothills, investing in existing communities, and the three scenarios being too similar, to highlight a few issue areas.

Before these unscientific public workshops, the COG commissioned AIS to conduct a "scientific" (RTP/SCS page 2-7) survey[5] taking place in October of 2012. According to the 2014 Fresno COG Regional Transportation Plan Public Outreach Strategy (page 14): *"Fresno COG is working with a survey firm to conduct "scientific" surveys whose participants are reflective of the county's demographics, including the homeless and non-English speaking populations from the urban and rural areas. The consultant will be responsible for preparing a detailed list of findings that assess whether or not values and priorities of the Fresno County community that were identified during the Blueprint Planning Process public outreach efforts still hold true today, as well as assessing whether the transportation priorities defined during Measure C survey development are still priorities to our communities. Survey findings will feed directly into Regional Transportation Plan development, including the drafting of Fresno COG's Sustainable Communities Strategy."* 4-D

The "scientific" survey indicates that the public wants maintenance of existing infrastructure, more public transit (especially for disadvantaged populations), and more sidewalks and bike paths. These scientific results are very similar to the unscientific community meetings. It is unclear what was done with all of this public input.
Q1: In Chapter 2 of the RTP/SCS, "Public Participation: Working Together for a Better Plan," can the COG please indicate how public comment and requests, scientifically-collected and not, are included in the preferred scenario, as selected by the COG? Specifically, how was the information presented to the COG Board? Why was Scenario B chosen even though it did not have the support of the community? Between when Scenario B was chosen and the draft documents came out, what steps were taken to incorporate the public input? Even though added roadway capacity was not a highlight of any public input, why is the largest category of funds, almost 40% of the RTP budget (based on the fiscally constrained project list, Appendix C), targeted at "Streets & Roads-Capacity Increasing" compared to less than 23% going to "Streets & Roads-Operations & Maintenance?"

Intent of the RTP/SCS and Internal Consistency

The first page of the SCS, (Chapter 4, pg. 4-2) states that "The SB 375 SCS requirements *address regional land use and housing accommodation in the context of transportation investment*" (emphasis added). Thus, the intent of SB 375 is to influence regional land use and housing through transportation projects, which are the purview of the COG. 4-E

[3] http://www.fresnocog.org/sites/default/files/publications/SCS/Final_SCS_Workshop_Results_Summary.pdf
[4] http://www.fresnocog.org/sites/default/files/publications/SCS/SCS_Workshop_comments_pulled_from_spreadsheets.pdf
[5] http://www.fresnocog.org/sites/default/files/publications/RTP/FCOG_RTP_and_SCS_2012_Survey_Revised_PP2_Nov14.pdf

Post Office Box 7989, South Lake Tahoe, California 96158
Phone: 530.542.4546 Fax: 530.542.4570 info@sierranevadaalliance.org www.sierranevadaalliance.org

The SCS, on the same page (4-2) states that "The path toward living more sustainably is clear: *focus housing and job growth in urbanized areas* where there is existing and planned transportation infrastructure, *protect sensitive habitat and open space*, invest in a transportation network that provides residents and workers with transportation options that reduce GHG emissions, and *implement the plan through incentives and collaboration*" (emphasis added). This reinforces that the intent of the SCS, which must be internally consistent with the RTP, is to invest in existing communities, protect sensitive habitat, and implement these intentions.

Continuing on the first page (Chapter 4): "Transportation strategies contained in the RTP – investing in public transit system, managing transportation demand, making transportation system improvements, and continuing to expand and improve bike and pedestrian facilities - are major components of the SCS."
Q2: Can the COG please explain how the RTP, specifically the Fiscally Constrained Project List, is consistent with the SCS even though the largest percentage of funds is directed toward increasing road capacity, largely on the urban fringe and in rural areas, while increasing capacity is not mentioned as a goal in the SCS? See Table 1 (next page).

4-E (cont.)

Table 1: Fiscally Constrained Project list categories as a percentage of total expenditures.

Category	In $000	Percentage of Total
Bike and Pedestrian Total	$94,381	2.11%
Streets & Roads-Capacity Increasing Total	$1,757,971	39.36%
Streets & Roads-Operations & Maintenance Total	$1,022,181	22.89%
Transit	$1,591,878	35.64%
Total	$4,466,411	100.00%

Finally, page 4-23 of the SCS states that "The steep increase in transit projects is mostly due to the BRT corridors currently planned within the region."
Q3: Can the COG please explain how the region will meet its GHG reduction targets and transit-spending goals without Bus Rapid Transit in Fresno?

COG *authority* over transportation projects

We recognize that Fresno COG does not have land use planning authority[6], but it has the authority and responsibility to determine which regional transportation projects it will include in the RTP/SCS, which projects it will fund, and (by virtue of preparing an SCS), and which projects will be eligible for CEQA exemptions and other streamlined permitting requirements.[7] The funding is particularly relevant to Fresno because of its county-wide sales tax for transportation. Fresno COG can and should exercise this authority by explicitly stating in the SCS that projects consistent with the SCS will adhere to the mitigation hierarchy: *avoidance* of impacts is prioritized, followed by *minimization*, followed by *mitigation*.

4-F

Q4: Can the COG cite to any State or Federal laws or regulations that would prevent the COG from imposing mitigation requirements to reduce listed impacts at the programmatic level over all or most RTP projects? Is it the COG's position that policies contained in the RTP Policy Element, for example, are merely advisory, or do they have authority over the RTP projects?

[6] Cal. Government Code § 65080.
[7] See, e.g., Cal. Public Resources Code §§ 21155 and 21155.1 (requirements for designation as a "sustainable communities project" exempt from CEQA, including consistency with an SCS that ARB has accepted would meet GHG reduction targets); 21155.2 (process for "sustainable communities environmental assessment" and streamlined CEQA review for certain transit priority projects); and 21159.28 (circumstances under which projects consistent with SCS can avoid CEQA review of GHG emissions and regional transportation network impacts).

Post Office Box 7989, South Lake Tahoe, California 96158
Phone: 530.542.4546 Fax: 530.542.4570 info@sierranevadaalliance.org www.sierranevadaalliance.org

With this authority over transportation projects, we recommend that the COG adopt the attached Natural and Working Lands Conservation Policy. 4-F (cont.)

Model Natural and Working Lands Conservation Policy

Please see Attachment 1: Model "Natural and Working Lands Conservation Policy" Language. These policies would likely only apply to projects over which Fresno COG has full or partial purse string control, as compared to projects funded solely by direct state or federal funds.

In the EIR, Impact 3.3.3 cursorily considers possible impacts from improved transportation infrastructure: "owners of agricultural lands nearest to urbanized areas may feel pressure to develop as transportation improvements within proximity of these lands are improved or implemented" (pg 3-42 to 3-43). These growth-inducing impacts are deferred to "implementation agencies," even though the COG has authority over their adopted transportation projects and their impacts.

Q5: In the EIR, will the COG include a programmatic-level mitigation measure to address the growth-inducing impacts of transportation projects in the RTP/SCS, for Impact 3.3.3? The language we propose is: "RTP projects that are found, in accordance with CEQA, to induce growth or remove a substantial barrier to growth will not receive funding until the applicable local jurisdiction(s) has adopted land conservation/mitigation policies in line with those recommended in the RTP/SCS EIR." 4-G

Q6: Will the COG include the language provided in the attached Natural and Working Lands Policy, or similar language, in Chapter 6 of the RTP/SCS? If so, please indicate which language was incorporated, if the language was taken directly from the Policy or paraphrased/changed, and where the language is located in the final documents. If not, please explain why no changes were made to the final documents.

Q7: Will the COG include the language provided in the attached Natural and Working Lands Policy, or similar language, as mitigation measure for impacts 3.3.1, 3.3.2, and 3.3.3 in EIR for the RTP/SCS? If so, please indicate which language was incorporated, if the language was taken directly from the Policy or paraphrased/changed, and exactly where the language was placed in the final EIR. If not, please explain why no changes were made to the final EIR.

Natural and Working Lands Policy Questions to be addressed by the COG staff and consultants

Without any kind of analysis in the EIR, the true land conversion impacts of transportation projects in the Fresno RTP/SCS cannot be determined. The Fiscally Constrained Project List does not even include linear lengths (distances) of widening or new highway construction projects, or how much right-of-way is being used or acquired.

Both the Bay Area (Plan Bay Area) and SACOG quantified the land conversion impacts, all types of agricultural land open space, from their transportation projects. There is a legal requirement to use the best available data and this impact analysis can be done using the Greenprint and similar methodology used by Bay Area and SACOG.

Q8: Will the COGs quantify lands to be converted due to RTP projects (as compared to land use jurisdiction projects)? Will the COG calculate the land which will be consumed by the capacity increasing projects indicated on the map (Figure 4-23) and Fiscally Constrained Project List 4-H

Post Office Box 7989, South Lake Tahoe, California 96158
Phone: 530.542.4546 Fax: 530.542.4570 info@sierranevadaalliance.org www.sierranevadaalliance.org

(Appendix C)?

Additionally, there is a capacity increasing project indicated in Figure 4-23: Capacity Increasing Projects (page 4-26 of the RTP/SCS) which I was not able to find on the Project List. 4-H (cont.)

Q9: Can the COG please point out where this project is in the project list under "Streets & Roads-Capacity Increasing?" 4-I

By making the *feasible* changes indicated by the above questions and attached Model Policy, impacts identified would be *substantially reduced*. Because of this, *adoption of these mitigation measures is a legal requirement.*

Q10: "Implantation agencies" is used in the first sentence of "Mitigation Measures" on pages 3-92, -112, -177, -212, -305, -307, -308, -309, -327, -332, -334, -336, -368, and -372 of the DEIR. Is it supposed to be "implementation agencies'" or "implementing agencies'?" 4-J

Thank you again and I look forward to your responses.

Sincerely,

Gavin Feiger
Senior Associate

ENCL: Model Natural and Working Lands Conservation Policy

Post Office Box 7989, South Lake Tahoe, California 96158
Phone: 530.542.4546 Fax: 530.542.4570 info@sierranevadaalliance.org www.sierranevadaalliance.org

Model "Natural and Working Lands Conservation Policy"

For the Fresno RTP/SCS and Accompanying EIR

We recognize that Fresno COG does not have land use planning authority[1], but it has the authority and responsibility to determine which regional transportation projects it will include in the RTP/SCS, which projects it will fund, and (by virtue of preparing an SCS), which projects will be eligible for CEQA exemptions and other streamlined permitting requirements.[2] Fresno COG can and should exercise this authority by *explicitly stating in the SCS that projects consistent with the SCS will adhere to the mitigation hierarchy:* ***avoidance*** **of impacts is prioritized, followed by** ***minimization*****, followed by** ***mitigation*****.**

These policies would likely only apply to projects over which Fresno COG has full or partial purse string control, as compared to projects funded solely by direct/earmarked state or federal funds.

Policy Chapter (6) Model Language

In order to attain the objectives in the Policies and SCS chapters of the RTP and make these chapters internally consistent and consistent with the RTP project list, the following policies and statements should be included in Chapter 6: Policies:

- A standalone "Land Conservation" section, similar to SACOG's (Chapter 6).[3]
- Acknowledge and support preservation of the existing road and highway system as the top priority for local public works agencies and Caltrans, and expect to help them secure adequate funding sources for necessary work.
- Focus on ensuring transit and the existing arterial system performs well for an increased number of local trips, to support infill and compact development from smarter land uses without pushing growth outward because of overly congested conditions, and on providing a strong grid network (which offers alternative routes) wherever land uses allow.
- Preserve and protect agricultural lands as a means for providing open space and for the managed production of resources.

In order to attain the objectives in the Policies chapter of the RTP, the following policies should be included in Chapter 6 of the RTP/SCS:

[1] Cal. Government Code § 65080.
[2] See, e.g., Cal. Public Resources Code §§ 21155 and 21155.1 (requirements for designation as a "sustainable communities project" exempt from CEQA, including consistency with an SCS that ARB has accepted would meet GHG reduction targets); 21155.2 (process for "sustainable communities environmental assessment" and streamlined CEQA review for certain transit priority projects); and 21159.28 (circumstances under which projects consistent with SCS can avoid CEQA review of GHG emissions and regional transportation network impacts).
[3] http://www.sacog.org/2035/files/MTP-SCS/6%20-%20Policies%20and%20Strategies%20Final.pdf

Submitted by the Sierra Nevada Alliance, May 2, 2014.
Gavin Feiger, Senior Program Associate | gavin@sierranevadaalliance.org | 530.542.4546 x302

Avoidance

- Establish goals and quantify benefits for avoiding conversion of these resources (acres in each category) based on increasing development efficiencies (measured by people, jobs and economic outcomes per acre), and identify policies for mitigating conversion that cannot be avoided.
- Reinforce efforts to meet GHG reduction targets by not supporting development studies for new communities.

Minimization

- Minimize the urban growth footprint of the region by improving circulation within and access to existing communities instead of access to and beyond the edge of existing communities.
- Develop buffers and transition areas between urban uses and agricultural land to reduce incompatibility issues that are associated with cultivation, pest control and harvesting of crops.

Mitigation

- Set a threshold of significance for the loss of natural or working lands, and this threshold would apply to all transportation projects funded as part of the RTP.
- The threshold would be set by the end of 2014 and the mitigation ratio, in the form of conservation easements for land of equal value, would be at least 1:1.

Respecting Local Land Use Authority

- Fresno COG cannot require local implementing agencies to adopt the above mitigation measures, and it is ultimately the responsibility of a lead agency to determine and adopt mitigation. Therefore it cannot be ensured that this mitigation measure would be implemented in all cases. Further, there may be instances in which site-specific or project-specific conditions preclude the reduction of all project impacts to less than-significant levels.
- Fresno COG can and will require compliance with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce farmland conversion.

Encourage Local Jurisdictions to Adopt the Model Language in this document and, more broadly:

In order to attain the objectives in the Policies chapter of the RTP, the following policies should be included in Chapter 6 of the RTP/SCS:

- Encourage local jurisdictions to analyze possible impacts to agriculture and natural resources as a result of growth.
- Encourage local governments to direct greenfield developments to areas immediately adjacent to the existing community edge through incentives and support for regulatory reform for local jurisdictions.
- Provide additional information to local and regional stakeholders regarding the benefits of reducing land conversion and related impacts in the alternate scenarios, specifically adding discussion of:
    - Greenhouse gas increase as a result of conversion of agricultural and natural lands to urban uses (based on U.C. Davis research cited above and other relevant science)
    - Reduction in agricultural economic output resulting from conversion of agricultural lands to urban uses
- Work with local jurisdictions to conduct an assessment of current land use plans and policies in the county (including LAFCO) to determine the effectiveness of current policy approaches in reducing land conversion over time and to highlight best practices.

Submitted by the Sierra Nevada Alliance, May 2, 2014.
Gavin Feiger, Senior Program Associate | gavin@sierranevadaalliance.org | 530.542.4546 x302

- Developing and disseminating model zoning and regulatory elements for jurisdictions, such as agricultural enterprise zones, on-farm value added facilities (i.e. commercial kitchen), worker housing, and expanding agro-tourism by allowing visitors to interact and engage with farmlands more directly.

In addition to agriculture and farmland, this language will provide greater protection of **open space**:

Open Space
In order to attain the objectives in the Policies chapter of the RTP, the following policies should be included in Chapter 6 of the RTP/SCS:

- Project and future land use development implementation agencies should identify open space and recreation areas that could be preserved and will include mitigation measures (such as dedication or payment of in-lieu fees) for the loss of open space.
- Project and future transportation development implementation agencies shall conduct the appropriate project-specific environmental review, including consideration of loss of open space. Potential significant impacts to open space shall be mitigated, as feasible. The project sponsors or local jurisdiction can and should be responsible for ensuring adherence to the mitigation measures prior to construction.
- In addition to agriculture and farmland, this language will provide greater protection of open space and forest resources.

EIR Model Language

Moving on to the Preliminary Environmental Impact Report (PEIR), the goals of the policy element are explicitly stated as (pg. 2-5 to 2-6 in the EIR):

The Policy Element for the 2014 RTP and SCS supports three broad overarching focus points:

- Preservation of existing facilities and services.
- Sound financial management leveraging of existing funding.
- Balancing Transportation needs with land use

By making the following, *feasible*, changes, impacts identified would be *substantially reduced*. Because of this, *adoption of these mitigation measures is a legal requirement.*

In the EIR, with *authority over transportation projects*, the COG should create a list of land use impacts (conversions) due to *transportation projects adopted in the RTP*.

Both the Bay Area (Plan Bay Area) and SACOG quantified the land conversion impacts, all types of agricultural land open space, from their transportation projects. There is a legal requirement o use the best available data and this impact analysis can be done using the Greenprint and similar methodology used by Bay Area and SACOG.

In the EIR, with *authority over transportation projects*, the COG should analyze the *growth-inducing impacts* of the *transportation projects adopted in the RTP*.

In the EIR, Impact 3.3.3 cursorily considers possible impacts from improved transportation infrastructure: "owners of agricultural lands nearest to urbanized areas may feel pressure to develop as transportation improvements within

Submitted by the Sierra Nevada Alliance, May 2, 2014.
Gavin Feiger, Senior Program Associate | gavin@sierranevadaalliance.org | 530.542.4546 x302

proximity of these lands are improved or implemented" (pg 3-42 to 3-43). These growth-inducing impacts are deferred to "implementation agencies," even though the COG has authority over their adopted transportation projects and their impacts.

After fully analyzing the land conversion impacts of transportation projects, the COG should *require* impacts of *transportation projects* to be mitigated for and *recommend* mitigation for *land use projects* implemented by local jurisdictions. The requirements and recommendations should be the same language (recommend that local jurisdictions follow the requirements laid out here for RTP projects) and follow the mitigation hierarchy: ***avoidance* of impacts is prioritized, followed by *minimization*, followed by *mitigation*.**

In order to make the EIR a satisfactory program-level EIR, this or similar language should be included as mitigation measures for impacts 3.3.1, 3.3.2, and 3.3.3 in EIR for the RTP/SCS:

Mitigation measures that shall be considered by implementing transportation agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:

Avoidance

- Requiring project relocation or corridor realignment, where feasible, to avoid farmland, especially Prime Farmland.
- If a project involves acquiring land or easements, it shall be ensured that the remaining non-project area is of a size sufficient to allow viable farming operations, and the project proponents shall be responsible for acquiring easements, making lot line adjustments, and merging affected land parcels into units suitable for continued commercial agricultural management.

Minimization

- Minimizing isolation, severance and fragmentation of agricultural land by constructing underpasses and overpasses at reasonable intervals to provide property access;
- Managing project operations to minimize the introduction of invasive species or weeds that may affect agricultural production on adjacent agricultural land;
- Requiring buffer zones, which can function as drainage swales, trails, roads, linear parkways, or other uses compatible with ongoing agricultural operations, (the width of buffer zones to be determined on a project-specific basis, taking into account prevailing winds, crop types, agricultural practices, ecological restoration, and infrastructure) between projects and adjacent agricultural land, which should be designed to protect the feasibility of ongoing agricultural operations and protect ecological restoration areas from noise, dust, and the application of agricultural chemicals;

Mitigation

- Project and future transportation development implementation agencies shall conduct the appropriate project-specific environmental review, including consideration of loss of Farmland. Potential significant impacts to Farmland shall be mitigated, as feasible. The project sponsors or local jurisdiction can and should be responsible for ensuring adherence to the mitigation measures prior to construction.
- Mitigation of at last 1:1. Acquiring conservation easements on land at least equal in quality and size as partial compensation for the direct loss of agricultural land or contributing funds to a land trust or other entity qualified to preserve Farmland in perpetuity.
- If a Williamson Act contract is terminated, a ratio greater than 1:1 of land equal in quality shall be set aside in a conservation easement, as recommended by the Department of Conservation.

Submitted by the Sierra Nevada Alliance, May 2, 2014.
Gavin Feiger, Senior Program Associate | gavin@sierranevadaalliance.org | 530.542.4546 x302

Mitigation Example: As an example of cost for a large-scale project, there is currently a CalTrans project in Tulare County where the loss of farmland and possible mitigation are being discussed. The project—known as Tulare Expressway—would realign and widen 9.3 miles of State Route 65 between Lindsay and Exeter. The project would consume approximately 320 acres of farmland. The cost for the project—without mitigating the farmland impact—is estimated at $94.5 million to $97 million. Based on previous mitigation agreements in Kern County as well as one farm appraisal near the project site, an estimate for acquiring conservation easement on 320 acres of local farmland was between $1.28 million and $2.56 million, or 1.5%-3% added to the estimated cost of the project. Each Caltrans District has Environmental Enhancement and Mitigation Program (EEMP)[1] funds specifically set aside for the mitigation of farmland loss, and these funds can be matched by the Department of Conservation (California Farmland Conservancy Program – CFCP[1]). Most likely, an estimate for conservation easement over ranchlands or most natural lands would be considerably less than for productive farmlands.

[1] Caltrans Environmental Enhancement and Mitigation Program (EEMP): http://www.dot.ca.gov/hq/LocalPrograms/EEM/homepage.htm

[1] Department of Conservation California Farmland Conservancy Program (CFCP): http://www.conservation.ca.gov/dlrp/cfcp/Pages/Index.aspx

Broadly, again Fresno COG cites lack of land use planning authority to avoid any commitment to enforce mitigation measures and states that implementing agencies should (pg. 3-39 to 3-40 and in Table 1-1 – Summarization of Impacts, Mitigation Measures, and Significance):

- Encourage in-fill development, in place of development in rural and environmentally sensitive areas
- Allow transfer of development rights away from agricultural land to mixed-use development areas
- Consider agricultural resources, and avoid / minimize / mitigate any encroachment on those resources

With the authority over transportation projects, please change the word "should" to "shall" or "will" in the mitigation measures for impacts 3.3.1, 3.3.2, and 3.3.3 in EIR for the RTP/SCS.

Respecting Local Land Use Authority

Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures above for transportation projects, which the COG does have authority over.

In addition to agriculture and farmland, this language will provide greater protection of **open space and forest resources**.

Mitigation measures that shall be considered by implementing transportation agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:

Open Space

- Project and future transportation development implementation agencies should identify open space and recreation areas that could be preserved and should consider mitigation measures for the loss of open space.
- Require project relocation or corridor realignment, where feasible, to avoid protected open space.

Forest Resources

Avoidance

Require project relocation or corridor realignment, where feasible, to avoid timberland or forest land.

Mitigation

Require conservation easements on land at least equal in quality and size as partial compensation for the direct loss of timberland or forest land.

Respect local land use authority

Require compliance with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce forest land conversion.

Submitted by the Sierra Nevada Alliance, May 2, 2014.
Gavin Feiger, Senior Program Associate | gavin@sierranevadaalliance.org | 530.542.4546 x302

#5

May 9, 2014

Barbara J. Steck
Deputy Director
Fresno County Council of Governments (FresnoCOG)
2035 Tulare Street, Suite 201
Fresno, CA 93721
bjsteck@fresnocog.org

SIERRA NEVADA ALLIANCE
Keeping light in the range.

Subject: Comments on Fresno RTP/SCS and DEIR

Mrs. Steck and Board Members,

On behalf of the Sierra Nevada Alliance, we write to provide both policy comments on the Fresno COG 2014 Regional Transportation Plan and Sustainable Community Strategy (RTP/SCS) and to provide comments on the Draft Environmental Impact Report (DEIR) supporting the RTP/SCS. The Sierra Nevada Alliance has been participating in a local coalition regarding the RTP/SCS for more than a year now, providing oral and written comments to the COG Board, the PAC, and the PAC Subcommittee, largely regarding working lands and open space conservation.

Since 1993 the Sierra Nevada Alliance has been protecting and restoring Sierra lands, water, wildlife and communities. Our mission is to protect and restore the natural resources of the Sierra Nevada for future generations while promoting sustainable communities. We are truly an Alliance, with over ninety-five Member Groups that span the entire 400 mile mountain range. Our members and groups who live in Fresno County engage in a range of conservation activities including protection of communities from air and water pollution, protection of wildlife species and habitat, preservation of open space and farmland, and partner with those within our communities historically disadvantaged and frequently bearing the greatest burden of negative health and environmental impacts. New Towns and other conversion of working lands and open space, and those effects on water resources, are our paramount concerns in Fresno County.

Starting on Page 3-257 of the DEIR, in the Hydrology and Water Resources section, the COG continues to defer all review and mitigation to the local jurisdictions or implementing agencies. The COG does have authority over transportation projects because it has the authority and responsibility to determine which regional transportation projects it will include in the RTP/SCS, which projects it will fund, and (by virtue of preparing an SCS), which projects will be eligible for CEQA exemptions and other streamlined permitting requirements. This is particularly, relevant in Fresno, with its countywide sales tax for transportation.

This document is not an adequate program-level analysis of the impact of the RTP/SCS transportation projects on Hydrology and water resources. The COG should do a program-level analysis of the cumulative impacts on hydrology and water resources of all projects on the RTP Project List. 5-A1

Specifically,

Surface Waters (Page 3-263)
There are numerous surface water sources in the area, including lakes, rivers, and streams. In addition, there are numerous creeks and canals. A number of wetland and vernal pool areas also exist.

The San Joaquin River and the Kings River are the primary natural surface water sources within Fresno County. Both rivers originate in the **Sierra Nevada's** and flow toward the valley floor. The San Joaquin River's approximate annual run-off is 1,600,000 acre-feet (an acre-foot is 325,851 gallons). The Kings River's annual run-off is very similar to that of the San Joaquin River."

5-A1 (cont.)

Q1: Sierra Nevada is singular, not multiple or possessive. Please always use "Sierra Nevada" to describe the region.

A number of challenges and potential impacts to water resources are pointed out in the DEIR. We are providing comments and questions, indicated by **"Q#"** below.

5-A2

Challenges (key points underlined for emphasis)

Groundwater Resources (Pg. 3-266)
In addition to surface water systems, groundwater is a significant water resource. Groundwater is water that is stored underground, typically between saturated soil and rock. Because of their capacity to store usable water in a manner that is perennially secure from loss or evaporation, groundwater reservoirs are a significant water resource. Most groundwater reservoirs store far more water than the volume that flows through them annually. However, only the flow-through volume is renewable. A groundwater resource can contain several aquifers, or water-bearing zones. An aquifer refers to a rock formation that is water bearing.

5-B

Groundwater (Pg. 3-268)
Use of groundwater has produced serious overdraft in some areas of the County and has resulted in constraints to the availability of water supplies. The California Water Plan Update 2013 identifies the Tulare Lake Basin, which the majority of Fresno County is in, as being in a critical condition of overdraft. Overdraft can lead to numerous issues, such as increased extraction costs, land subsidence, water quality degradation, and environmental impacts. In reaction to drought conditions, nearly all communities in the region have introduced water conservation programs.

5-C

Impacts (underlining added to DEIR language for emphasis)

Environmental Impacts, Mitigation Measures, and Significance After Mitigation (Pg. 3-269)
To determine the actual potential for significant impacts on hydrology and water resources resulting from implementation of the 2014 RTP and SCS, transportation project- and future development project-specific studies would be necessary. However, some general impacts can be identified based on the nature of the individual transportation improvements and future land use development. Projects and future land use development located in watersheds, adjacent to impaired water bodies, or in flood hazard areas are most likely to affect water resources. Construction of the proposed projects and future land use development could cause water quality impacts, because the individual improvement projects and future developments would increase the area of paved surface. Water quality could be affected by storm water runoff that passes over paved surfaces before it reaches a major creek, river, or water body.

Impact 3.11.1 – Violate Regional Water Quality Control Board water quality standards or waste discharge requirements (Pg. 3-271)
Local surface water quality would be affected by increased urban runoff and construction runoff.

5-D

Increasing impervious surface area would increase urban runoff, which transports greater quantities of contaminants to receiving waters. Construction activities can increase pollutant loads in storm water. In addition, road cut erosion can increase long-term siltation in local receiving waters.

Mitigation Measures

The specific impacts on hydrology and water quality will be evaluated as part of the implementation agencies' project-level environmental review process regarding their proposed individual transportation improvement project(s) and future land use development(s). Implementation agencies will ultimately be responsible for ensuring adherence to the mitigation measures identified prior to construction. Given that Fresno COG does not have land use authority to approve development projects, their role will be to encourage inclusion of the mitigation measures referenced below.

- Improvement projects and new development will include upgrades to storm water drainage facilities to accommodate increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce velocity.
- Transportation network improvements and future land use developments will comply with local, state and federal floodplain regulations. Proposed transportation improvements and applicable new developments will be engineered by responsible agencies to accommodate storm drainage flow.
- Responsible agencies should ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are provided to prevent water quality degradation.
- Responsible agencies implementing projects requiring continual water removal facilities should provide monitoring systems including long-term administrative procedures to ensure proper operations for the life of the Project.
- Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff.

5-D (cont.)

Q2: Will the COG use its authority over transportation projects to condition funds so that local jurisdictions or agencies must provide a mitigation plan before receiving any funds from COG-controlled or influenced funding streams?

5-E

Q3: Will the COG consider adding the following, or similar, language as a mitigation measure for Impact 3.11.1?

- "When undertaking water quality upgrades or including water quality aspects of transportation projects, include bicycle and pedestrian facilities where possible."

5-F

Impact 3.11.2 – Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (Pg. 3-272)

The installation of transportation infrastructure, the expansion of project facilities, and the construction of new development could encounter groundwater. Individual projects and future land use developments may require dewatering during construction and for the life of a project. The process of dewatering includes removal of water (groundwater or surface water) from a construction site by pumping or evaporation. The dewatered effluent must be discharged at another location which could have impacts on groundwater. In addition, individual projects under the RTP and SCS could impact groundwater recharge by increasing the amount of paved surface area. The paving required for highway projects and the construction of future land use development could have significant effects on the

5-G

amount of surface water that filters into the ground. Pollutants in the runoff from proposed transportation facilities and future development could affect groundwater basins.

Transportation projects can be growth-inducing. For example, building or widening a highway toward "new towns" such as Friant Ranch induces growth in these far-flung and water-intensive developments.
Q4: Will the COG use its authority over transportation projects to drop these projects to the bottom of the priority list or condition money so that there environmental review of transportation projects must include increased water demand from land use (development growth) induced by transportation project?

5-G (cont.)

Impact: 3.11.7 – Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map (Pg. 3-281)
Figure 3-14 depicts the amount (in acres) of new development associated with the Project by FEMA 100-year flood zone areas (Zones A, AD, AE, and AH). As can be seen, only 436 acres of new development is estimated to be located within FEMA Flood Zones by 2040. Most new development (2,810 acres) will be located outside FEMA 100-year flood zone areas or within areas that have a .2% or less chance of flooding on an annual basis.

5-H

Based on this language, transportation projects can be developed in 100-year flood hazard areas.
Q5: Will the COG require that no new or expanded transportation projects be allowed in 100-year flood plains; and use COG authority over transportation projects to drop these projects to the bottom of the priority list or condition money so that the COG/RTP does not fund any new or expanded physical transportation projects in 100-year flood hazard areas?

Impact: 3.11.8 – Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (Pg. 3-282)
A portion of the transportation projects included in the 2014 RTP and SCS could occur within the 100-year flood hazard area, thus increasing the potential to obstruct or exacerbate floodwaters. The construction of projects involving support structures in the floodway could obstruct floodwaters at some locations.

5-I

Q5: Will the COG require that no new or expanded transportation projects be allowed in 100-year flood plains; and use COG authority over transportation projects to drop these projects to the bottom of the priority list or condition money so that the COG/RTP does not fund any new or expanded physical transportation projects in 100-year flood hazard areas?

By making the *feasible* changes indicated by the above questions, impacts identified would be *substantially reduced*. Because of this, *adoption of these mitigation measures is a legal requirement.*

Thank you again and I look forward to your responses.

Sincerely,

Gavin Feiger
Senior Associate

#6

Rob Terry

From: NICHOLAS PALADINO <ndpaladino@sbcglobal.net>
Sent: Thursday, April 10, 2014 4:33 PM
To: Melissa Garza
Subject: San Joaquin Bicycle Projects

Melissa,

Sorry for the long delay in submitting this rebuttal to Mr. Gouveia's comments on the titles of the three Bike/Ped projects for the city of San Joaquin.

In his response to you Mr. Gouveia stated that Class I or Class II and bike lane or bike path is "a matter of semantics." This is incorrect. The three classes of bikeways are clearly defined in the state Streets and Highways Code Section 890.4 which I quote below:

"890.4. As used in this article, "bikeway" means all facilities that provide primarily for bicycle travel. For purposes of this article, bikeways shall be categorized as follows:
(a) Class I bikeways, also known as "bike paths" or "shared-use paths," which provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrans with crossflows by motorists minimized.
(b) Class II bikeways, also known as "bike lanes," which provide a restricted right-of-way designated for the exclusive or semiexclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and mjotorists permitted.
(c) Class III bikeways, also known as onstreet or offstreet "bike routes," which provide a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists."

The article referred to is Article 3, the California Bicycle Transportation Act, of the Streets and Highways Code. Thus the code clearly defines the three classes of bikeways, and there is no such thing as a Class I Bike Lane.

6-A

Unfortunately there exists within our county and state-wide a tendency to use the term "trail" rather than "bike path" or "shared-use path." Thus I often see the term Class I Trail.

Mr. Gouveia is correct that Class I does exist in the 2012 CAMUTCD. However, the definitions given in the CAMUTCD for the three classes are those given in the Streets and Highways Code. See definitions 22 through 24a and definitions 31b through 31d on pages 77-79. Those definitions are used in the 2012 CAMUTCD Part 9, Traffic Control for Bicycle Facilities. Those definitions are also used in the Highway Design Manual. Index 301.2 of Chapter 300 of the HDM is titled "Class II Bikeway (Bike Lane) Lane Width." Chapter 1000, Bicycle Transportation Design, of the HDM also consistently uses the definitions of the Streets and Highways Code.

Thus FRE500855 and FRE500856 should be titled Class II Bike Lanes. I can not determine whether FRE500861 is to be a bike lane or a bike path, as the description reads "on the railroad alignment."

Nicholas Don Paladino
Advocacy Director, Fresno Cycling Club

1

Rob Terry

From: NICHOLAS PALADINO <ndpaladino@sbcglobal.net>
Sent: Thursday, April 10, 2014 10:25 PM
To: Melissa Garza
Subject: RTP Appendix M Comments

Melissa,

Below are my observations, comments, and questions on the Bike & Pedestrian portion of Appendix M of the draft RTP:

- This is the 2014 RTP. Thus I was surprised to see "Estimated Open to Traffic" dates of 2011, 2012, and 2013. If these projects have not been completed, should they not have dates of 2014 and later?
- Projects FRE090108 and FRE500257 are complete and should be removed from the list. This will change the total for Bike and Pedestrian projects. I am suspicious that other projects in the city of Fresno may also be complete, but I have not field checked them.
- Based upon the Project Title and Project Description, the following projects appear to be duplicates:
  -- FRE110114 and FRE500011
  -- FRE110137 and FRE500049
  -- FRE110113 and FRE500260
  -- FRE090125 and FRE500993
  -- FRE110144 and FRE500365

If these are indeed duplicates, then only one needs to be listed with the appropriate cost. Then the total for Bike and Pedestrian projects should be recalculated.

- FRE021804 is Kingsburg Railroad Depot Restoration. How can this possibly be a Bike & Pedestrian project?

If the total for Bike and Pedestrian projects is altered, then this will change the pie charts in the narrative portion of the RTP, probably reducing the portion going to these two modes of transportation.

Nick Paladino

6-B

1

Rob Terry

From: NICHOLAS PALADINO <ndpaladino@sbcglobal.net>
Sent: Friday, May 09, 2014 4:18 PM
To: Barbara Steck
Subject: More Comments on Draft RTP

Barbara,

Below in an email are the written comments on the draft RTP that I gave to you prior to the TTC meeting:

Chapter 4

Page 4-17, right column: there appear to be inconsistent figures of Important Farmland converted to other purposes. The text says 97.8 acres, but the figures for Prime, Statewide, and Unique Farmland total to 91.8 acres. 6-C

Page 4-25, top of the right column: I believe the Shaw Avenue BRT corridor is the *third* BRT corridor. 6-D

Chapter 6

Page 6-14, right column: replace the narrative concerning bicycle and pedestrian plans with COG's intent to write a regional Active Transportation Plan. 6-E

Page 6-15, left column: the policy "Provide information to the public . . ." is given twice.

Chapter 7

Page 7-4, left column: I find the text and information under the heading "The following federal programs . . ." confusing. The first line "The following funding programs are considered . . ." does not match the heading nor the listing of expired programs given below it. Moreover, that line of text seems to be continued by the two lines of text beneath the listing.

Page 7-10, top of left column: the discussion of state funding sources should include the new Active Transportation Program (ATP). This may require a revision to the discussion of the federal Transportation Alternatives Program (TAP) on page 7-6. 6-F

Page 7-10, Discussion of Measure "C" Funds: two different figures are given for the funds expected to be generated/collected over the 20 year period. The first paragraph states "approximately $1.7 billion," and the second paragraph gives "approximately $1.4 billion." Also the final page of Appendix M, Measure C Extension Plan, shows the total 20 year sales tax estimate as $1,447,481,840.

Nick Paladino

1

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 6
1352 WEST OLIVE AVENUE
P.O. BOX 12616
FRESNO, CA 93778-2616
PHONE (559) 488-7307
FAX (559) 488-4088
TTY 711
www.dot.ca.gov

#7

Serious drought. Help save water!

May 14, 2014

Mr. Tony Boren
Executive Director
Fresno Council of Governments
2035 Tulare Street, Suite 201
Fresno, California 93721

Dear Mr. Boren:

Thank you for the opportunity to review the Fresno Council of Governments (FCOG) Draft 2014 Regional Transportation Plan (RTP). Caltrans, at District 6 and various divisions within the Department, has reviewed the Draft RTP and collectively offers the following comments:

DISTRICT 6:

Transportation Planning

FCOG is commended for their RTP and developing a guide of current and future investments in their regional transportation system to reduce congestion, build infrastructure, bicycle facilities, and improve access to transit within the 2040 horizon year.

FCOG highly encourages public participation and involvement from their citizens, public agencies and local partners to address transportation goals and strategies. FCOG is commended for utilizing several public forums to reach out to their residents.

FCOG supports all the areas of the Sustainable Communities Strategy (SCS) fundamentals as identified in the Government Code Section 650809(b) (2) (B) and 65584.04(i) (1). Caltrans, along with other agencies, partnered with FCOG in the development of their SCS and were present at many meetings that were offered for this proposed project. FCOG is commended for their timely outreach and preparation efforts to seek comments from their local partners and constituents. This project is a long term plan and focuses on future and existing motor vehicle traffic, transit, rail, goods movement, bicycle and pedestrian facilities, aviation systems and have been incorporated and evaluated according to SB 375 to reduce greenhouse gas (GHG).

FCOG's 2014 RTP has identified a plan that addresses a transportation network that is working and is serving the County of Fresno. FCOG has included the following components in their RTP: Sustainable Communities Strategy, federal funding, air quality planning, complete modeling, multi-county coordination, and environmental impact report which provides a great foundation to plan for the future transit needs of Fresno. The following comments are offered for review:

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

- FCOG encourages the collaboration of working with member agencies and continues the development of a comprehensive multi-modal regional transportation network to complement that of Caltrans.
- FCOG supports the maintenance and rehabilitation of the existing state highway, local streets and roads network which is part of their Short-Term Improvement Plan (2014-2018) and Long-Term Improvement Program (2019-2040).
- FCOG promotes the State's efforts to continue to develop and implement Strategic Highway Safety Plans.
- FCOG's Mass Transportation system consists of both public transit and Amtrak rail passenger service. Further focus has been formed to concentrate on the existing system, needs assessment, unfunded needs, accomplishments and proposed actions.
- FCOG is commended for their notable transit collaboration among Fresno Area Express (FAX), Clovis Transit and Fresno County Rural Transit Agency (FCRTA). Each entity provides exceptional transit service to its customers in the County of Fresno and its surrounding rural cities. These transit agencies are working diligently to enhance coordination between agencies towards a unified transit system by purchasing the same electronic fare box equipment. This would promote simpler transfers and tracking between the transits systems.
- FCOG through the FCRTA is commended for their exceptional delivery of rural transit services. FCRTA has provided efficient public participation methods to respond to the unmet needs process. FCRTA has also purchased additional bus stop shelters with solar lighting, benches and waste receptacles. These new bus stop shelters present a pleasant space that creates a walkable environment and further promotes a productive and efficient transit system. FCRTA further promotes programs for the elderly, disabled and low income youth populations which include Measure C funds, Senior Fare Subsidy Earmark programs, and Taxi Scrip which helps senior citizens over the age of seventy to access paratransit services.
- FCOG is commended for their efforts to enhance bikeways in the County of Fresno; however limited funding continues to have an impact on the creation of future bike lanes.
- FCOG is commended for establishing an assessment of maximum connectivity, ridership and revenue potential in order for the high speed rail (HSR) to reach its highest capability. With the established San Joaquin Valley Rail, Fresno Works Committees, and the High-Speed Rail Authority guiding the development of the HSR maintenance station, it is essential that all modes of the transit connectivity to all potential local transit providers be fully examined to reduce traffic congestion, air pollution and maintenance costs for Fresno and its adjoining counties.

- Caltrans commends FCOG for including Chapter 3 Environmental Justice Report: Ensuring Meaningful Involvement for All People as part of the RTP. It can be referred to as a model for the development of other RTP's for other counties within the San Joaquin Valley.

- Chapter 5-7: Caltrans recommends a section within this chapter to address the development of an Active Transportation Plan (ATP) for strategies to secure Active Transportation Program funding. The ATP Design Plan could provide an assessment of previously funded Caltrans Environmental Justice and Community Based Transportation Planning Grant projects. There could also be a strong connection between an Active Transportation Plan and Chapter 3 on Environmental Justice. 7-A

Office of Traffic Operations

The RTP document addresses all modes of transportation: motor vehicles, transit, rail, goods movement, bicycle and pedestrian, aviation, transportation systems management programs and projects for the horizon year 2040.

The Transportation and Traffic portion of the RTP, among other State Regulations, identifies Senate Bill (SB) 743 which creates a process to change analysis of transportation impacts under California Environmental Quality Act (CEQA). Under this bill, the focus of traffic analysis will shift from driver delay to reduction of greenhouse gas emissions, creation of multi-modal networks and promotion of a mix of land uses. Specifically, SB 743 requires the Governor's Office of Planning and Research to amend CEQA guidelines and provide an alternative to Level-of-Service (LOS) for evaluating transportation impacts. Measurements of transportation impacts may include: vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates or automobile trips generated. It is stated in the RTP document that SB 743 is not expected to take effect until 2015 and it is not directly applicable to this EIR. 7-B

Under the Highways, Streets and Roads section of the EIR, State Route (SR) 269 should also be added to the list of State Routes that provide north-south access.

The EIR portion of this document has incorporated different Environmental Impacts, their Mitigation Measures and the Significance After Mitigation. In general a project contained within the RTP would result in a significant transportation impact if it: 7-C

- Causes an increase in traffic which is substantial in relation to the existing traffic load and capacity.
- Exceeds a standard LOS established by the County Congestion Management Agency for designated roads or highways.
- Results in a change in traffic patterns.
- Substantially increases hazards due to a design feature.

- Results in inadequate emergency access.
- Conflicts with adopted policies, or programs supporting alternative modes of transportation.

HEADQUARTERS:

Division of Transportation Planning: Office of Regional & Interagency Planning (ORIP)

7-C (cont.)

The Office of Regional and Interagency Planning, Regional Planning Branch has completed its review of FCOG's Draft 2014 RTP. We thank you for the opportunity to review and provide comments on the RTP. We offer comments, suggestions, and questions on the following sections:

- The RTP Checklist should reference RTP content locations in the body of the RTP and give the appropriate page number locations, not just Chapter or Appendix references. 7-D
- Clarify where in the RTP FCOG involved federal land management agencies during the preparation of the RTP. 7-E
- Pages 1-3 and 1-11 mention climate change issues. FCOG should consider Climate Change or Adaptation related projects. Flooding or extreme heat events could both have negative impacts on the State Highway System, as well as local county and city streets and roads. 7-F
- Page 1-19: The last six information bullets shown under the Transportation Improvement Program (TIP) heading would be more appropriate under the heading of Long Range Transportation (Plan). 7-G
- Chapter 4: The Sustainable Communities Strategy is mentioned and located throughout the RTP; however, it is highlighted in Chapter 4 and describes how FCOG intends to meet their targets using Scenario B. 7-H
- Page 4-2: It would be beneficial to expand the discussion and clarify in a specific location in the RTP the broader role of vehicle miles traveled from public transit buses, heavy duty trucks, and school buses. 7-I
- Pages 7-3 and 7-14: The Measure C ½ cent sales tax that expires 2027 is assumed to be renewed and/or augmented, and it is assumed that the tax payers will vote to extend the Measure through the life of this RTP. What are these assumptions based upon to ensure a financially constrained RTP document for the 2027 to the 2040 time period? 7-J

Division of Aeronautics

7-K The Division of Aeronautics once again wishes to compliment FCOG on the exceptional job of integrating aviation interests into various sections of the Draft RTP. There is sufficient detail to realize that FCOG recognizes aviation as an important component of the regions health and prosperity. Further,

the pro-active approach to integrating aviation into a multi-modal transportation planning program continues as a noteworthy approach for others outside the region to incorporate aviation into the region's multi-modal transportation system to serve the community for years to come. We appreciate the inclusion of the Ground Access Improvement Program as required for Primary Commercial Service Airports like Fresno Yosemite International Airport. In addition, the RTP sufficiently addresses surface transportation routes and transit service accessibility.

Section 5.6 Aviation Overview:

7-K (cont.)

Also, it is apparent that FCOG understands that there is a particular role of the Airport Land Use Commission to protect the investment in aviation facilities by managing compatible land use development, while improving airport connectivity between the various transportation modes. We recommend that since airport improvement funding is of a higher priority, the Airport sponsors should be sure to update the Capital Improvement Plan (CIP) to ensure eligibility for California Aid to Airports Program (CAAP) funds. The federal Airport Capital Improvement Program (ACIP) process is simultaneous with the State CIP update, and we have no reason to believe that federal AIP funds are lacking. State AIP Matching Grants will only be eligible for funding if the respective airport has updated the State CIP with the current project, and that it is included in the most recent CIP approved by the California Transportation Commission.

More information regarding the CIP and CAAP can be found on our website: http://www.dot.ca.gov/hq/planning/aeronaut/documents/casp/acip.htm. The Division of Aeronautics funding is expected to be higher for FY 2014-15 and beyond due to a $4.00 transfer of funds from the Airport Loan Program, which will partially be available for Airport Land Use Compatibility Plans.

If you have any questions concerning the comments provided, please call me at (559) 488-7307.

Sincerely,

JENNIFER BRYAN-SANCHEZ
Transportation Planning North Branch
District 6

C: Gail Miller, Michael Navarro, Jacqueline Hodaly, Marta Frausto, Lorena Mendibles, and Albert Lee of Caltrans
Ray Sukys, Eric Eidlin of FTA
Jack Lord, Scott Carson of FHWA

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

#8

SIERRA BUSINESS COUNCIL

May 15, 2014

Barbara J. Steck, Deputy Director
Fresno County Council of Governments
2035 Tulare Street, Suite 201
Fresno, CA 93721
bjsteck@fresnocog.org

RE: SBC Comments on the Fresno COG Regional Transportation Plan/Sustainable Communities Strategy Draft Program Environmental Impact Report (PEIR)

Dear Ms. Steck,

Thank you for this opportunity to comment on the Regional Transportation Plan/Sustainable Communities Strategy and Draft Program Environmental Impact Report (PEIR) dated March 21, 2014. We appreciate your work and the efforts of COG staff, committees and Council members in undertaking this inaugural effort to incorporate Sustainable Communities Strategies into the COG's Regional Transportation Plan. Your commitment to soliciting public input and working with interested constituents is commendable.

The Sierra Business Council is a network of more than 4,000 businesses, organizations and individuals committed to economic prosperity, environmental quality and community vitality in the Sierra Nevada – similar to the *three E*s of the Valleywide Blueprint Principles: *Economy, Environment and Equity*. More than 130 participants in our network reside in or do business in Fresno County, and many more come to Fresno County to recreate. Our work over the past 20 years has demonstrated that simultaneously building vibrant communities, prosperous economies and healthy thriving ecosystems is a highly effective community development strategy for the Sierra Nevada and gateway communities, which is why we have been so interested in working with local community-based organizations on the Fresno SCS process.

SBC believes this SCS and its link to future transportation and land use planning decisions will create a healthier community by all measures. To that end, we are pleased to see an increase over 2011 for transit and active transportation (bicycling, pedestrian) spending in this RTP, as well as the move toward increased diversity of housing choices and the commitment to projects that support disadvantaged

Sierra Business Council
WEBSITE www.sierrabusiness.org
PHYSICAL ADDRESS 10183 Truckee Airport Rd Truckee, CA 96161
MAILING ADDRESS P.O. Box 2428 Truckee, CA 96160
PHONE 530.582.4800
FAX 530.582.1230

2

SIERRA BUSINESS COUNCIL

communities. These kinds of activities benefit both residents and visitors alike, and serve to support local business interests, as well, by housing people closer to services, getting people out of their cars and into existing downtown areas and businesses, and generating more tax revenue per acre without having to raise taxes. These strategies also improve public health, a substantial benefit in its own right, but which can also help businesses by bringing more people into town and minimizing employee work days lost to personal or family illness.

These so-called "co-benefits" are recognized in AB 32 and SB 375, the legislation underlying the SCS process (please see Appendix for more information and citations) and are a big part of why SBC believes the COG should do its best to go beyond the bare minimum greenhouse gas emission reduction requirements and use the SCS process to help improve the lives and livelihoods of Fresno County residents.

Rather than viewing the pursuit of co-benefits as "going too far" or being "unrealistic," **SBC encourages Fresno COG to take advantage of the state's incentive-based SCS program to achieve as much positive impact as possible in this and subsequent SCS rounds**, as was envisioned in the underlying legislation and in San Joaquin Valley's own Blueprint process. We believe the SCS can and should be an aspirational document that helps urban and rural communities alike meet their long term development goals.

To that end, we offer the following thoughts and suggestions for your consideration in this and future SCS rounds.

Better Alignment with Blueprint Core Community Values/Smart Growth Principles [General Comment]

The Blueprint Guidance Framework document, dated August 31, 2011, outlines a set of smart growth principles based on core community values, including:

1. Create a range of housing opportunities and choices
2. Create walkable neighborhoods
3. Encourage community and stakeholder collaboration
4. Foster distinctive, attractive communities with a strong sense of place
5. Make development decisions predictable, fair, and cost-effective
6. Mix land uses
7. Preserve open space, farmland, natural beauty, and critical environmental areas

8-A

Sierra Business Council
WEBSITE www.sierrabusiness.org
PHYSICAL ADDRESS 10183 Truckee Airport Rd Truckee, CA 96161
MAILING ADDRESS P.O. Box 2428 Truckee, CA 96160
PHONE 530.582.4800
FAX 530.582.1230

3

SIERRA BUSINESS COUNCIL

8. Provide a variety of transportation choices
9. Strengthen and direct development towards existing communities
10. Take advantage of compact building design
11. Enhance the economic vitality of the region
12. Support actions that encourage environmental resource management

The implementation strategies section of the Blueprint framework points out that using the Blueprint to implement SB 375 and develop the SCS can help achieve mutual objectives for smart growth and compact development, efficient transportation systems, higher-density housing, and open space conservation. Many of the smart growth principles listed above, such as #1, #2, #4, #7, #8, #11, and especially **#9 - strengthening and directing development towards existing communities**, are precisely the things the Community-Based Organizations (CBOs) have been asking for and reflecting back to the COG during the SCS public input process.

While the current RTP/SCS promises incremental improvements in some of these areas, **we encourage the Fresno COG to be bold and approve stronger policies and strategies on June 26** so that the smart growth principles from Blueprint and the community preferences expressed in public meetings and surveys can be put into practice and begin achieving community benefits as envisioned.

8-A (cont.)

Social and Economic Effects [PEIR Comment on Section 3-16]

While CEQA does not necessarily require analysis of social and economic impacts from a project, the fact that the Fresno COG receives federal funding as a Metropolitan Planning Organization means it must comply with other environmental justice regulations, such as those of the Federal Highway Administration (FHWA). Section 3-16 of the PEIR addresses this issue.

One of the key elements of the FHWA's environmental justice policy is to prevent "denial of, reduction in or significant delay in the receipt of benefits" by minority populations and low-income groups [PEIR, p. 3-379]. The PEIR points out that Fresno County has a high percentage of both low-income (35%) and minority (66%) populations. And both populations are generally concentrated in five areas: Huron, Mendota, Parlier, Orange Cove and San Joaquin.

8-B

Sierra Business Council
WEBSITE www.sierrabusiness.org
PHYSICAL ADDRESS 10183 Truckee Airport Rd Truckee, CA 96161
MAILING ADDRESS P.O. Box 2428 Truckee, CA 96160
PHONE 530.582.4800
FAX 530.582.1230

SIERRA BUSINESS COUNCIL

Yet three of those five areas – Parlier, Mendota and Huron – are receiving far less than their "fair share" of funding under the current project funding plan. *(*)*

Jurisdictions Receiving the Least Proportionate Share of Funding

	% of region's budget	% of region's population	% of "fair share"
Parlier	0.1%	1.6%	4%
Mendota	0.1%	1.2%	7%
Coalinga	0.2%	1.8%	14%
Kerman	0.5%	1.5%	31%
Huron	0.3%	0.7%	36%
Sanger	1.3%	2.6%	49%

Chart provided by CBOs

8-B (cont.)

New or improved transit services are considered by the FHWA to be "beneficial impacts," according to the PEIR [p. 3-386]. Therefore the lower proportional funding could be considered a "reduction in or significant delay in the receipt of benefits" by those communities. As such, the COG should be addressing these issues and not just pushing them off for project-specific review under local general plans or, worse yet, claiming that the RTP project as a whole is designed to serve the entire population of the county and, therefore, won't have a disproportionate impact on minority or low-income communities [PEIR, p. 3-390].

In addition, the legislation underlying California's climate change and greenhouse gas reduction efforts calls for maximizing social and economic benefits. By choosing a Preferred Alternative that allocates more growth to new communities than other alternatives, and developing a finance plan that underspends in key minority and low-income communities, the PEIR fails to adequately address the needs of Fresno's disadvantaged communities. **We ask that the COG revisit its finance plan to be sure that underserved communities get their fair share of project funding for projects that reflect the core community values and smart growth principles outlined in the Blueprint and voted for by the public at the COG's various community meetings and surveys.**

(*)Per CBO letter, this chart divides each jurisdiction's budget by the total regional budget. No jurisdiction will receive 100% of its "fair share" because the region's budget also funds agencies like CalTrans. The City of Fresno was not included on this list because, in subsequent analyses that allocated transit agency budgets to the jurisdictions, Fresno moved from an underfunded tier to a more moderate tier.

Sierra Business Council
WEBSITE www.sierrabusiness.org
PHYSICAL ADDRESS 10183 Truckee Airport Rd Truckee, CA 96161
MAILING ADDRESS P.O. Box 2428 Truckee, CA 96160
PHONE 530.582.4800
FAX 530.582.1230

5

SIERRA BUSINESS COUNCIL

Project List Development [RTP Comment on Chapter 7 & Appendix C]

We understand that this is the first SCS and everyone is working hard to determine how to fit all the pieces together. In the future, **we ask the COG to reverse the process for identifying transportation projects in the RTP.** The project list is the primary vehicle for reflecting SCS goals and implementing SCS strategies to reduce greenhouse gas emissions and meet other objectives. While the 2014 list may reflect general smart growth principles, there is no way it could have taken specific direction from the SCS, as the SCS was not yet approved when the Call for Projects went out in January 2013. **SCS policies and strategies should be applied via new evaluation criteria and weighting methods that will rank "SCS-friendly" projects more favorably and ensure that precious transportation investments go to projects with the best chance of achieving greenhouse gas emission reduction and other goals.**

8-C

CBO Proposals [RTP Comment on Chapters 6 & 7]

We thank the Public Advisory Subcommittee, the PAC and the COG staff for their consideration of the CBOs' three proposals: the Needs Assessment, the Sustainable Planning and Infrastructure grant program and the Natural and Working Lands Conservation Policy. SBC participated in the May 7, 2014 meeting of the PAC Subcommittee, during which committee members agreed to move all three proposals forward to the full PAC.

8-D

Needs Assessment
We appreciate the Subcommittee's support of conducting a county-wide assessment to identify current infrastructure conditions that might be affecting public health in low-income communities, and identify and prioritize transportation-related projects to address those needs. This assessment fulfills a requirement of SB 375 [§65080(a)] calling for the policy document to identify and quantify regional needs, and it meets the SB 375 intent for transportation planning agencies to address issues of local significance and importance to the community.

Grant Program
Similarly with the grant program, we thank the Subcommittee and COG staff for their support of the funding program proposal that would explore the use of new and existing funding sources to implement infrastructure upgrades, Complete Streets projects, improved transit and other actions identified by the needs assessment.

Sierra Business Council
WEBSITE www.sierrabusiness.org
PHYSICAL ADDRESS 10183 Truckee Airport Rd Truckee, CA 96161
MAILING ADDRESS P.O. Box 2428 Truckee, CA 96160
PHONE 530.582.4800
FAX 530.582.1230

6

SIERRA BUSINESS COUNCIL

We believe that both of these programs would be stronger if they were included in the Policies section (Chapter 6) of the RTP, since it is the Policy element that "directs the courses of action" to achieve the overall project goals [p. 6-2]. The introduction to the Policy section indicates that policies have already been added to "insure consistency with… the intent of SB 375, new projects, and implementation of the Blueprint Principles." It would seem appropriate, then, and **we ask the COG to add pursuit of these two programs as policies in Chapter 6 under "Improving mobility and accessibility for all regardless of race, income, national origin, age, or disability" [Table 6-1C: General Transportation Environmental Justice]. A companion line item should then be added in the financial element in Chapter 7 recommending the development of specified new sources of revenue for this purpose**, as described in SB 375 §65080(b)(4)(A).

Natural and Working Lands Conservation

Regarding the Natural and Working Lands Conservation Policy, we agree with the PAC Subcommittee's May 7 proposal to keep this discussion moving, and **we fully support the creation of an ad hoc committee to work with member agencies in identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities. We recommend using the draft Natural and Working Lands Conservation Policy language as a starting point for that ongoing discussion. We also support the Subcommittee's idea to explore how to use the existing valley-wide Greenprint data and process to inform this discussion. We also believe that substantial guidance in developing a Natural and Working Lands Policy could be acquired by working with other jurisdictions that have already adopted similar policies, such as The Counties of Placer, Sonoma, Tuolumne and San Diego.**

8-D (cont.)

Conclusion

How we plan shapes the many factors that contribute to community health and sustainability, at all levels. **Our neighborhoods are our health**. SB 375 requires that the Regional Transportation Plan approved by the COG provide clear policy guidance to the local jurisdictions who do hold the land use and other authorities, as part of a "collaborative" and incentive-based approach to meeting the state-set greenhouse gas emission reductions. We ask the COG to be bold in its Valleywide leadership and amend/approve a first-round RTP/SCS plan that goes beyond the letter of the law to really effect positive change across all communities in Fresno County.

Sierra Business Council
WEBSITE www.sierrabusiness.org
PHYSICAL ADDRESS 10183 Truckee Airport Rd Truckee, CA 96161
MAILING ADDRESS P.O. Box 2428 Truckee, CA 96160
PHONE 530.582.4800
FAX 530.582.1230

7

SIERRA BUSINESS COUNCIL

Sincerely,

Steven R. Frisch
President

Kerri L. Timmer
Government Affairs Director

Encl: Appendix

Sierra Business Council
WEBSITE www.sierrabusiness.org
PHYSICAL ADDRESS 10183 Truckee Airport Rd Truckee, CA 96161
MAILING ADDRESS P.O. Box 2428 Truckee, CA 96160
PHONE 530.582.4800
FAX 530.582.1230

SIERRA BUSINESS COUNCIL

APPENDIX

Co-Benefits Justifications

By asking to maximize co-benefits and investment in existing communities along with meeting greenhouse gas emission reductions, we are not asking for anything that isn't **already suggested in law**.

1. **AB 32 (2006) –** the underlying law for this entire effort, calls for:
    a. Considering **overall societal benefits** *[38562(b)(6)]* and
    b. **Maximizing** benefits **to the economy, environment, and public health**. *[38562(b)(6)]*
2. **SB 535 (2012) -** Additional AB 32-related legislation, by Kevin DeLeon:
    a. Recognizes the disproportionate impacts climate change will have on disadvantaged and low-income communities in California, which already face disproportionate impacts including higher rates of respiratory illness, hospitalizations, and premature death. **[1(a)]**
    b. Recognizes the **public health impacts of climate change** and requires that activities under AB 32 consider the localized and cumulative impacts in communities that are already adversely impacted by air pollution. **[1(c)]**
    c. Calls for public and private investment to be directed toward the most disadvantaged communities specifically to **provide an opportunity for small businesses, schools, affordable housing associations, and other community institutions to participate in and benefit [1(d)]**, where disadvantaged communities are defined as:
        i. areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation;
        ii. areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment.

# # #

Sierra Business Council
WEBSITE www.sierrabusiness.org
PHYSICAL ADDRESS 10183 Truckee Airport Rd Truckee, CA 96161
MAILING ADDRESS P.O. Box 2428 Truckee, CA 96160
PHONE 530.582.4800
FAX 530.582.1230

#9

To: Melissa Garza, FCOG 15 May 2014

Subject: 2015 FTIP Review

From: Dennis Jacobs, Caltrans FTIP Coordinator

1. Your EPSP document needs to be updated to incorporate MAP-21 funds such as ATP and to specify each type of program that has been agreed to by the parties in the project selection process. Programs not specified are ineligible for the EPSP process.

2. Generally, FTA funded projects can be advanced using EPSP if additional funding becomes available. MPO EPSP agreements must specify that transit operators have been included in the consultation process and FTA must approve the agreements. In addition, the EPSP agreement must include the following specific language:
"For FTA administered funds, projects may be moved within the period of the FSTIP at the request of the agency, as long as funding is available and the change does not negatively impact the delivery or availability of funds for other projects ready for obligation." 9-A

3. You should use (in $1,000) instead of ($000) in your documents. 9-B

4. Do you not have projected revenues and programming for the first two years of ATP? 9-C

5. CMAQ revenues for 16/17 and 17/18 show $13,248 instead of $13,167. Is this because someone is paying back a loan? 9-D

6. RSTP revenues for 16/17 and 17/18 show $11,140 instead of $11,201. 9-E

7. You show some projects with prior year funding only. Why are we showing this? Have they not closed out? 9-F

8. And you show some projects 18/19 beyond. Is this information for the public to see? 9-G

9. For FRE130045 alleys are normally not part of the federal aid system. Has Laura Dawson done an eligibility determination on this? 9-H

10. For FRE111337 is this for shoulder stabilization? 9-I

11. Please remember to provide 3 copies of the final FTIP to Caltrans.

12. Please ensure that the comments are addressed in the final FTIP submittal.

#10

SOUTHERN SIERRA PARTNERSHIP

Audubon California · Sierra Business Council · Tejon Ranch Conservancy · The Nature Conservancy · Sequoia Riverlands Trust

American Farmland Trust
Saving the Land that Sustains Us

May 15, 2014

Barbara J. Steck, Deputy Director
Fresno County Council of Governments
2035 Tulare Street, Suite 201
Fresno, CA 93721
bjsteck@fresnocog.org

RE: Draft Program Environmental Impact Report for 2014 Regional Transportation Plan / Sustainable Communities Strategy

Dear Ms. Steck,

I am writing on behalf of the Southern Sierra Partnership (SSP), a coalition of business and conservation groups working to protect land, livelihoods and communities in our region, to comment on the Program Environmental Impact Report (PEIR) for the 2014 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS). SSP's member organizations—Audubon California, Sequoia Riverlands Trust, the Sierra Business Council, Tejon Ranch Conservancy, and The Nature Conservancy—are grateful for the opportunity to comment, as is American Farmland Trust, which shares the concerns described below.

SSP serves a 7-million-acre region stretching from the Southern San Joaquin Valley to the peaks of the Sierra and Tehachapi Ranges, and including much of Fresno County. This area contains habitat crucial to preserving biodiversity in a changing climate,[1] as well as farmland that contributes nearly $38 billion to the economy every year.[2] It is also home to a diverse and

[1] Southern Sierra Partnership. 2010. Framework for Cooperative Conservation and Climate Adaptation for the Southern Sierra Nevada and Tehachapi Mountains. Retrieved from http://www.southernsierrapartnership.org/ssp-framework.html.
[2] Livingston, A. 2013. Paths to Prosperity for the Southern Sierra and Southern San Joaquin Valley: Capitalizing on the Economic Benefits of Land Conservation and Compact Growth. Retrieved from http://www.southernsierrapartnership.org/ssp-economic-study.html.

rapidly growing human population, many of whom come to Fresno County for its rural character and quality of life. But in recent years, the Southern San Joaquin Valley has been characterized by low-density growth and disinvestment in existing communities—a pattern that is converting essential habitat and farmland into subdivisions,[3] worsening widespread poverty[4] and exacerbating some of the worst air quality in the nation.[5] The SCS process, which was intended to reduce per capita greenhouse gas (GHG) emissions through "changed land use patterns and improved transportation,"[6] provides an excellent opportunity for Fresno County to distinguish itself from this trend and build greater economic and environmental resilience. In order to take full advantage of this opportunity, we respectfully request that the Fresno Council of Governments (Fresno COG) do the following:

1) Review the finance plan to ensure that underserved communities get their fair share of project funding;
2) Modify the process used to develop the financially constrained project list in future SCS rounds to include application of approved SCS policy and strategy criteria to the project evaluation and ranking processes;
3) Include the Needs Assessment and Sustainable Planning and Infrastructure grant program as policies in Chapter 6 and as line items in the financial element in Chapter 7; and
4) Establish an ad hoc committee to work with member agencies to identify conservation and mitigation policies for farmland and habitat for the next SCS round.

I. Fresno COG Should Review the Finance Plan to Ensure that Underserved Communities Get Their Fair Share.

As it stands now, it appears that a number of disadvantaged communities are not receiving a fair share of the planned transportation spending for projects that would benefit low-income and minority populations. The Federal Highway Administration requires that MPOs receiving federal funds must prevent the denial of, reduction in or significant delay in the receipt of

10-A

[3] American Farmland Trust. 2013. Saving Farmland, Growing Cities: A Framework for Implementing Effective Farmland Conservation Policies in the San Joaquin Valley. Retrieved from http://www.farmland.org/documents/FINALSJVREPORTPDF1-14-13.pdf. For more on impacts to habitat, see SSP (2010).
[4] Between 2007 and 2011, individuals below poverty in Fresno County averaged 23.4% of the population, compared to 14.3% of the population nationwide. Headwaters Economics. 2012. Economic Profile System—Human Dimensions Toolkit: Socioeconomic Profiles. Downloaded from http://headwaterseconomics.org/tools/eps-hdt and run in Microsoft Excel.
[5] According to the American Lung Association's recently-released State of the Air rankings, the Fresno-Madera metropolitan area suffers from the worst particulate pollution (both short-term and year-round) in the country, and the fourth-worst ozone pollution. American Lung Association. 2014. State of the Air. Retrieved from http://www.stateoftheair. org.
[6] SB 375, § 1(c). California Statutes, 2008.

benefits by these populations.[7] Based on the PEIR analysis, these populations are concentrated in five areas throughout Fresno County: Huron, Mendota, Parlier, Orange Cove and San Joaquin. The first three of these have been identified by community-based organizations as receiving far less than their "fair share" of funding under the current project funding plan. We believe the COG should re-evaluate the funding plan to ensure that transportation project benefits accrue fairly to existing communities throughout the County, with an emphasis on those with high concentrations of minority or low-income populations, as required by the Federal Highway Administration.

10-A (cont.)

II. Fresno COG Should Modify Its Project List Development and Evaluation Process.

Since the project list is the mechanism for implementing approved SCS strategies, those strategies and accompanying RTP policies and actions should be taken into account when evaluating and ranking projects for funding. Fresno COG should develop new evaluation criteria and weighting mechanisms to ensure that projects that support SCS goals, including but not limited to protecting "farmlands, open space, and natural resource areas [that] are critical for the region's environmental and economic health"[8] and "incorporat[ing] environmental justice principles into transportation planning,"[9] are recognized and prioritized for funding.

10-B

III. Fresno COG Should Include the Needs Assessment and Sustainable Planning and Infrastructure Grant Program as Policies in Chapter 6 and as Line Items in the Financial Element in Chapter 7.

SSP is pleased to see the movement on proposals by the Community Based Organizations regarding development of a needs assessment, a grant program to support infrastructure upgrades and other transportation-oriented projects in underserved communities, and a natural and working lands conservation policy to minimize/mitigate for loss of farmland and natural resource lands due to construction of transportation projects. We respectfully request that Fresno COG add development of the needs assessment and grant program as policies in Chapter 6; they could go in Table 6-1C: General Transportation Environmental Justice. We would also request that an accompanying line item be added to the financial element in Chapter 7 recommending development of a specified set of funding sources for this purpose.

10-C

[7] PEIR, p. 3-379.
[8] Draft RTP/SCS p. 4-17.
[9] Draft RTP/SCS p. 4-28.

3

IV. Fresno COG Should Establish an Ad Hoc Committee to Adopt Conservation and Mitigation Policies for Farmland, Rangeland and Other Natural Resources and Work with Member Agencies on Implementation and Inclusion in the Next SCS Round.

Finally, we support the creation of an ad hoc committee to adopt and implement policies to protect important farmland, rangeland and natural resource lands in the County, including but not limited to 1) full mitigation for farmland, habitat and other natural resources, 2) a mitigation hierarchy policy (avoid, minimize, mitigate on-site, then compensate) and 3) a policy stating that where impacts cannot be minimized, compensatory offsets will address the specific conservation functions and values that will be lost. If it is not possible to include finished versions of these policies in the current RTP/SCS, we respectfully request that Fresno COG and the ad hoc committee ensure that they are included in the 2018 RTP/SCS. 10-D

We recognize that Fresno COG does not have land use planning authority,[10] but it has both the authority and responsibility to provide guidance to local jurisdictions and to determine the regional transportation projects it will include in the RTP/SCS, the projects it will fund, and (by virtue of preparing an SCS) the projects that will be eligible for CEQA exemptions and other streamlined permitting requirements.[11] If future generations are to benefit from the natural resources that power Fresno County's economy and support its quality of life, it is essential that Fresno COG use its legitimate authority to ensure that transportation projects it funds, as well as projects that benefit from streamlined permitting requirements due to consistency with the SCS, are required to provide full mitigation.[12]

We look forward to your responses on these points, and appreciate your consideration.

Sincerely,

Adam Livingston

Adam Livingston
Coordinator
Southern Sierra Partnership

[10] Cal. Government Code § 65080.
[11] See, e.g., Cal. Public Resources Code §§ 21155 and 21155.1 (requirements for designation as a "sustainable communities project" exempt from CEQA, including consistency with an SCS that ARB has accepted would meet GHG reduction targets); 21155.2 (process for "sustainable communities environmental assessment" and streamlined CEQA review for certain transit priority projects); and 21159.28 (circumstances under which projects consistent with SCS can avoid CEQA review of GHG emissions and regional transportation network impacts).
[12] This includes but is not limited to mitigation mandated by CEQA (and, for projects that involve action by federal agencies, NEPA).

4



Daniel O'Connell, PhD
San Joaquin Valley Program Manager
American Farmland Trust

5

#11

May 15, 2014

Barbara Steck, Deputy Director
Fresno Council of Governments
2035 Tulare Street Suite 201
Fresno, CA 93721

Submitted via email: bjsteck@fresnocog.org

Dear Deputy Director Steck:

On behalf of the undersigned health and medical organizations, we are writing to provide our input into the Fresno Council of Governments' (COG) draft Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and draft Environmental Impact Report (DEIR). We appreciate the COG staff have solicited and taken health organization input into this plan over the past two years and look forward to working with you as the final plan is developed.

Our organizations are committed to the successful implementation of SB 375 because we believe that land use and transportation planning must be better aligned to support healthier Fresno communities and avoid ongoing health burdens. Three recent reports underscore these challenges and that urgent action is needed to improve and protect the health of Fresno residents. While not the solution on its own, the Fresno COG's SB 375 process is at the heart of each of these reports and is a critical component of a healthier future:

1. **The American Lung Association's *State of the Air 2014*[1]** report released on April 30th found that the metropolitan Fresno area is the most polluted city in the United States for particle pollution, and the fourth most polluted city due to ozone pollution. Reductions in vehicle trips through more efficient, compact land use decisions, coupled with strong investments in healthier transportation options that serve our existing communities' needs first, are critical to improving air quality and lung health in Fresno, where asthma affects over 20 percent of our children. The American Lung Association in California also recently reported that Fresno County residents could avoid 4,600 asthma attacks, nearly 800 lost workdays and over $80 million in health costs

[1] American Lung Association. *State of the Air 2014*. April 2014. www.stateoftheair.org

in 2035 due to traffic pollution if the County grows in a more walkable, sustainable manner compared to business as usual planning.[2]

2. **The California Department of Public Health and the California Conference of Local Health Officers released the annual *County Health Status Profiles*** report on April 7, 2014. Unfortunately, these results show that Fresno death rates for lung cancer, heart disease and stroke, and diabetes are all above the state average, with the death rate due to diabetes ranking as fourth worst in California. Cleaner air choices, and more active, walking, biking and transit-accessible neighborhoods are key to providing residents with opportunities to weave more physical activity into their daily lives to help cut down on such troubling chronic disease impacts.[3]
3. **The United States Global Change Research Program's *National Climate Assessment*[4],** released on May 6, 2014 paints a stark picture of climate change impacts across the country, and specifically calls out severe and wide-ranging health impacts of climate change that have particular relevance to the Fresno area, including increased ozone pollution and allergen production and resulting asthma and respiratory health impacts, as well as increasing drought impacts on Valley fever. Further, the report notes risks to California's agricultural crops and impacts to farming communities. Reductions in transportation emissions through strong SCS plans will lessen climate impacts and reduce the tailpipe ingredients of ozone pollution.

SB 375 and the Sustainable Community Strategy should provide Fresno County residents with a vision for a healthier future with cleaner air, less chronic illness and a more sustainable climate. As noted in the health organization letter submitted to the COG on November 19, 2013, the selection of Scenario B as the foundation for the draft RTP/SCS was disappointing as that choice performed the weakest on key performance measures, including walk, bike and transit options, vehicle miles traveled and long-term greenhouse gas reductions. While disappointed in that vote, we believe that the COG and staff are committed to additional policies and programs to improve community health and we offer the following recommendations to support a healthier future for Fresno County.

1. **The Council of Governments, in coordination with local planning and health departments and other stakeholders, should conduct a needs assessment of community health and healthy neighborhood infrastructure needs of existing Fresno residents. Also, the needs assessment should be followed up with a plan and timeline for addressing the needs identified in the report. While discussion about this needs assessment is occurring and moving through the COG committee process, the commitment to this needs assessment should be clearly stated in the SCS plan.** As discussed at several COG, committee and sub-committee meetings, a critical first step in improving health in our communities is to evaluate where they are falling short in meeting residents' needs. We believe that the SCS plan can best support the health of Fresno County residents if this needs assessment is conducted in the first twelve months after plan adoption. We appreciate that the COG has programmed funding to begin this process and believe that incorporation in the final plan and action to carry out the assessment in the coming year will ensure this remains an ongoing priority during plan implementation.

11-A

[2] American Lung Association in California. *Public Health Crossroads: Fresno County*. March 2014. www.lung.org/california
[3] California Department of Public Health. *County Health Status Profiles*. April 7, 2014. http://www.cdph.ca.gov/programs/ohir/Documents/OHIRProfiles2014.pdf
[4] United States Global Change Research Program. *National Climate Assessment*, (Human Health, Southwest Region Chapters). May 2014. http://nca2014.globalchange.gov/

2. **The RTP/SCS should place top priority on investing resources in making existing communities more sustainable, where needs are greatest pursuant to the results of the needs assessment, and should include a specified minimum funding level for active transportation projects in these neighborhoods. Currently programmed active transportation projects and funding fell well short of the budgeted amounts.** The first priority for the RTP/SCS funding should be to invest in existing communities' transit, road, active transportation, housing and other infrastructure needs rather than funding new growth areas. In order to ensure this happens, the Policy Chapter (Chapter 6) of the RTP/SCS should include clear commitment to create the Sustainable Planning and Infrastructure Program proposed by community organizations and approved through COG advisory committees in May for allocating funding per the results of the needs assessment.[5] The Sustainable Planning and Infrastructure Program process should look at every opportunity to provide more residents, and especially our most disadvantaged communities with the lowest household transportation budgets, with more, and more cost-effective, reliable and safe transportation choices, affordable housing, safe routes to schools and other basic municipal services. We strongly support moving forward with the City of Fresno's Bus Rapid Transit project to revitalize the urban core, but we must also allow for similar high quality mobility strategies to be funded in communities throughout the County, where sidewalks, bike lanes and more basic transit service could produce significant benefits. As with conducting the needs assessment described above, the final plan should include clear policy element language to ensure this program is developed, funded and implemented within the context of this RTP/SCS.

11-B

3. **Support Integration of Clean Transportation Vehicles and Infrastructure In Land Use Planning** In addition to including the needs assessment and Sustainable Planning and Infrastructure Program specifically in the Policy chapter (Chapter 6: Policies: Foundation of the Plan), we recommend that the policy element of the plan clearly support the use of low- and zero-emission vehicles, deployment of zero emission vehicle infrastructure, and development and deployment of zero- and near zero emission freight technologies to reduce diesel particulates and black carbon pollution that harm health, shorten lives and compound our climate challenges. Specifically, language on clean freight should be added to Table 6-1G referenced above, or added into Table 6.6B:

   > Provide special consideration to transportation projects that improve the operational efficiency of goods movement and air quality, *including those that support the development and utilization of near zero and zero emission technologies to better protect local communities and our environment.*

11-C

Thank you for considering our input throughout this process and specific to the draft 2014 RTP/SCS. We look forward to working with the Fresno COG board and staff to develop and implement a final plan that improves health, air quality and our environment, especially in our most disadvantaged communities, while meeting the region's evolving transportation and housing needs.

[5] At present, language in Chapter 7 of the draft plan expresses COG's commitment to work to develop such a program in the future, but this program does not appear among the policies COG will adopt to implement the plan.

Sincerely,

Tim Gibbs
Director of Campaign Initiatives
American Cancer Society Cancer Action Network

Bonnie Holmes-Gen
Senior Director, Policy and Advocacy
American Lung Association in California

Heidi R. Flori, MD, FAAP
President
California Thoracic Society

Praveen Buddiga, MD
Chair, Air Quality Committee
Fresno-Madera Medical Society

Eric Lerner
Climate Director
Health Care Without Harm

Sara Satinsky, MPH, MCRP
Senior Research Associate
Human Impact Partners

Harry Wang, MD,
President, Sacramento Chapter
Physicians for Social Responsibility

Jeremy Cantor, MPH, Program Manager
Sandra Viera, Program Manager
Prevention Institute

Linda Rudolph, MD, MPH
Co-Director, Center for Climate Change & Health
Public Health Institute

Azibuike Akaba
Policy Analyst
Regional Asthma Management & Prevention (RAMP)

Marty Martinez, MPP
Bay Area Policy Manager
Safe Routes to School National Partnership

#12

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.

FIGHTING FOR JUSTICE, CHANGING LIVES

May 15, 2014

Barbara Steck
Deputy Director, Fresno Council of Governments
2035 Tulare Street Suite 201
Fresno, CA 93721
bjsteck@fresnocog.org

RE: Draft 2014 Fresno County Regional Transportation Plan, Sustainable Communities Strategy, and Environmental Impact Report

We thank you for creating the Fresno region's first Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP). The Community Equity Initiative, a program of California Rural Legal Assistance Inc., represents low-income residents of rural, disadvantaged unincorporated communities throughout California. The program seeks to reverse the trends of disinvestment in remote underserved parts of Fresno County and dismantle the existing barriers to participation in public process, with the express acknowledgement that securing rights and equality for rural residents is key to maintaining the long-term health of our state. We have evaluated the draft RTP and EIR for possible impacts on our client communities and for legal compliance. We offer the following comments and conclusions.

Framing our viewpoints

Rural constituencies, who make up the backbone of the state's economy[1], are face to face with the core issues underlying SB 375. Many of our clients work and live near highly toxic agriculture and other dangerous industry due to lack of choice, and often walk and bike out of sheer necessity. Resources are not distributed equitably across rural geographies and, repeatedly, people who live in fringe and island communities are subject to environmental health hazards and lack access to the basics of life such as clean air and water, safe non-toxic employment opportunities, and affordable housing. Lack of choice is compounded by barriers to decision making in rural areas, but Fresno County has the opportunity to include disenfranchised unincorporated populations in decision making for the RTP and EIR through seeking their contribution to and participation in compliance with SB 375 and the long-term health of our economy and natural resources.

It is critical that needs assessments and funding options are provided to remedy existing deficiencies and to support the existing economies of rural and unincorporated areas and to preserve California's diverse rural cultures. Fresno should be alive with robust local economies in our rural areas, jobs/housing balance, affordable transportation and

[1] Fresno County is home to over two million acres of the world's most productive farmland, with agricultural operations covering nearly half of the county's entire land base of 3.84 million acres. Farmers here raise more than 350 different crops, contributing directly more than $6.6 billion to the California economy and supporting 12 percent of all jobs in the Fresno area. (Draft EIR p. 3-31)

2201 Broadway, Suite 815 · Oakland, CA 94612 · Phone: 415-777-2752 · www.crla.org

LSC

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.
FIGHTING FOR JUSTICE, CHANGING LIVES

housing, walkable and bikeable towns, and equality in transit and related services. We offer the following comments to highlight our client community's stake within the COG's work and to ensure that the important investment opportunities available through the billions of transportation and planning dollars via the RTP/SCS are available and accessible to our client community. We applaud the COG's recent interest in pursuing equity in investment planning through recommending three policy proposals on the PAC agenda including the approval of a needs assessment and a grant program.

This RTP/SCS has many strong points, including the most basic goal of meeting the California Air Resources Board's (CARB) greenhouse gas (GHG) emissions reductions targets and significantly reducing vehicle miles traveled (VMT). Compliance with applicable law will require the County to further prioritize investment in existing communities, the COG tends to promote new developments (i.e., sprawl), rather than to adequately preserve farmland and open space and eliminate disinvestment and underinvestment in lower income rural communities with a lack of adequate infrastructure, employment and housing. The COG has a tremendous opportunity to invest in greater access to healthy communities and economic opportunities for residents of all parts of Fresno County including those in remote and unincorporated areas.

Fixing and finishing what we have

The Draft RTP recognizes that maintaining investment consistent with population and service area growth leaves many needs unmet,[2] the COG has selected a development pattern in Scenario B that encourages new development outside of existing communities and infrastructure support systems. Such growth patterns historically have been a cause for disinvestment in existing communities and increased vehicle miles travelled to city centers. Placing our limited resources into new-growth areas despite the continued deterioration of local streets, roads, sidewalks and bike lanes in existing cities and communities widens the housing inequality gap, decreases the citizen sense of ownership and unity of Fresno and increases vehicle miles travelled and levels of GHG emissions. Fresno COG has the authority to take these negative trends into account and redirect infrastructure and transit improvements back into existing communities, renewing Fresno's civic pride and creating a robust transit system to meet the needs of our existing communities. 12-A

The transportation and land use plan in the RTP/SCS should focus growth in communities where people currently reside, and face tremendous need, particulalry the historically neglected West and South Fresno areas. It is in these areas that transit investments would have the greatest impact in access to jobs and services and improved streets and sidewalks would improve bikeability and walkability. Transportation services and other civic infrastructure vary throughout this region. Many of the communities we serve lack access to public transit, safe sidewalks and bike lanes, and even basic public infrastructure such as water and sewer systems. Our patterns of growth and investment will determine whether those deficits get addressed or remain. Growth and investment are

[2] Draft 2014 Regional Transportation Plan 5-40

2201 Broadway, Suite 815 · Oakland, CA 94612 · Phone: 415-777-2752 · www.crla.org

LSC

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.
FIGHTING FOR JUSTICE, CHANGING LIVES

not equitably distributed throughout the region, and our client community is best served by a plan that prioritizes investment to areas that have been disproportionately neglected for several decades, in order to bring their level of infrastructure and services to similar quality as communities and cities in the County that have enjoyed greater historical investment. Equitable land use planning, transportation planning and affordable housing planning are key elements of sustainable and healthy communities.

12-A (cont.)

Addressing key health needs through fair allocation of funds

The California Office of Environmental Health Hazard Assessment released a second draft of the California Environmental Screening Tool (CalEnviroScreen 2.0) that uses advanced GIS information and map communities at greatest vulnerability to impacts of environmental hazard. This can be an essential planning tool. 8 of the 10 most environmentally vulnerable census tracts are in Fresno County, located specifically in the unincorporated Southern and Western regions. Residents of Fresno face the state's fourth highest death rate for diabetes, and a higher-than-average diabetes rate on the whole. Though we acknowledge that these outcomes are compound, these results are alarming and as Fresno COG is aware, equitable land-use planning are at the helm of reversing some of these trends to reduce air pollution and chronic disease burdens on residents' quality of life. These regions, whose vulnerabilities can be observed on the Office of Environmental Health and Hazard Assessment, website are legacy unincorporated communities. We believe that the COG can remedy years of community disinvestment by prioritizing the allocation of scarce transportation funds to serve current residents by making the neighborhoods where they live and work safer and healthier.

12-B

The cities outside of Fresno proper also require sufficient funds to fix potholes, build sidewalks and bike lanes, ensure safe routes to school, upgrade streets and existing commercial areas, develop affordable housing and improve public transit. The Health Impact Assessment (HIA) conducted by Leadership Counsel for Justice and Accountability with technical support from the University of California, Center for Regional Change shows that many cities and towns would not receive their fair share of regional funding, as the chart below illustrates.[3]

[3] This chart from the HIA divides each jurisdiction's budget by the total regional budget. No jurisdiction will receive 100% of its "fair share" because the region's budget also funds agencies like CalTrans. The City of Fresno was not included on this list because in subsequent analyses that allocated transit agency budgets to the jurisdictions, Fresno moved from an underfunded tier to a more moderate tier.

2201 Broadway, Suite 815 · Oakland, CA 94612 · Phone: 415-777-2752 · www.crla.org
LSC

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.
FIGHTING FOR JUSTICE, CHANGING LIVES

Jurisdictions Receiving the Least Proportionate Share of Funding

	% of region's budget	% of region's population	% of "fair share"
Parlier	0.1%	1.6%	4%
Mendota	0.1%	1.2%	7%
Coalinga	0.2%	1.8%	14%
Kerman	0.5%	1.5%	31%
Huron	0.3%	0.7%	36%
Sanger	1.3%	2.6%	49%

Transit and walkability for Lanare, Laton, Riverdale and West Fresno

The preferred scenario however does not improve transit access to services for communities such as Lanare, Laton, Riverdale and West Fresno as measured by access to key destinations by means of transit trips of 45 minutes or less.[4]
The 2014 draft RTP increases the total percentage of transit spending, but it does not plan for change in services currently provided to residents of disadvantaged unincorporated communities and those residing in most of West Fresno. The draft RTP acknowledges that infrequent and short service hours, and multiple transfers make commutes arduous and make public transit the last choice for our client population.[5] FCOG should strive to meet the goals and intent of SB 375 by working with transit providers and maximizing transit dollars to provide improved and more frequent transit service to incentivize the use of public transit. Residents from these communities are forced to rely on personal vehicles for transportation. The draft 2014 RTP should strive to expand transit service through 2035 beyond merely the Fresno-Clovis Metropolitan Area to offer services to all residents of Fresno County. 12-C

Effective use of unbudgeted funds to improve transportation options

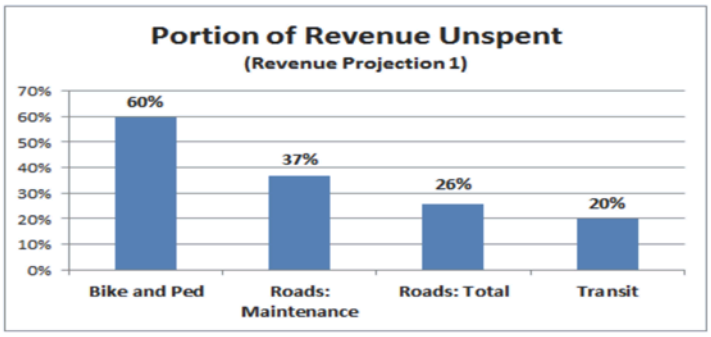
The Draft RTP estimates that $6.5 billion in revenue will be available through 2035, but only $4.5 billion of these funds are allocated to transportation projects. The remaining $2 billion should allocated to promote healthy, equitable and sustainable growth in existing communities in order to equitably distribute resources to our client community (and, as a result, the rest of Fresno County would benefit). This is a particularly fitting use of funds because most of the unbudgeted funds are from programs designed to support active transportation and road maintenance. Investments in pedestrian, bicycle, road maintenance, and streetscapes are not only essential to safety, reducing air pollution, and increasing physical activity, they also attract new private investment and infill into existing 12-D

[4] Health Impact Assessment, 34
[5] Draft 2014 Regional Transportation Plan, 5-26

2201 Broadway, Suite 815 · Oakland, CA 94612 · Phone: 415-777-2752 · www.crla.org
LSC

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.
FIGHTING FOR JUSTICE, CHANGING LIVES

communities, where they can support or enhance property values and quality of life in Fresno's neighborhoods.



A well-designed grant program can be a critical tool in addressing the challenges of infrastructure deficit in existing communities and we commend the Fresno COG in their openness to securing funds for a sustainable planning and infrastructure grant program. This program will assist in SCS implementation by enhancing the ability of existing neighborhoods to serve as walkable, bikeable, transit-oriented or transit-ready areas for people of all incomes and by meeting the needs identified in the needs assessment. Non-infrastructure programs, such as those that support Safe Routes to School, now part of the Active Transportation Program, often have federal funding opportunities for which the COG can apply to bring both infrastructure and non-infrastructure improvements that support healthy communities. Most of our client communities would qualify as disadvantaged, meaning that 100% of the funds could come from federal coffers without any matching requirement from the County.

12-D (cont.)

Adoption of a natural and working-lands conservation policy

The COG's elected scenario relinquishes 17 square miles of farmland to urbanization. This pattern of farmland consumption can destroy the agricultural resources that provide job opportunities to our client communities. The Draft EIR rightly emphasizes that agriculture forms the basis of the region's economy and employs countless rural residents. This inaugural RTP/SCS process offers the Fresno region an opportunity to address its historic patterns of inefficient fringe development. Promoting conservation practice and implementing a mitigation strategy will ensure that the Fresno COG contributes to reinvigorating economies in disadvantaged unincorporated parts of Fresno county, maintaining existing employment opportunities to our client populations, and ensuring that increasing amounts of acreage are not permanently lost to subdivision development.

12-E

2201 Broadway, Suite 815 · Oakland, CA 94612 · Phone: 415-777-2752 · www.crla.org
LSC

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.
FIGHTING FOR JUSTICE, CHANGING LIVES

Deficiencies in the Draft EIR

Mitigation for land conversion and growth-inducing impacts of transportation projects

A fuller analysis of land conversion impacts is critical for the efficacy of the EIR. The impact of transportation projects in the Fresno RTP/SCS cannot be determined without full transparency and analysis of figures such as the linear lengths of widening or new highway construction projects, or how much right-of-way is being acquired to carry out these capacity building projects in the Fiscally Constrained Project List. Both the Bay Area (Plan Bay Area) and SACOG quantified the land conversion impacts from their transportation projects in their plans and these were subject to public review. It is essential that Fresno COG to quantify the lands being converted due to RTP projects so that impacts can be assessed and appropriate mitigation can be suggested and executed. 12-F1

EIR Impact 3.3.3 briefly but inadequately considers effects of transportation infrastructure changes: "owners of agricultural lands nearest to urbanized areas may feel pressure to develop as transportation improvements within proximity of these lands are improved or implemented." (pp. 3-42 to 3-43). The growth-inducing impacts of transportation projects in the RTP/SCS also require program-level mitigation and an analysis of their potential long-term impacts on attaining GHG reduction targets.

Failure to assess impact on low income communities and communities of color

The Draft EIR concludes that there will be "no significant impacts on minority or low-income communities." Several of the scenarios' deficiencies threaten to impact low income communities and communities of color disproportionately, for example, low income communities stand to be harmed by the reliance on reduced VMT from existing communities to counteract increased VMTs generated by new towns. The Draft EIR that the capacity increasing projects model "no significant impact" on surrounding communities. The Draft EIR's finding of no significant impacts improperly precludes the COG from developing mitigation measures for this disproportionate impact. Communities located near highways and transit corridors historically are vulnerable to the health hazards of capacity increasing projects and the needs of these communities, particularly unincorporated areas, require close scrutiny. 12-F2

Conclusion

The following observations address the impact of the draft RTP on low income, disadvantaged, predominantly minority client communities:

1. The recently contemplated grant program and needs assessment have the potential to significantly improve involvement from traditionally underserved communities and yield to more beneficial land use and transportation projects in Fresno County's disadvantaged unincorporated communities.

2201 Broadway, Suite 815 · Oakland, CA 94612 · Phone: 415-777-2752 · www.crla.org
LSC

CALIFORNIA RURAL LEGAL ASSISTANCE, INC.
FIGHTING FOR JUSTICE, CHANGING LIVES

2. Existing communities, especially low-income, disadvantaged unincorporated communities, are long overdue for prioritized investment in their health and viability by way of transportation and land use funding.
3. A critical element in the preservation of green landscapes for long-term GHG reduction and maintaining employment for our client population involves the implementation of a farmland conservation policy.

We thank you for the opportunity to comment and we are confident that the COG will address the long-term health of our most vulnerable populations and work to assess needs and fund projects to improve the quality of life for our client community. The future must include thriving rural and unincorporated areas that enjoy sustainable transit, housing options located near healthy non-toxic jobs, and the air quality and quality of life that is supported by SB 375 compliance.

Sincerely,

Janaki Jagannath
Community Worker
California Rural Legal Assistance, Inc. - Community Equity Initiative
2115 Kern Street, Suite 370
Fresno, CA 93721
(559) 233-6710 ext. 313

cc:
Marisa Christensen Lundin, CRLA, Registered Legal Services Attorney
Dan Torres, CRLA, Deputy Director
Ilene J. Jacobs, CRLA, Director of Litigation, Advocacy and Training

2201 Broadway, Suite 815 · Oakland, CA 94612 · Phone: 415-777-2752 · www.crla.org
LSC

#13

May 15, 2014
Hand Delivered

Barbara J. Steck, Deputy Director
Fresno County Council of Governments
2035 Tulare Street, Suite 201
Fresno, CA 93721

RE: Comments to Fresno RTP and Draft PEIR

Dear Ms. Steck:

Thank you for this opportunity to comment on Fresno COG's Regional Transportation Plan (RTP) and first ever Sustainable Communities Strategy (SCS). We write to you as a coalition of health, equity, conservation and sustainable business organizations that has been involved in this RTP / SCS development process over the last three years.

Barbara J. Steck,
May 15, 2014
Page 2

As laid out in SB 375, an SCS offers the opportunity to create a vision to improve public health, economic opportunity, and sustainability in communities throughout a region. The RTP, in turn, can allocate investments to make this vision a reality. We commend this plan's strengths. It anticipates more diverse housing choices in line with market trends, and we estimate that it will significantly boost spending on public transportation. We appreciate that development of this plan involved more community members, from more geographically diverse regions of the county, than have ever participated in RTP development based on our experience. We would especially like to recognize that the Fresno Council of Governments (FCOG or COG) has taken an important step toward achieving state-wide, regional and local goals through its recommendation of three policy proposals designed to improve sustainable development and investment throughout Fresno County.

The plan must go further, though, to put our region on the path to sustainable, healthy, and equitable growth. It must prioritize investment in existing communities that further public health, distribute all available funding equitably, better preserve working lands and open space, and plan for and invest in greater access to healthy communities and economic opportunities for all residents of Fresno. In this correspondence and an attached appendix we suggest policies and actions to further these objectives. In summary, we recommend that this plan:

- Incorporate a policy allocating RTP investments to existing cities and communities first — 13-A
- Allocate all resources at the COG's disposal, especially to increase investments in active transportation and transit, most of all in disadvantaged communities with unmet needs — 13-B
- Analyze how investments in active transportation and transit compare to the 2011 plan, ensuring that this plan represents a significant improvement — 13-B
- Undertake a needs assessment to develop and implement a plan to address unmet transportation and related infrastructure needs throughout the County — 13-C
- Develop a robust grants program to ensure adequate funding to address unmet transportation and related infrastructure needs throughout the County — 13-D
- Ensure land use and transportation policy changes drive short- and long-term GHG declines
- Develop and implement anti-displacement measures
- Adopt a Natural and Working Lands Conservation Policy that promotes avoidance of impacts; fully analyze and mitigate impacts of RTP transportation projects; and clarify the mitigation needed for a land use project to be deemed consistent with the SCS — 13-E
- Strengthen the RTP as a planning tool by increasing its internal consistency and adding a plan to track its progress
- Address deficiencies in the PEIR analysis and mitigations

I. Focus Growth and Investment so that All Existing Communities May Thrive

Invest in Existing Communities First

While it has many strengths, this plan unfortunately simply does not do enough to support growth and investment in existing communities. The Draft RTP itself recognizes that maintaining service consistent with population and service area growth leaves many needs unmet,[1] yet the development pattern in Scenario B continues business-as-usual trends to expand beyond existing communities. Furthermore, the SCS anticipates growth in new communities while a number of cities and towns would grow at about half the rate projected in their general plan.

The RTP and SCS should instead set out a transportation and land use plan that focuses growth in communities where people live today. To ensure that limited and valuable dollars are directed towards improving existing neighborhoods and communities, particularly those that stand to benefit most from investments in infrastructure and transit services , FCOG should adopt a policy in Table 6-1B (General Transportation Multimodal System - Future Travel Demands & Financial Resources) that allocates RTP investments in existing cities and communities first. 13-F

Grow and Invest in Ways that Address Key Health Needs

The American Lung Association's State of the Air 2014 report released on April 30, 2014 now shows that Fresno is the most polluted city in the United States by fine particle pollution, and the fourth most polluted by ozone. Many communities lack access to basic services and critical opportunities. Many of the same communities suffer disproportionately the effects of air pollution and environmental degradation. Recently, the California Office of Environmental Health Hazard Assessment release a second draft of the California Environmental Screening Tool (CalEnviroScreen 2.0), that identifies communities at greatest risk from the impacts of environmental degradation. Most of California's top 20% of disadvantaged communities reside in the San Joaquin Valley; 8 of the 10 most vulnerable census tracts are in Fresno County.

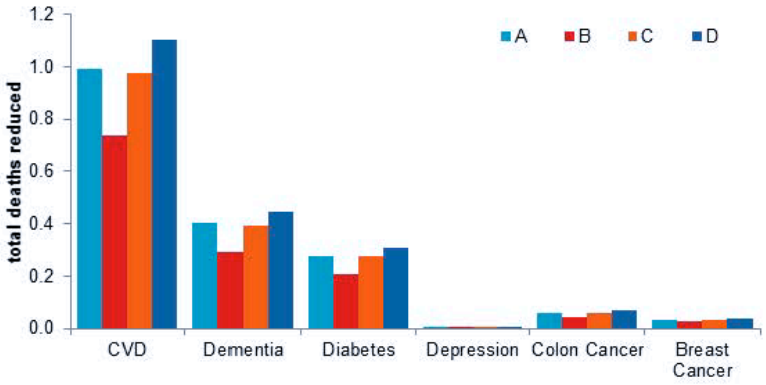
Fresno residents also face much higher rates of obesity than the state as a whole and have the state's fourth highest death rate for diabetes. These conditions are affected by the design of our neighborhoods and can be improved through healthier transportation options. As Fresno grows, we must reduce air pollution and chronic disease burdens on residents' quality of life.

Unfortunately, this plan does not go far enough to encourage healthier land use and transportation network. The proportions of travel by transit and active transportation barely increase.[2] The Board selected the scenario that does the least to improve public health. Many of the undersigned organizations participated in a Health Impact Assessment (HIA) that assessed different scenarios' impacts on health in select communities. (We have attached the HIA to this 13-G

[1] Draft 2014 Regional Transportation Plan 5-40
[2] Transit shifts from 1.48% in 2008 to just 1.56% in 2040, bike-ped shifts from 6.47% in 2008 to 6.65% in 2040, per Table 3-86 and 3-87 in the PEIR.

correspondence.) Their impact on the total incidence of physical activity-related diseases in Fresno County is illustrated below. Scenario B did the least to reduce physical activity related diseases. The draft 2014 RTP can and must strive for more health gains to build a healthy and sustainable region.

Reduction in Mortality from Active Travel By RTP Scenario



13-G (cont.)

Invest Transportation Dollars Equitably To Help Existing Neighborhoods and Communities Become More Walkable and Transit Friendly

Every city and community needs investments to fix potholes, build sidewalks and bike lanes, develop safe routes to school programs, upgrade streetscapes to encourage private investment, develop affordable housing and improve public transit. Yet some cities and towns would receive investments that are far lower than their share of the population.[3]

[3] This chart divides each jurisdiction's budget by the total regional budget. No jurisdiction will receive 100% of its "fair share" because the region's budget also funds agencies like CalTrans. The CIty of Fresno was not included on this list because in subsequent analyses that allocated transit agency budgets to the jurisdictions, Fresno moved from an underfunded tier to a more moderate tier.

Barbara J. Steck,
May 15, 2014
Page 5

Jurisdictions Receiving the Least Proportionate Share of Funding

	% of region's budget	% of region's population	% of "fair share"
Parlier	0.1%	1.6%	4%
Mendota	0.1%	1.2%	7%
Coalinga	0.2%	1.8%	14%
Kerman	0.5%	1.5%	31%
Huron	0.3%	0.7%	36%
Sanger	1.3%	2.6%	49%

13-H

This allocation is troubling, as it does not prioritize investment in those communities, both incorporated and unincorporated, that have been historically underrepresented in planning and investment decisions. The PEIR analysis finds that low-income and minority populations are concentrated in five areas throughout Fresno County – Huron, Mendota, Parlier, Orange Cove and San Joaquin – several of which would receive the most disproportionate investment in this plan. In fact, while existing neighborhoods demonstrate significant need and could reap significant benefits from strategic investment for current and future residents, the RTP allocates growth and investment beyond and outside of existing communities.

HIA transit findings: a failure to improve transit service communities beyond metro Fresno

While the 2014 draft RTP increases the total percentage of transit spending, it does not appear to improve service to residents of the majority of West Fresno nor of disadvantaged unincorporated communities such as Lanare, Laton, Riverdale.[4] As the draft RTP states, poor service frequency, short service hours, and multiple transfers create long travel times making public transit a distant last choice for travel.[5] FCOG should strive to meet the goals and intent of SB 375. Currently, residents from these communities are forced to rely on personal vehicles to get to where they need to go, thereby increasing vehicle miles traveled. The draft 2014 RTP should expand transit service through 2035 beyond just the Fresno-Clovis Metropolitan Area by working with transit providers and maximizing transit dollars to provide improved and more frequent transit service.

13-I

Prevent Disproportionate Impacts on Disadvantaged Communities

The Fresno COG restates the accepted tenet of environmental justice at the outset of the environmental justice report of the RTP pledging: "fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income in respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[6] However, the RTP and SCS fall short of setting measures to achieve environmental justice within our

13-J

[4] The HIA measured this as access to key destinations by means of transit trips of 45 minutes or less.
[5] Draft 2014 Regional Transportation Plan 5-26
[6] Appendix I, p 1

county. In fact, as presented, this RTP may further disproportionate impacts on low income communities and communities of color.

Failure to consider public input on scenario selection

Fresno COG accepted scenario B as the preferred scenario although that scenario was not the preferred scenario identified by the public during the outreach meetings. The concept of "meaningful participation" is diminished if the decision-making body fails to offer due consideration to the voice of the public. The COG should ensure robust involvement of under-represented communities in RTP implementation efforts and capitalize on such involvement in this RTP and subsequent RTPs to improve the health and well-being of disadvantaged communities. 13-K

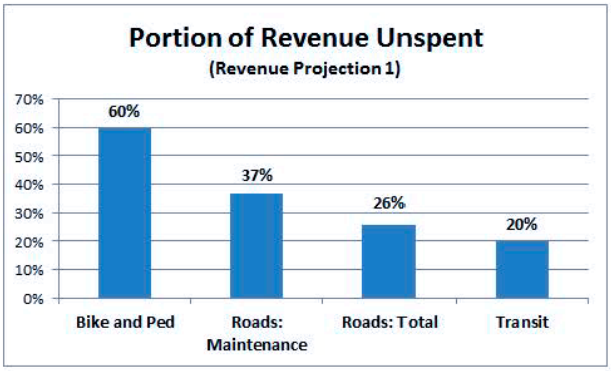
Failure to assess Burden of Environmental Impacts on Disadvantaged Communities

Eight of the 10 most vulnerable census tracts in California – based on demographic and environmental metrics - are in Fresno County. Yet the RTP fails to analyze the extent to which the preferred scenario may further impact and disadvantage those vulnerable communities compared to other alternatives. The RTP should assess environmental impacts on those eight communities and other vulnerable communities in the region, include a policy to proactively protect the most vulnerable communities from further degradation, and take steps to address the inequitable distribution outlined above. 13-L

Leverage Available Funding for Needed Transit and Active Transportation Improvements

The region *does* have the resources to help all neighborhoods be healthy and prosperous. However, Fresno is not tapping all the resources at its disposal nor allocating available funds to best move the region toward greater health and sustainability. This RTP estimates that $6.5 billion in revenue will be available through 2035, but it would spend just over $4.5 billion. That's two billion dollars, or 30%, of projected revenues that could be allocated to promoting healthy, equitable and sustainable growth in existing communities.

No information is provided on how spending for transit and active transportation compare to 2011. Comparing the budget to planned expenditures, the least-subscribed programs are those for active transportation and road maintenance. These investments are not only essential to safety, reducing air pollution, and increasing physical activity; they also attract new private investment and infill into existing communities, where they can support or enhance property values and quality of life in Fresno's neighborhoods. The RTP fails to fund much needed investments in active transportation and transit, instead continuing to spend the greatest portion of funds on capacity-increasing road and highway projects. 13-M



Address the Plan's Shortfalls by Full Implementation of Key Coalition Proposals

The COG staff and Policy Advisory Committee recommendation to incorporate coalition proposals is to be commended. We are very grateful for the positive dialogue that allowed their consideration. Their full implementation can help the region begin to address the shortfalls identified above.

<u>The Health and Infrastructure Needs Assessment</u>

While the COG, the Coalition and others have identified key areas of need for investment throughout the County there is no comprehensive analysis of needs and critical opportunities for investment. To make its linkage to this plan clear, we believe a policy regarding the development of the needs assessment shall be added to Table 6-1C of the Action Element. Furthermore, we continue to ask that this policy not focus solely on transportation infrastructure deficiencies but the full range of health inequities and infrastructure gaps. We are hopeful that this broader scope can be funded in the same ways that the COG funded other important non-transportation studies and planning efforts, such as the San Joaquin Valley Higher Density Residential Housing Market Study.

13-N

<u>The Proposed Sustainable Planning and Infrastructure Program</u>

A well-designed grant program can be a critical tool in addressing those challenges. The proposed Sustainable Planning and Infrastructure Program that creates a grant program is a very positive step. We encourage the Board to approve this proposal and then ask staff to incorporate its general intent into this RTP, where it can address several critical weaknesses of this plan. The Proposed Sustainable Planning and Infrastructure Program would support SCS implementation by enhancing the ability of existing neighborhoods to serve as walkable, bikeable, transit-oriented or transit-ready areas for people of all incomes and by meeting the needs identified in the needs assessment. Non-infrastructure programs, such as those that support Safe Routes to School should also be considered. Models to learn from exist throughout the state, such as the

13-O

San Joaquin Council of Government's Smart Growth Incentive Program. Because this proposal will take advantage of the excess revenue, particularly in active transportation, and correct the underfunding of disadvantaged cities and towns, we believe it should be incorporated into this RTP as follows:

- Include a policy regarding the development of the grant program.
- In appropriate sections of the Action Element, describe how the grant program can support the development of multimodal neighborhoods and increase transit ridership and the rates of walking and biking.
- Include in the financial element and estimate of revenue allocated to this grant program.

II. Clarify and Increase the Plan's Short and Long Term GHG Emission Reductions

The goal of SB 375 is to reduce greenhouse gas pollution while concomitantly improving public health and access to opportunities by making it easier for people to drive less. We applaud the COG for creating a plan that would meet its SB 375 emission reduction targets. However, we are concerned that the plan could be stronger in general, fails to maintain GHG reduction trends over time, and fails to distribute benefits equitably.

Scenario B had the lowest GHG reductions of all scenarios considered, and in many ways, this plan is still very close to business as usual. In fact, the business-as-usual planning scenario would reduce GHGs by 8.4% in 2040, while Scenario B would only achieve a reduction of 10.97%. In other words, 77% of the reductions would come from business as usual, not the policies implemented by this plan. SB 375 requires the RTP to be "action-oriented," meeting targets via their development pattern, transportation network, and other transportation measures and policies. 13-P

The plan does not include an analysis of how anticipated reductions will come about. It is not clear how the plan will reduce vehicle miles traveled and GHG by approximately 11% when it has fairly modest results on several other important indicators. For instance, if this plan is not significantly increasing the amount of trips for which people walk, bike and utilize public transit, (see Footnote 2 above) then how will it effectively decrease vehicle travel?

The intent of SB 375 is for the region to make it easier and more convenient for people to drive less via land use and transportation policies. External trends such as an economic downturn or gas price increases may or may not materialize. The fact that the majority of reductions comes from business as usual suggests that the reductions may stem from such external (non-policy) causes. If these circumstances change (e.g., if the economy picks up again), the region may suddenly find itself headed in the wrong direction with respect to harmful GHG pollutants.

This plan should pay close attention to how GHG reductions intersect with equity issues. If external forces -- a lack of jobs, unaffordable gas -- are the cause of our reduced driving, does that means that people are not *choosing* to drive less, but instead *having no choice but to* drive

less, e.g., not able to afford to drive? Second, are adequate measures being taken to provide lower-income group with access to transit and active transportation options? Since lower-income populations use those travel modes at higher rates than higher-income groups, it is important that displacement not push lower-income people out of transit-oriented and walkable neighborhoods.

Based on evidence from other COGs, we also have concerns that the entire Valley may have experienced a significant short-term decline, perhaps caused by the recession or by gas prices. Greenhouse gases and other key indicators might have then flattened out or even resume a long-term upward trend. Executive Order (S-03-05) calls upon the state to reduce GHG to 80% below 1990 levels by 2050. To ensure that the region is on the right path, we ask that this RTP:

- Provide a clear explanation and a table expressing how individual policies and other, external factors (e.g., economic changes, gas prices, interregional trips) achieve these levels of GHG reductions, including descriptions of all model inputs and methodologies;
- Provide figures for today's values (2012) so that we can understand how 2020, 2035, and 2040 compare not only to 2005 but also to today;
- Demonstrate that the majority of reductions come from policy improvements, rather than economic shifts, rising gas prices, or other factors outside of the region's control;
- Analyze travel pattern changes by income and geographic location to ensure that reduced VMT does not reflect a reduced ability to reach key destinations;
- Ensure anti-displacement measures to (1) ensure that existing residents of communities that will benefit from improvements in pedestrian and transit infrastructure, and (2) to ensure that existing residents are not forced to move due to increased housing costs, thus increasing their commute distances and/or making transit or active travel infeasible;
- Ensure the region is on a solidly emissions downward trajectory, if necessary improving the land use scenario and transportation plan to reach this goal.

13-P (cont.)

III. <u>Preserve our agricultural economy, farmland, open space, and Natural Resources</u>

The Draft RTP/SCS projects consumption of nearly 17 square miles of farmland and rangeland—an area more than three times the size of Sanger.[7] This pattern of growth simultaneously consumes the agricultural resources that power our economy while undermining efforts to revitalize existing neighborhoods, reinvigorate business corridors, and reinvest in downtown development. Loss of farmland as anticipated in the RTP threatens tens, if not hundreds, of millions of dollars per year in economic activity and puts agriculture-related jobs at risk.[8]

13-Q

[7] Draft EIR p. 3-35

[8] For value of average harvested acre of almonds ($5,692), see Fresno County Department of Agriculture. 2012. Fresno County Annual Crop & Livestock Report. Retrieved from

This inaugural RTP/SCS process offers the Fresno region an opportunity to acknowledge and address its historic patterns of inefficient development. The Fresno COG has the authority and responsibility to determine which regional transportation projects it will include in the RTP/SCS, which projects it will fund, and which projects will be eligible for CEQA exemptions and other streamlined permitting requirements.[9] By promoting conservation practice and policy, Fresno COG will not only be complying with state law but also facilitating a uniform conservation platform across the county that will assist business development into the future.

The COG should adopt a Natural and Working Lands Conservation Policy identical to or similar to the language provided for the PAC meeting on May 9, 2014. The COG should add a "Land Conservation" section to Chapter 6: Policies, fully analyze the land conversion impacts of RTP-funded *transportation* projects, and require mitigation for unavoidable impacts. Fresno COG should also make explicit in the RTP that for a *land use* project to be deemed consistent with the SCS, it must adhere to the mitigation hierarchy: avoidance of impacts is prioritized, followed by minimization, followed by mitigation. Finally, we request that the COG recommend local jurisdictions to fully mitigate land use projects for farmland, habitat and other natural resources, on land with conservation values and functions equal or greater to impacted lands.

13-Q (cont.)

IV. Strengthen the RTP as a Planning Document

Better Integrate and Ensure Consistency Among the Plan's elements

The goal of SB 375 is to provoke conversations about the integration of land use and transportation planning. To do this, the SCS and RTP need to be internally consistent. The various elements of the plan seem to stand in isolation from one another. For example, it is unclear how the policy element relates to the project list, or how the project list meets the needs in the transportation element.

Track Progress

The COG should track SCS performance indicators over each four-year interval between RTPs and report on them. Progress – or the lack of it – will provide valuable information to the Policy Board. With this information, and with clear-cut indicators clearly in mind, the COG Policy Board will know what inputs in the form of revised policies, scoring criteria, and transportation needs should be entered into the next RTP to create lists of projects that achieve more desirable outcomes.

---

http://www.co.fresno.ca.us/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=55145&libID=55154. For multiplier of 3.50 to account for agricultural value chain in Fresno County, see Draft EIR p. 3-31

The RTP should include a commitment to develop a committee with broad community and agency representation to help plan for the next SCS round by analyzing progress made on existing policies and recommending new policies, as appropriate. The committee should include affordable housing advocates, transportation advocates, neighborhood and community groups, environmental advocates, home builder representatives, broad-based business organizations, landowners, commercial property interests, and homeowner associations, as called for in the public participation planning section of SB 375 (section 65080(b)(2)(E)(i)).

V. Address Deficiencies in the Draft PEIR

The PEIR Should Include a Full Analysis of Land Conversion Impacts and Provide Programmatic Mitigation for the Growth-Inducing Impacts of Transportation Projects.

Impacts of construction

We respectfully request a fuller analysis of land conversion impacts in the EIR. The true impacts of transportation projects in the Fresno RTP/SCS cannot be determined without analysis in the EIR, yet the Fiscally Constrained Project List does not even include linear lengths (distances) of widening or new highway construction projects, or how much right-of-way is being used or acquired. Both the Bay Area (Plan Bay Area) and SACOG quantified the land conversion impacts from their transportation projects. It is essential that Fresno COG quantify the lands being converted due to RTP projects, so that impacts can be assessed and appropriate mitigation occur. 13-R

Impacts of growth inducing transportation projects

In the EIR, Impact 3.3.3 cursorily considers possible impacts from improved transportation infrastructure: "owners of agricultural lands nearest to urbanized areas may feel pressure to develop as transportation improvements within proximity of these lands are improved or implemented" (pg 3-42 to 3-43). These growth-inducing impacts of transportation projects in the RTP/SCS also require programmatic-level mitigation.

Failure to properly mitigate for impacts on water resources

The COG continues to defer all review and mitigation to the local jurisdictions or implementing agencies. The COG does have authority over transportation projects, as stated above. This document is not an adequate program-level analysis of the impact of the RTP/SCS transportation projects on Hydrology and water resources. The COG should do a program-level analysis of the cumulative impacts on hydrology and water resources of all projects on the RTP Project List, both with respect to the projects themselves and with respect to the growth such projects can and will induce. Furthermore, mitigation measures can and should require that local jurisdictions provide a mitigation plan before receiving funding for projects identified in the RTP for impacts on water resources that result both directly from project construction and growth induced by a project.

Failure to properly mitigate for increased GHG emissions caused by vehicle travel

The COG acknowledges in Impact 3.6.1 that "Increased Transportation GHG Emissions May Contribute to Climate Change." Yet the COG's primary mitigation strategies would occur "through Implementation of the Regional Blueprint and the RTP SCS." How can the COG pursue both implementation of the Regional Blueprint and the RTP SCS, when in some cases the RTP SCS does not follow Blueprint principles? Implementation of the RTP SCS is the very cause of the GHG impact that needs mitigated. The mitigation measures here should focus on strategies that go beyond the reductions in the SCS / RTP. One strategy that can be highlighted would be the development of a grant program that funds local jurisdictions' efforts to plan and build enhancements to existing neighborhoods to make non-auto travel more convenient.

Failure to assess impact on low income communities and communities of color

The Draft Environmental Impact Report concludes that there will be "no significant impacts on minority or low-income communities." As noted above several of the Scenario's deficiencies threaten to impact low income communities and communities of color disproportionately. These include the Scenario's plan for and investment in new communities that will further strain resources that could be available for low income communities, the concomitant reliance on reduced VMT from existing communities to counteract increased VMTs generated by new towns and the failure of the RTP to invest sufficient funds in active transportation and transit projects throughout the County. The Draft PEIR's finding of no significant impacts forecloses the COG from developing mitigation measures for this disproportionate impact.

13-R (cont.)

VI. Conclusion and Further Suggested Policy and Action Changes

We would like to thank the Fresno COG again for accepting these comments for its work to create the region's first SCS. This SCS begins the course to a healthier more sustainable region and we look forward to working with the COG in the coming weeks, months and years to make this RTP and SCS stronger and subsequent plans stronger so that they can effectively and equitably fulfill their role to frame and foment a strong, healthy and sustainable Fresno.

In addition to, and in complement of, the recommendations we've outlined above, we have attached Appendix 1: Recommended Changes to the Action and Policy Element. We welcome your questions and feedback on the recommendations identified therein as well as those recommendations outlined in this correspondence.

Respectfully submitted,

/s/
Dan O'Connell
AMERICAN FARMLAND TRUST

/s/
Cesar Campos
CCEJN Coordinator

/s/
Marty Martinez
Northern California Policy
Manager

SAFE ROUTES TO SCHOOL
NATIONAL PARTNERSHIP

Craig Breon

/s/
Rey León
Executive Director
Valley LEAP

/s/ Gavin Feiger
SIERRA NEVADA ALLIANCE

Director of Programs
Fresno Metro Ministry

/s/
Heather Dumais
San Joaquin Valley Advocacy Coordinator
AMERICAN LUNG ASSN IN CALIFORNIA

Veronica Garibay
Co-Director
LEADERSHIP COUNSEL FOR JUSTICE
AND ACCOUNTABILITY

Wendy L. Alfsen
Executive Director
CALIFORNIA WALKS

Rev. Sophia DeWitt
Interim Co-Director
Fresno Interdenominational Refugee
Ministries (FIRM)

/s/
Sabina Gonzales
Regional Director
Communities for a New California (CNC)

/s/
Carey Knecht, Associate Director
Climate Plan

Appendix 1: Recommended Changes to the Action and Policy Element

We offer the following suggested Changes and Additions to the Action and Policy Element – Edits and additions to policies are underlined. Deletions are in strikethrough.

The Draft RTP identifies the following proposed action to support the region in ensuring that air quality standards are met: Fresno COG, Fresno County and its fifteen cities will encourage land use patterns which reduce dependency on the automobile, reduce energy consumption, and support the use of transit and other alternative modes.[10] This proposed action begs for further strengthening. FCOG should implement actions that result in real land use changes that help meet air quality standards by encouraging, allocating resources, and providing funding to its member jurisdictions via the Sustainable Planning and Infrastructure Program to update neighborhood and community plans that will result in making existing communities more compact, affordable places to live with greater access to jobs and services and increased use of transit and active transportation. FCOG will allocate a portion of flexible spending dollars and future cap and trade dollars to support this grant program. 13-S

Table 6-1A

Ensure that public and private transportation providers, community residents, community based organizations, and other interested parties have an opportunity to provide input into the transportation planning process.

Develop and fund bicycle and pedestrian facilities as well as needed community plans to make active transportation a viable alternatives to single-occupancy vehicle use.

Decisions on improvements to the transportation system shall take into account the effective use of all modes and facilities, and any possible impacts low income communities.

Encourage and support the development of methods to expand and enhance transit services and to increase the use of such services, particularly in low income and environmental justice communities.

Support and fund the coordination or consolidation ~~(where appropriate)~~ of transit and paratransit services to provide more effective, efficient and accessible transportation services.

- The use of where appropriate can potentially exclude low income areas that presently do not have service.

Allocate funding to encourage local jurisdictions to provide incentives to promote public transit, walking and bicycling.

[10] Draft 2014 Regional Transportation Plan 5-125

Table 6-1B

~~Procure~~ Actively seek and apply for, and leverage federal, state and local transportation funding to the maximum degree possible, in order to develop a regional transportation network which serves the residents of the region in the most economical, effective and efficient manner possible.

Table 6-1C

Seek to ensure the full and fair participation by all potentially affected communities in the transportation decision making process by ensuring involvement of and transparent exchange of information with of community residents and organizations with knowledge of diverse communities throughout Fresno

Seek and apply for funding for projects that improve bicycle and pedestrian facilities and improve access to public transit in low income communities.

Conduct a needs assessment that catalogues current health conditions, quality and access to transit service, sidewalks, bike lanes, safe and quality housing, basic infrastructure (safe drinking water, wastewater service, storm water drainage), and opportunity for infill development.

13-S (cont.)

Table 6-1E

Goal: A regional transportation and land use network consistent with the intent of SB 375 (Senate Bill 375 also known as the Sustainable Communities Protection Act of 2008)

Objective: Development of a regional transportation and land use network which is environmentally sensitive and helps reduce greenhouse gas emissions wherever possible

Polices under Goal: A regional transportation network consistent with the intent of SB 375 (Senate Bill 375 also known as the Sustainable Communities Protection Act of 2008) must be consistent with the SCS.

Avoid or fully mitigate all significant impacts of new transportation facilities on low income communities, environmentally sensitive areas and natural resources, ~~if feasible.~~

Allocate housing and employment growth in existing cities and communities to ensure a fully planned and funded for transportation network.

Develop a the Sustainable Planning and Infrastructure Program to support existing cities and communities to engage in smart growth planning efforts and fund the infrastructure necessary to create walkable, transit ready places to live.

Projects on behalf of or in disadvantaged communities will receive additional ranking points in competitive funding processes to ensure that small cities and communities will receive funding to help meet the goals of SB 375.

Allocate housing and employment growth to existing built cities and communities to ensure that they all contribute towards GHG reduction targets.

Table 6-3A

Provide a transit system that meets the public transportation needs of existing cities and communities, particularly in low income areas, within the service area.

Provide, improve and fully fund transit services that serve low income, elderly, and disabled communities, and include those users in the project review period.

Ensure that transit and active transportation needs are met in existing cities and communities before investments in new growth areas occur by providing funding to address disparities in need.

Table 6-3F

Policy: Provide incentives to reduce dependency on single vehicle occupancy travel without compromising travel mobility. This policy is unclear and does not realistically achieve the goal of supporting transportation investments that work toward accomplishing air quality goals, optimize utilization of land and encourage a stable economic base.

13-S (cont.)

Additional points will be given to existing cities and communities that propose projects that promote infill development, bicycle and pedestrian improvements, and increased access to public transit during the project scoring process.

Maximize funding for bicycle and pedestrian projects, especially for those in low income areas.

Table 6-5A

Include and fund bicycle and pedestrian transportation planning as integral parts for the Fresno COG's transportation planning program.

Encourage, provide funding to and assist member agencies to develop new or update existing bicycle and pedestrian transportation plans which are integrated with the regional bikeways system and which provide for bicycle use and walking as alternatives to the automobile for short trips.

Encourage, provide funding to, and assist member agencies to include bicycling and pedestrian sections in all transportation-related documents including, but not limited to, circulation elements of general, community, and specific plans.

Encourage, and provide funding to, member agencies to plan and provide for bicycle and pedestrian-friendly development, including infill development to enhance existing communities and increase the number of compact, mixed-use, and mixed-income neighborhoods, as well as encourage bicycle travel and walking in new development plans and projects.

Encourage and fund member agencies in identifying crucial origins and destinations where bicycling and walking are particularly likely, such as transit stops, schools, and neighborhood-serving retail, and planning and building a dense network of safe and attractive streets for walking and biking.

Encourage and fund member agencies in developing educational programs that increase walking and biking, such as Safe Routes to Schools programs.

Table 6-5B

Encourage and fund member agencies and Caltrans, to the extent feasible and practical, to maintain the regional bikeways system free of deterrents to bicycling such as debris, gravel, glass, leaves, and any other extraneous materials.

Encourage and fund member agencies to adopt policies or design standards to include accommodations for bicycle and pedestrian travel on all new construction, reconstruction, or capacity increasing projects on major roadways where reasonably feasible. Such accommodations may be made by a separate bike and pedestrian path, sidewalks, bicycle lanes, or a shared roadway. A shared roadway would include a wide outside lane or a paved shoulder.

Encourage and fund member agencies and Caltrans to develop, stripe and sign bikeways consistent with state design standards in order to develop a visually consistent, clear, simple and recognizable bikeways system with clearly defined travel areas and boundaries.

Encourage member agencies and Caltrans to give top priority to bikeway and pedestrian projects that serve disadvantaged communities where none exist, and second-highest priority where they will link existing separated sections of the system and that will serve the highest concentration of bicylsits and pedestrians and destination of highest demand.

- Without this addition, this policy has a potential negative impact to low income communities that do not have the systems in place to support bicyclist and pedestrian safety to begin with.

13-S (cont.)

Table 6- 5D

Maximize bicycle and pedestrian spending and prioritize those projects in low income communities.

Identify available and potential new bicycle and pedestrian funding sources and their requirements and assist small cities and communities in applying to these sources.

#14

American Farmland Trust
Saving the Land that Sustains Us

California Office
Box 73856 Davis, CA 95617
530-231-5259

May 15, 2014

Barbara J. Steck, Deputy Director
Fresno County Council of Governments
2035 Tulare Street, Suite 201
Fresno, CA 93721

RE: Draft Environmental Impact Report for 2014 Regional Transportation Plan / Sustainable Communities Strategy

Dear Ms. Steck,

The San Joaquin Valley of California is the most productive agricultural region in the world. Six of our nation's top agricultural producing counties are located in the region, and among these, Fresno County ranks #1 in producing more than $6 billion worth of agricultural goods annually. In addition to this production output, the processing, distribution and marketing of these goods has been estimated at an additional three and a half times as much economic revenue.

Given the Valley's unique economic productivity, natural resource wealth and agricultural capacity, American Farmland Trust (AFT) is vested in the long-term viability of the region's producers and conservation of its farmland and resources. In 2013, we released our most recent research and policy analysis with *Saving Farmland, Growing Cities: A Framework for Implementing Effective Farmland Conservation Policies in the San Joaquin Valley*. In the report, we proposed six key objectives linked together within a framework to realize farmland conservation in the region:

- Avoid development of high quality farmland
- Minimize farmland loss with more efficient development
- Ensure stability of the urban edge
- Minimize rural residential development
- Mitigate the loss of farmland with conservation easements
- Encourage a favorable agricultural business climate

For each of these objectives, AFT went on to identify specific, measureable outcomes by which to evaluate success.

In a rural agricultural region like the San Joaquin Valley, farmland conservation will be an important component in realizing SB 375's land use and transportation objectives as most of the land around the county's cities are high quality farmland. Foremost among policies to achieve greenhouse gas emission reductions is to develop more efficiently by using less land to accommodate higher residential densities on a per acre basis. American Farmland Trust recognizes the SB 375's Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) process as a current and ongoing opportunity to improve public transportation investments to achieve long term economic development, improved community health outcomes and better land use policies to conserve prime farmland and natural resources. During this inaugural RTP/SCS, AFT has been actively engaged in the Fresno process since its inception and recognizes the exemplary inclusiveness exhibited by Fresno COG in its public engagement, stakeholder outreach and accommodation of public recommendations.

Related to the EIR, AFT is commenting on and/or requesting improvements in three specific areas: (1) land conversion, (2) the implementation of a farmland mitigation programs, and (3) the creation of Fresno COG ad hoc committee focused on the preservation of agricultural, natural and working lands.

I. Land Conversion

Fresno County is the most productive food producing county in the United States. Yet, a long-term threat to this productivity is the conversion of farmland to residential and commercial development.

American Farmland Trust's recent report, *Saving Farmland, Growing Cities*, found that between 1990 and 2008, more than 161,000 acres of land were converted to urban uses in the San Joaquin Valley. Of that, nearly 100,000 acres were highly productive farmland. Of the total acreage converted, 78% was agricultural land and 61% was high quality farmland. Put another way, three quarters of all the land urbanized in the Valley was agricultural land and of that, nearly four out of five acres were the most fertile soils with the most secure water supplies. In Fresno County, where 53% of the total area is high quality farmland, 63% of all land developed was on prime farmland.

14-A

While SB 375 requires Metropolitan Planning Organizations like Fresno COG to address the conversion of farmland outside of spheres of influence, AFT appreciates that a broader accounting for all farmland conversion was done under the county's RTP/SCS. In the Draft RTP/SCS EIR, Fresno County is poised to realize project impacts to 5,857 acres of farmland designated as prime, of statewide importance or unique, with most of this loss occurring within existing spheres of influence. An important distinction of this loss, and related to mitigation for the conversion of this farmland, is between conversion due directly to transportation projects versus the growth inducing impacts from these infrastructure projects.

II. Farmland Mitigation

Mitigation for the conversion of farmland is an integral component of a conservation policy platform that will need to be developed and implemented to achieve the goals of SB 375 in a primarily rural region like the San Joaquin Valley. While statewide MPO's with significantly urbanized centers can incentivize greenhouse gas reductions through emphasizing infrastructure investments like light rail systems, in a rural region without densities to make such investments fiscally feasible public policy that firms land use policy around the conservation of agricultural and natural resource is the next logical approach to realizing emission reductions. 14-B1

Both the Bay Area and SACOG quantified the land conversion impacts from transportation projects, and Fresno COG should make similar assessments for both direct conversion of agricultural and natural resources and the growth-inducing impacts due to transportation projects. Once assessments are made, transportation projects identified and funded in the RTP/SCS, as well as projects that benefit from streamlined CEQA requirements due to consistency with the SCS, must be required to provide full mitigation, as mandated by CEQA and NEPA. While recognizing that Fresno COG does not have land use planning authority, it has the authority and responsibility to determine which regional transportation projects it will include in the RTP/SCS, which projects it will fund, and (by virtue of preparing an SCS), which projects will be eligible for CEQA exemptions and other streamlined permitting requirements. Fresno COG can and should exercise this authority by explicitly stating in the SCS that projects consistent with the SCS will adhere to the mitigation hierarchy (avoid, minimize, then compensate), and that where impacts cannot be minimized, offsets – such as conservation easements acquisitions - will address the conservation values that are impacted. 14-B2

As previously submitted, there are examples of how the Fresno COG could prioritize this policy approach. Recently, in Tulare County, a large-scale CalTrans project has been projected to consume farmland and mitigation for this conversion is being discussed. The project—known as Tulare Expressway—would realign and widen 9.3 miles of State Route 65 between Lindsay and Exeter resulting in the loss of approximately 320 acres of farmland. The cost for the project—without mitigating the farmland impact—is estimated at $94.5 million to $97 million. Based on previous litigation agreements in Kern County as well as one farm appraisal near the project site, an estimate for acquiring conservation easement on 320 acres of local farmland was between $1.28 million and $2.56 million, or 1.5%-3% added to the estimated cost of the project. Each Caltrans District has funds specifically set aside for the mitigation of farmland loss, and these funds can be matched by the Department of Conservation. 14-B3

In addition, the necessary infrastructures are in place to realize farmland and natural resources conservation practices in Fresno County. Regional land trusts, like Sequoia Riverlands Trust and the Central Valley Farmland Trust, actively partner with funders, government agencies, scientists, farmers and developers to provide mitigation services for the conversion of farmland. The funds generated by mitigation programs – like those created for RTP/SCS transportation projects - can be utilized by land trusts and related organizations to purchase development rights and place conservation easements on prime farmland and other impacted resources. 14-B4

III. Resource Preservation Ad Hoc Committee

A comprehensive land use policy for Fresno County – one that ensures successful SB 375 outcomes - needs to be the product of a broad stakeholder dialogue and agreement.

For this reason, American Farmland Trust is supportive of the Fresno COGs Policy Board's recent vote to form an ad hoc committee to deliberate and find agreement how preservation of agricultural, natural and working lands will be realized in public policy. The Draft EIR of the Fresno RTP/SCS also acknowledges the formation of "sub-committee to analyze, discuss and provide recommendations on possible policies aimed at preservation of agricultural, natural and working lands." Specifically, this committee is charged with "formulation of policy and program language to:

- Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects.
- Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities."

These steps, particularly taken with the Fresno COG's member agencies and other stakeholder groups, offer promising opportunities for progress toward achieving land use policies to protect farmland and other resources.

14-C

In conclusion, recent research prepared for the California Energy Commission by UC Davis has found that farmland conservation practice has even greater outcomes for greenhouse gas emissions than previously recognized. In *Vulnerability and Adaptation to Climate Change in California Agriculture* (2012), Dr. Jackson and other scientists found, "that greenhouse gas emissions from urban land can be more than 70 times greater per unit area than cropland, and that policies that preserve agricultural land will also help achieve the mitigation targets set by California's recent suite of climate policies, namely AB 32 and SB 375." Farmland conservation policy, in a rural region, is a pathway to implement and achieve SB 375's goals.

American Farmland Trust urges you to seize this opportunity not only to comply with SB 375, but to improve the quality of life, conserve the natural and agricultural resources, and enhance the economy in Fresno County by improved conservation practice and land use policies for the RTP/SCS.

Sincerely,

Daniel O'Connell
San Joaquin Valley Program Manager
American Farmland Trust

U.S.Department of Transportation
Federal Highway Administration

California Division

650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
(916) 498-5001

May 19, 2014

In Reply Refer To:
HDA-CA

Mr. Tony Boren
Executive Director
Fresno Council of Governments
2035 Tulare Street, Suite 201
Fresno, CA 93721

SUBJECT: FCOG Draft 2015 FTIP 2014 RTP SCS Comments

Dear Mr. Boren:

Thank you for submitting the Fresno Council of Governments (FCOG) Draft 2014-2040 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) and Draft FY 2015-2018 Federal Transportation Improvement Program (FTIP) to the Federal Highway Administration (FHWA) for comment.

Overall, we find that FCOG has done a good job in developing Draft 2014-2040 RTP/SCS and Draft FY 2015-2018 FTIP documents that substantially meets the requirements of 23 CFR 450 and the *Final Rule on Statewide and Metropolitan Transportation Planning* as published in the Federal Register on February 14, 2007.

At this time, we have no detailed comments on the content of the draft documents. We do encourage FCOG to closely evaluate all comments that may be received from the public and other federal and state agencies on the documents as you move forward towards adoption of the Final FY 2015-2018 FTIP and 2014-2040 RTP/SCS. In order to assure timely approval of the Air Quality Conformity Determination when the California Department of Transportation (Caltrans) submits the new Federal Statewide Transportation Improvement Plan (FSTIP) later this year, we strongly encourage FCOG to perform final quality checks of the RTP/SCS, FTIP and the Conformity Analysis documents well in advance of adoption by your Metropolitan Planning Organization (MPO) board. 15

FHWA will continue to monitor FCOG's FTIP and RTP/SCS development process as FCOG proceeds towards adoption of the Final documents. We may provide additional comments on your Draft and Final submitted FY 2015-2018 FTIP and 2014-2040 RTP/SCS as well as informally via email, phone consultations and our participation in various FCOG transportation planning activities.

In Fall 2014, FHWA would like to meet with FCOG staff in your Fresno office to discuss this cycle of RTP/SCS development and any technical assistance you might require from FHWA to improve the update process for the next RTP/SCS cycle. This meeting will be arranged and coordinated by FCOG's FHWA MPO liaison Scott Carson.

Again, thank you for submitting the Draft 2014-2040 RTP/SCS and FY 2015-18 FTIP in a timely fashion and in concurrence and cooperation with Caltrans and the other San Joaquin Valley MPOs in developing new RTP/SCS and FTIP documents to meet federal and state update requirements. If you have any questions, please do not hesitate to contact Scott Carson at 916-498-5029 or scott.carson@dot.gov.

Sincerely,

For: Vincent P. Mammano.
Division Administrator

cc: (email)
Ray Sukys, FTA
Eric Eidlin, FTA
Karina O'Connor, EPA
Jacqueline Hodaly, Caltrans
Jennifer Bryan-Sanchez, Caltrans
Tony Boren, FCOG
Barbara Steck, FCOG
Jack Lord, FHWA
Joseph Vaughn, FHWA
Scott Carson, FHWA

cc: (other)
FCOG RTP/FTIP Binders

scarson/

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

May 16, 2014

Barbara Steck
Fresno County Council of Governments
2035 Tulare St., Suite 201
Fresno, CA 93721

Subject: 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)
SCH#: 2012081070

Dear Barbara Steck:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on May 15, 2014, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

16

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

RECEIVED
MAY 19 2014
BY:
FRESNO COG

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2012081070
Project Title 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)
Lead Agency Fresno County Council of Governments

Type EIR Draft EIR

Description Note: Review per lead

The 2014 RTP/SCS identifies the Fresno region's transportation needs and issues, sets forth an action plan of projects and programs to address the needs consistent with a set of goals and policies, and documents the financial resources to implement the plan. The 2014 RTP/SCS also includes a Sustainable Communities Strategy (SCS) prepared to address requirements set forth in CA Senate Bill 375, which requires that Fresno COG prepare an SCS that provides an integrated land use and transportation plan for meeting greenhouse gas emission reduction targets set forth by the CARB.

Lead Agency Contact

Name Barbara Steck
Agency Fresno County Council of Governments
Phone (209) 233-4148 **Fax**
email
Address 2035 Tulare St., Suite 201
City Fresno **State** CA **Zip** 93721

Project Location

County Tulare
City
Region
Lat / Long
Cross Streets
Parcel No. Countywide
Township **Range** **Section** **Base**

Proximity to:

Highways SR 99 & others
Airports FYI & Others
Railways UP, BNSF, Others
Waterways San Joaquin & Others
Schools Various
Land Use

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Recreation/Parks; Drainage/Absorption; Economics/Jobs; Flood Plain/Flooding; Fiscal Impacts; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Schools/Universities; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects; Aesthetic/Visual

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 4; Office of Historic Preservation; Department of Parks and Recreation; Central Valley Flood Protection Board; Office of Emergency Services, California; California Highway Patrol; Caltrans, District 6; Caltrans, Division of Transportation Planning; Air Resources Board; Air Resources Board, Transportation Projects; Regional Water Quality Control Bd., Region 5 (Fresno); Native American Heritage Commission; Public Utilities Commission; San Joaquin River Conservancy

Date Received 03/21/2014 **Start of Review** 03/21/2014 **End of Review** 05/15/2014

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD

3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-2380 FAX: (916) 574-0682

Clear
05/15/14
PE

RECEIVED
APR 21 2014
STATE CLEARING HOUSE

April 18, 2014

Ms. Barbara Steck
Fresno County Council of Governments
2035 Tulare St., Suite 201
Fresno, California 93721

Subject: CEQA Comments: 2014 Regional Transportation Plan/Sustainable Communities Strategy, Draft EIR, SCH No. 2012081070

Location: Fresno County

Dear Ms. Steck:

Central Valley Flood Protection Board (Board) staff has reviewed the subject document and provides the following comments:

The proposed transportation plan may result in projects located adjacent to or within the following regulated streams under Board jurisdiction pursuant to Title 23, California Code of Regulations (23 CCR), Section 112:

Stream	County - Limits
Alta Main Canal	Fresno
Byrd Slough	Fresno
Cameron Slough	Fresno - within the Kings River designated floodway
Cole Slough	Fresno
Cresent Bypass	Kings and Fresno - North Fork Kings River
Dog Creek	Fresno
Dry Creek	Fresno
Five Mile Slough	Fresno
Fresno Slough	Kings and Fresno
Globe Slough	Fresno
James Bypass	Kings and Fresno
Lower San Joaquin River Flood Control Project	Fresno, Madera, and Merced
Sand Creek	Tulare and Fresno
San Joaquin River	Friant Dam to West End of Sherman Island

The Board enforces its regulations for the construction, maintenance, and protection of adopted plans of flood control that protect public lands from floods. Adopted plans of flood control include federal-State facilities of the State Plan of Flood Control, regulated streams, and designated floodways. The geographic extent of Board jurisdiction includes the Central Valley, and all tributaries and distributaries of the Sacramento and San Joaquin Rivers, and the Tulare and Buena Vista basins (23 CCR, Section 2).

A Board permit is required prior to working in the Board's jurisdiction for the following:

- Placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction,

encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee (23 CCR Section 6);

- Existing structures that predate permitting, or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (23 CCR Section 6);

- Vegetation plantings require submission of detailed design drawings; identification of vegetation type; plant and tree names (both common and scientific); quantities of each type of plant and tree; spacing and irrigation method; a vegetative management plan for maintenance to prevent the interference with flood control operations, levee maintenance, inspection, and flood fight procedures (23 CCR Section 131).

Other local, federal and State agency permits may be required and are the responsibility of the applicant to obtain.

Board permit application forms and our complete 23 CCR regulations can be found on our website at http://www.cvfpb.ca.gov/. Maps of the Board's jurisdiction including all tributaries and distributaries of the Sacramento and San Joaquin Rivers, and Board designated floodways are also available on a Department of Water Resources website at http://gis.bam.water.ca.gov/bam/.

Additional Considerations Related to Potential Impacts of Vegetation and Hydraulics

Accumulation and establishment of woody vegetation that is not managed may have negative impacts on channel capacity and may increase the potential for levee over-topping or other failure. When vegetation develops and becomes habitat for wildlife, maintenance to initial baseline conditions typically becomes more difficult as the removal of vegetative growth may be subject to federal and State resource agency requirements for on-site mitigation. The proposed project should include mitigation measures to avoid decreasing floodway channel capacity.

Adverse hydraulic impacts of proposed encroachments could impede flood flows, reroute flood flows, and/or increase sediment accumulation. The proposed project should include mitigation measures for channel and levee improvements and maintenance to prevent and/or reduce hydraulic impacts. If possible off-site mitigation outside of the Board's jurisdiction should be used when mitigating for vegetation removed at the project location.

If you have any questions please contact James Herota at (916) 574-0651, or via email at james.herota@water.ca.gov.

Sincerely,

for Len Marino, P.E.
Chief Engineer

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, California 95814

PUBLIC HEARING COMMENTS - COG BOARD MEETING 04-24-14 AND SELMA PUBLIC HEARING 05-07-14		#17	
COMMENTER	COMMENT	RESPONSE	
COG BOARD MEETING 04-24-14			
Heather Dumais, American Lung Association	The Plan can do more.	There is always room to improve. There are lessons learned during the 2014 RTP/SCS process, and they could become valuable experience for the 2018 RTP/SCS.	17-A
	Need a support plan that will go forward starting now.	References to programs will be included in Policy element and RTP.	17-B
	Need a clear statement of grant programs early.	References to programs will be included in Policy element and RTP.	17-C
Jaime Moncayo, Leadership Counsel for Justice and Accountability	COG Board needs to adopt the three policies recommended by the Community Based Coalition:	References to programs will be included in Policy element and RTP.	17-D
	1. Grants program		
	2. Needs assessment		
	3. Conservation policy		
	We need a commitment from the Board that isn't there now.	Scheduled for Policy Board consideration on May 22, 2014	17-E
Stephenie Frederick, League of Women Voters	These are draft comments only. There will be formal written comments to come.		
	The LWV feel that the RTP could be more useful if:		
	The components of the RTP are integrated with each other, e.g. how policy is related to the project list.	This was received in the "Final Commentary on the 2014 RTP" letter dated 4/24/14 from the League and has been responded to as part of that letter.	17-F
	The 10 performance factors should be calculated every few years and then a report prepared.	As a requirement of MAP 21, a performance measurement system will be implemented and incorporated in the 2018 RTP that can track the process of the plan. A rule making process for establishing such performance measures and performance targets is taking place at the national level. The key for such performance measures is the availability of data. Performance measure established for the MAP 21 requirement will have data available and collected by responsible agencies. That way, such data could be compared over time, and thus the effectiveness of the RTP/SCS could be assessed. Vehicle miles travelled is a good potential performance measure. Unfortunately, the performance indicators established during the 2014 RTP/SCS process are mostly modeled number, and currently we do not know sources that collect such data over time. Due to the requirement of the MAP 21, there will be changes in the performance measures in the 2018 RTP/SCS.	17-G
	Need a more open and clarified scoring criteria for the 2014 project list.	To make the 2014 RTP project list more accessible, Fresno COG staff agrees that the scoring criteria for each mode should be included with the project list. It will be added to Appendix C.	17-H
	Need a policy element foundation with two sets of tools: (1) all the performance indicators be evaluated and (2) the three policy principles of the Community Based Organizations used.	for (1), please refer to cell D 18; for (2) all three policy proposal will be reflected in the policy element in a way that's consistent with the Board action and will not be considered significant changes to the RTP/SCS document	17-I
	LWV have nothing but kudos for the work COG has done.	Thank you.	17-J
Craig Breon, representing himself	The process abandons the authority of the COG Board.	Comment noted.	17-K
Cesar Campos, Central California Environmental Justice Network	Need grants for action.	We are working on SCS implementatioin program that would include such grants.	17-L
	EIR discusses the growing depletion of groundwater, but need metric of how much it is dividing communities.	Reference Response 5E.	17-M
	Need a discussion of regional projects that hurt low income communities.	Included in Environmental Justice chapter of RTP.	17-N

Page 1 of 2

PUBLIC HEARING COMMENTS - COG BOARD MEETING 04-24-14 AND SELMA PUBLIC HEARING 05-07-14		#17	
COMMENTER	COMMENT	RESPONSE	
	Urge COG Board members to hold public meetings in their jurisdiction and CCEJN would love to co-host.	Comment noted.	17-O
Mike Wells, Coalition for Clean Air	Need programs for disadvantaged communities.	References to programs will be included in Policy element and RTP.	17-P
Sarah Sharpe, Fresno Metro Ministry	Need to get people more informed and aware.	This comment was made in reference to the upcoming SCS Workshop Fresno Metro Ministries hosted on May 5, 2014. Fresno COG presented the RTP/SCS information at the workshop. FMM has made it a goal to help engage more members of the community in understanding and giving feedback on transportation issues such as the SCS.	17-Q
	The targets were too easy to hit.	The targets are not easy to hit. Without City of Fresno and other jurisdiction's latest general updates and much more investment in transit and active transporation, Fresno COG would not have been able to reach the targets. City of Fresno went through hundreds of workshop for the general plan update; hundred of people testified at the City Council meeting to support the general plan update. There are still forces who doubt the feasibility of the plan and try to go back to status quo. Implementation will be the key.	17-R
	The Community Based Organization policies should be integrated into the SCS, but they are not.	Needs assessment appears in 2014-15 OWP; Program appreas in Chapter 7 of RTP.	17-S
Christine Barker, representing herself	EIR states that roadway expansion will not impact low income and minority families, but it will.	Comment noted.	17-T
Gavin Feiger, Sierra Nevada Alliance	Sierra Nevada Alliance will submit more detailed comments on the SCS and EIR later.		
	The vast amount of comments from public meetings are not incorporated into the SCS.	All of the comments from public workshops and online surveys were given to each committee who voted on the SCS Scenarios during open, public meetings which included local agency planners, city managers and elected officials. These three groups of committee members are responsible for incorporating land use principals into their General Plans which are reflected in Scenario B. Much of the SCS process was influenced by comments made throughout the process. Scenarios A, C and D were all essentially build by the public or community organizations in response to public comment. The comments themselves are included in Appendix J of the RTP Appendices.	17-U
SELMA PUBLIC HEARING 05-07-14			
Veronica Garibay, Leadship Counsel for Justice and Accountability	The three policies should be incorporated into the SCS.	References to programs will be included in Policy element and RTP.	17-V
	The SCS needs to be stronger.	This is an ambitious and achievable plan for Fresno County.	17-W
	Cap and trade funding should be used in transit priority areas, although there aren't many in the valley.	Transit Priority Area(TPAs) is defined in SB743. Transit Priority Project(TPP) is defined by SB375, which covers the work of 2014 RTP/SCS. Although as stated in the SCS, there are corridors in Fresno County that meet the location criteria of TPP, the strict land use and environmental criteria for TPP makes it extremely hard for projects in the Fresno area to qualify.	17-X
Jeff Roberts, Granville Homes	I support Scenario B.	Comment noted.	17-Y

Page 2 of 2

SECTION 3.0 CHANGES, ADDITIONS, AND CORRECTIONS TO THE DRAFT PEIR

The following changes, additions, and corrections to the Draft PEIR are recommended. Such changes, additions, and corrections have identified to address written or staff comments received on the Draft PEIR.

- ✓ **Executive Summary, Page 1-42,** Table 1-1, Impact 3.15.3, Delete the following mitigation measure:

  - Recently, the Governor declared an emergency drought declaration for the State. Long-term water supply documents anticipate that drought (including severe single-year drought) are regular occurrences within the State. Because the 2014 RTP and SCS do not propose or approve any development of any water demand projects, the Governor's drought declaration does not indicate that there is a significant water supply impact associated with the RTP and SCS.

- ✓ **Chapter 2, Page 2-13,** add the following text to the end of the 1st bullet as a new paragraph:

  In addition, Scenario D was not fully analyzed for a collection of reasons. First, and as noted above, the scenario was developed <u>after</u> the public process of determining and analyzing Scenario's A, B and C – and did not go through the proper vetting process the other scenarios went through (which fully included the participation of the group that later developed Scenario D – who also heavily influenced scenario's A and C, as well). Second, the scenario did not include approved developments within Fresno County, such as Friant Ranch and Millerton – removing such developments from the map, would usurp local land use authority. In addition to not including such developments, the scenario placed much larger amounts of development in areas that historically had not received such levels of development interest, in areas that lack sufficient infrastructure, and in areas that are significantly further from existing transportation connections and utility services. All of these reasons resulted in a scenario that is considered inconsistent with the adopted general plans of many of the cities, as well as the general plan of the County of Fresno.

  Finally, SB 375 states that the preferred scenario must meet the reduction targets, while also being ambitious and achievable. Overall, Scenario D may have been ambitious, but the scenario was not considered achievable or feasible due to the aforementioned issues.

- ✓ **Chapter 2, Page 2-18,** 6th bullet, replace text with the following:

  - *Seek to ensure fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS implementation programs.*

- ✓ **Chapter 2, Page 2-18,** 9th bullet, replace text with the following:

  - *Under the direction of the policy Board, identify and coordinate a strategy and methodology to assist member agencies in avoiding or fully mitigating all significant impacts of new transportation facilities on environmentally sensitive areas and natural resources by identifying potential policies and actions to minimize the loss of farmland associated with the construction of transportation facilities.*

- ✓ **Chapter 2, Page 2-74,** Replace Figure 2-11, Regional Airports with an updated figure updating label on Selma Aerodrome to correct notation of General Aviation, Privately Owned.

- ✓ **Chapter 3, Section 3.3, Agricultural Resources, Page 3-37,** place the following paragraphs at the end of the page:

  The linear length in lane miles associated with new or expanded transportation improvements is 615. All project alternatives (except the No Project) have the same set of improvement projects. As a result, there are no differences in terms of impacts among the alternatives studied. The linear lane miles associated with the No Project alternative is 968. For purposes of the analysis, it is not possible to accurately reflect the amount of agricultural land that would be impacted by new or expanding transportation improvement projects. There are a number of key factors that must be considered in order to make such a calculation including, but not limited to the following:

  - *Amount of Right-of-way (ROW already acquired by the affected local agency or Caltrans*
  - *Amount of ROW impacting agricultural operations vs. vacant of any use*
  - *How wide the expanded or new facility will be*
  - *Whether traveler safety is an issue that would require wider lanes, shoulders or median treatments*
  - *The need for truck acceleration and deceleration lanes*
  - *Extent of intersection improvements*
  - *Bike lane requirements, lane type and width*
  - *Pedestrian and streetscape improvements*
  - *Provision for parking and type of parking*
  - *Need for bus turnouts*
  - *Staging area requirements*
  - *Location of utility easements and relocation*
  - *Road alignment*
  - *The need for roundabouts now required along Caltrans facilities where warranted – require more ROW*
  - *The need for passing lanes*
  - *The need for continuous left turn lanes*
  - *Other turn lanes*
  - *The extent of drainage facilities and culverts*

- *Bridge requirements and footprint*
- *Overcrossing and undercrossing requirements and footprint*
- *Other considerations*

While other MPOs may have estimated the impact of new facilities on agricultural operations, the estimates are rough considering the above. The exact extent of agricultural land impact by type of farmland can only be known once design plans and environmental review of each individual transportation improvement project is complete. It is not possible at the regional scale of the Fresno COG 2014 RTP and SCS PEIR. As such, mitigation measures to be carried out by those agencies responsible for implementing RTP and SCS transportation improvement projects are included in the Draft PEIR and will reduce the severity of potential significant impacts if they are carried out in accordance with the measures noted. The extent to which the measures will be effective can only be determined as environmental documents are prepared for individual improvement projects.

✓ **Chapter 3, Section 3.4, Air Quality, Page 3-92,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

✓ **Chapter 3, Section 3.4, Air Quality, Page 3-112,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "i*mplementing*".

✓ **Chapter 3, Section 3.6, Climate Change, Page 3-177,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

✓ **Chapter 3, Section 3.6, Climate Change, Page 3-177,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

✓ **Chapter 3, Section 3.11, Hydrology, Page 3-263,** Environmental Setting, Hydrology, 2nd bullet titled "Surface Waters", 2nd paragraph, 2nd sentence, change the words "Sierra Nevada's" to "*Sierra Nevada*."

✓ **Chapter 3, Section 3.11, Hydrology, Page 3-266,** Environmental Setting, Hydrology, 1st bullet titled "Groundwater Resources", add the following sentence following the 4th sentence: *However, only the flow-through volume is renewable.*

✓ **Chapter 3, Section 3.11, Hydrology, Page 3-268,** Environmental Setting, Hydrology, 1st paragraph, add the following words in the 1st sentence following the words "has produced": "*serious overdraft*." In addition, add the following sentence following the 1st sentence: *The California Water Plan Update 2013 identifies the Tulare Lake Basin, which the majority of Fresno County is in, as being in a critical condition of overdraft.*

- ✓ **Chapter 3, Section 3.11, Hydrology, Page 3-269,** Environmental Impacts, Mitigation Measures, and Significance After Mitigation, 1st paragraph, revise the 4th sentence to read: *Construction of the proposed projects and future land use development could cause water quality impacts, because individual improvement projects and future developments would increase the area of paved surface.*

- ✓ **Chapter 3, Section 3.11, Hydrology, Page 3-276,** Impact 3.11.4, add the following narrative after the 2nd paragraph:

The proposed transportation plan may result in projects located adjacent to or within the following regulated streams under Board jurisdiction pursuant to Title 23, California Code of Regulations (23 CCR), Section 112:

Stream	*County - Limits*
Alta Main Canal	*Fresno*
Byrd Slough	*Fresno*
Cameron Slough	*Fresno – within the Kings River designated floodway*
Cole Slough	*Fresno*
Cresent Bypass	*Kings and Fresno – North Fork Kings River*
Dog Creek	*Fresno*
Dry Creek	*Fresno*
Five Mile Slough	*Fresno*
Fresno Slough	*Kings and Fresno*
Globe Slough	*Fresno*
James Bypass	*Kings and Fresno*
Lower San Joaquin River Flood Control Project	*Fresno, Madera, and Merced*
Sand Creek	*Tulare and Fresno*
San Joaquin River	*Friant Dam to West End of Sherman Island*

The Board enforces its regulations for the construction, maintenance, and protection of adopted plans of flood control that protect public lands from floods. Adopted plans of flood control include federal-State facilities of the State Plan of Flood Control, regulated streams, and designated floodways.

The geographic extent of Board jurisdiction includes the Central Valley, and all tributaries and distributaries of the Sacramento and San Joaquin Rivers, and the Tulare and Buena Vista basins (23 CCR, Section 2).

A Board permit is required prior to working in the Board's jurisdiction for the following:

- *Placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction,*

encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee (23 CCR Section 6);

- *Existing structures that predate permitting, or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (23 CCR Section 6);*
- *Vegetation plantings require submission of detailed design drawings; identification of vegetation type; plant and tree names (both common and scientific); quantities of each type of plant and tree; spacing and irrigation method; a vegetative management plan for maintenance to prevent the interference with flood control operations, levee maintenance, inspection, and flood fight procedures (23 CCR Section 131).*

Other local, federal and State agency permits may be required and are the responsibility of the applicant to obtain.

Board permit application forms and complete 23 CCR regulations can be found on the following website at http://www/cvfpb.ca.gov/. Maps of the Board's jurisdiction including all tributaries and distributaries of the Sacramento and San Joaquin Rivers, and Board designated floodways are also available on a Department of Water Resources website at http://gis.bam.wate.ca.gov/bam/.

<u>Additional Considerations Related to Potential Impacts of Vegetation and Hydraulics</u>

Accumulation and establishment of woody vegetation that is not managed may have negative impacts on channel capacity and may increase the potential for levee over-topping or other failure. When vegetation develops and becomes habitat for wildlife, maintenance to initial baseline conditions typically becomes more difficult as the removal of vegetative growth may be subject to federal and State resource agency requirements for on-site mitigation. The proposed project should include mitigation measure to avoid decreasing floodway channel capacity.

Adverse hydraulic impacts of proposed encroachment could impede flood flows, reroute flood flows, and/or increase sediment accumulation. The proposed project should include mitigation measures for channel and levee improvements and maintenance to prevent and/or reduce hydraulic impacts. If possible off-site mitigation outside of the Boards' jurisdiction should be used when mitigating for vegetation removed at the project location.

✓ **Chapter 3, Section 3.12, Land Use and Planning, Page 3-305,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

✓ **Chapter 3, Section 3.12, Land Use and Planning, Page 3-307,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.12, Land Use and Planning, Page 3-308,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.12, Land Use and Planning, Page 3-309,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.13, Noise, Page 3-327,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.13, Noise, Page 3-327,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.13, Noise, Page 3-332,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.13, Noise, Page 3-334,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.13, Noise, Page 3-336,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.15, Public Utilities, Other Utilities & Services Systems, Page 3-368,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 3, Section 3.15, Public Utilities, Other Utilities & Services Systems, Page 3-371,** Table 1-1, Impact 3.15.3, Delete the following mitigation measure:

  - Recently, the Governor declared an emergency drought declaration for the State. Long-term water supply documents anticipate that drought (including severe single-year drought) are regular occurrences within the State. Because the 2014 RTP and SCS do not propose or approve any development of any water demand projects, the Governor's drought declaration does not indicate that there is a significant water supply impact associated with the RTP and SCS.

- ✓ **Chapter 3, Section 3.15, Public Utilities, Other Utilities & Services Systems, Page 3-372,** under the subsection titled "Mitigation Measures", 1st paragraph, 1st sentence, change the word "implantation" to "*implementing*".

- ✓ **Chapter 4, Section 4.2, Table 4-1,** remove the column reflecting Scenario D.

- ✓ **Chapter 4, Section 4.3, Project Alternatives, Page 4-11,** place the following paragraph after the 1st paragraph under the heading Agricultural Resources:

The linear length in lane miles associated with new or expanded transportation improvements is 615. All project alternatives (except the No Project) have the same set of improvement projects. The linear lane miles associated with the No Project alternative is 968. For purposes of the analysis, it is not possible to accurately reflect the amount of agricultural land that would be impacted by new or expanding transportation improvement projects.

EXHIBIT A - STATEMENT OF OVERRIDING CONSIDERATIONS

SUMMARY OF SIGNIFICANT, ADVERSE, UNAVOIDABLE IMPACTS

Fresno COG has prepared a mitigation monitoring program for the Fresno COG 2014 Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) Draft and Final Program Environmental Impact Report (PEIR) as required by the California Environmental Quality Act (CEQA), Public Resources Code 21000 et seq. Fresno COG identified several significant, adverse, and unavoidable impacts in the Draft and Final PEIRs. As such, CEQA requires the Fresno COG Board of Directors to balance the benefits of the Proposed Plan Option against its unavoidable environmental risks in determining whether to approve the RTP and SCS. The PEIRs identify the following significant, adverse, and unavoidable environmental impacts:

- ✓ **Impact 3.2.1:** Construction and implementation of individual projects could potentially impede or block views of scenic resources as seen from the transportation facility or from the surrounding area.

- ✓ **Impact 3.2.2:** Construction and implementation of the projects could alter the appearance of scenic resources along or near designated scenic highways and vista points.

- ✓ **Impact 3.2.3:** Construction and implementation of the projects could create significant contrasts with the overall visual character of the existing landscape setting.

- ✓ **Impact 3.2.4:** Construction and implementation of individual projects could potentially create a new source of substantial light or glare that would affect day or nighttime views of scenic resources as seen from the transportation facility or from the surrounding area.

- ✓ **Impact 3.3.1:** Strategies aimed at addressing the transportation needs of future growth patterns were considered during development of the proposed RTP and SCS. The document promotes a preferred land use scenario and alternative transportation system to the automobile through enhanced funding for transit and other alternative modes of transportation such as bicycle facilities, trails, airport improvements, and others. Implementation of strategies proposed in the RTP and SCS could result in positive changes to land uses and reduced impacts on important farmland or Forest/Timber Lands. Reducing the footprint of new development as reflected in the 2014 RTP and SCS protects farmland, Williamson Act contract land, forest/timber land, and other open space lands in the Fresno region.

  Implementation of transportation improvements included in the RTP could influence land use patterns throughout the region as shown in the SCS and result in the conversion of important agricultural lands. Land use and transportation policies are emphasized in the RTP in order to address automobile traffic and air quality concerns. Growth patterns that promote alternatives to the automobile by creating mixed-use developments, which would include residences, shops, parks, and

civic institutions, linked to pedestrian-and-bicycle friendly public transportation centers, are also discussed in the RTP and in the SCS. Implementation of enhanced alternative modes as provided by the RTP could result in more balanced land use conditions throughout the region, as the mixed-use developments would result in a concentration of jobs and residences in close proximity to one another. Reducing the footprint of new development as reflected in the 2014 RTP and SCS protects farmland, Williamson Act contract land, forest/timber land, and other open space lands in the Fresno region.

While the RTP is likely to result in a positive outcome related to supportive land use conditions for alternative forms of transportation such as transit, other projects in the Plan could have significant impacts on land use patterns, potentially causing land use growth and development to occur in areas not previously envisioned for growth and development. This impact could be especially significant on agricultural land uses within the County.

- ✓ **Impact 3.3.2:** Implementation of the proposed Project could potentially conflict with existing zoning for agriculture use, Williamson Act Contract or forest/timber lands resulting in the disturbance or loss of some of these designated areas.

- ✓ **Impact 3.3.3:** Impacts on farmland related to transportation improvements from implementation of the proposed Project are considered potentially significant.

- ✓ **Impact 3.4.2:** The RTP and SCS includes projects that may violate air quality standards or contribute substantially to an existing or projected air quality violation.

- ✓ **Impact 3.4.4:** The RTP and SCS includes projects that may expose sensitive receptors to substantial pollutant concentrations.

- ✓ **Impact 3.4.5:** Proposed projects identified in the RTP and SCS may create objectionable odors affection a substantial number of people.

- ✓ **Impact 3.5.1:** The RTP and SCS includes projects that may result in direct removal or degradation of riparian habitat or other sensitive natural communities during construction activities such as grading and grubbing.

- ✓ **Impact 3.5.2:** The RTP and SCS includes projects that may result in direct impacts to plant and wildlife species including rare, threatened and/or endangered species during construction and operation of the proposed transportation facilities through the removal of native habitat.

- ✓ **Impact 3.5.3:** The Project may result in indirect impacts to plant and wildlife species including rare, threatened and/or endangered species during the construction and operation through edge effects such as noise, lighting and visual deterrents.

- ✓ **Impact 3.5.4:** The Project would result in temporary and permanent impacts to terrestrial and aquatic wildlife movement. The linear nature of transportation projects increases the potential extent and significance of impacts to wildlife movement. Transportation facilities pose barriers to wildlife crossings that may result in injury of death of wildlife attempting to traverse the facility. These barriers also result in fragmentation of natural habitat and increased impacts associated with edge effects from lighting, noise, human disturbance, exotic plant infestations, urban runoff, etc. Smaller fragments of habitat result in greater intensity of the edge effects. It is also important to maintain connections between populations of wildlife so that interbreeding, and/or that young have no ability to disperse to suitable habitats, does not occur. Impacts to wildlife movement would be greater along entirely new transportation facilities than with improvements to existing facilities, because the existing facility has already formed a barrier, and the addition of new lanes for example, may only slightly increase the barrier effect.

- ✓ **Impact 3.5.5:** The 2014 RTP and SCS would potentially increase siltation of streams and other water resources from exposures of erodible soils during construction activities. Excessive siltation can significantly degrade habitat for fish and other aquatic organisms. Heavy sediment deposition can bury slow-moving or sessile bottom-dwelling organisms, fish eggs and larval forms of many aquatic organisms. These losses are not only of direct concern, but also represent a loss of food sources for larger fishes and other organisms, such as birds and mammals, that are not directly affected by sediments.

  Increased sediment can also decrease light penetration for aquatic plant production and increase water temperature from greater insulation. Higher water temperatures can affect aquatic organisms through direct stress of temperature-sensitive organisms (e.g., steelhead require cold water streams), and by increasing nitrate productivity which can exacerbate eutrophication if the sediments contain or are accompanied by excessive nutrients (i.e., algal blooms). The degree of this impact would depend on several factors including the following:
  - *Length of occurrence.* The longer the period of sedimentation, the greater the potential for significance.
  - *Timing of occurrence*. The effect would be of greater significance during particularly sensitive times of year, such as during fish spawning seasons when the eggs and larvae which are particularly sensitive to siltation would be present; and,
  - *Significance of Resource.* The effect would be of greater significance where a special status species might be affected, such as near a steelhead spawning stream.

- ✓ **Impact 3.5.6:** Transportation and future land use impacts related to conflicts with local policies or ordinances protecting biological resources are considered potentially significant.

- ✓ **Impact 3.6.1:** Increased Transportation GHG Emissions may contribute to Climate Change.

- ✓ **Impact 3.7.1:** Development of highway, arterial, bridge crossing, transit, and future land use development projects may have a significant impact on historical resources.

- ✓ **Impact 3.7.2:** Construction activities involving excavation and earthmoving may encounter archaeological resources.

- ✓ **Impact 3.7.3:** Construction activities involving excavation and earthmoving may encounter paleontological materials.

- ✓ **Impact 3.7.4:** Construction activities involving excavation and earthmoving may encounter human remains.

- ✓ **Impact 3.8.1:** Construction activities proposed in the 2014 RTP and SCS would lead to a substantial increase in energy consumption associated with construction equipment and vehicles primarily powered by nonrenewable fuels.

- ✓ **Impact 3.9.1:** Seismic events can damage transportation infrastructure and land use development through ground shaking, liquefaction, surface rupture, and land sliding. Property damage and public safety from seismic activity would be considered a significant impact in some cases.

- ✓ **Impact 3.9.2:** Some improvement projects require significant earthwork, increasing potential slope failure and long-term erosion. Earthwork can also alter unique geologic features.

- ✓ **Impact 3.9.3:** Proposed transportation infrastructure designs and future land use development could potentially have significant impacts to property and public safety due to subsidence and the presence of expansive soils.

- ✓ **Impact 3.9.4:** Implementation of proposed individual Projects could result in the loss of availability of a designated mineral resource that would be of value to the region and the residents of the State.

- ✓ **Impact 3.9.5:** Implementation of proposed individual Projects could result in the loss of availability of locally-important mineral resource recover sites delineated on a local general plan, specific plan, or other land use plan.

- ✓ **Impact 3.10.1:** Proposed 2014 RTP and SCS projects could create a significant hazard to the public or the environment through the routing transport, use, or disposal of hazardous materials.

- ✓ **Impact 3.10.2:** The implementation of the 2014 RTP and SCS could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during transportation. Implementation of the 2014 RTP

and SCS would facilitate the movement of goods, including hazardous materials, through the region. Transportation of goods, in general, and hazardous materials in particular, can thus be expected to increase substantially with implementation of the 2014 RTP and SCS.

- ✓ **Impact 3.10.3:** Due to the large number of contaminated sites, construction of new transportation facilities or future land use developments could disturb contaminated property.

- ✓ **Impact 3.10.5:** Transportation improvements and future land use development associated with the implementation of the proposed RPT and SCS could result in a safety hazard within an airport plan area.

- ✓ **Impact 3.10.6:** Transportation improvements and future land use development associated with implementation of the 2014 RTP and SCS could result in a safety hazard within the vicinity of a private airstrips, creating hazards from tall structures, glare producing objects, bird and wildlife attractants, radio waves from communication centers, or other features that have the potential to interfere with take-off or landing procedures.

- ✓ **Impact 3.10.7:** Implementation of the proposed Project could impair implementation of our physically interfere with an adopted emergency response plan or emergency evacuation plan.

- ✓ **Impact 3.10.8:** Implementation of the proposed Project could expose people or structures to a significant risk of loss, injury, or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands.

- ✓ **Impact 3.11.1:** Construction activities related to the implementation of the RTP and SCS could violate Regional Water Quality Control Board water quality standards or waste discharge requirements.

- ✓ **Impact 3.11.2:** Individual projects and future land use developments could substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

- ✓ **Impact 3.11.3:** Construction activities could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

- ✓ **Impact 3.11.4:** The proposed Project could increase flooding, alter the existing drainage patterns, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding or exceeding the capacity of existing or planned storm water drainage systems.

- ✓ **Impact 3.11.5:** Projects identified in the 2014 RTP and SCS could create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

- ✓ **Impact 3.11.6:** Construction activities related to transportation projects could substantially degrade water quality.

- ✓ **Impact 3.11.7:** Construction of new land use developments could place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, a Flood Insurance Rate Map, or other flood hazard delineation map.

- ✓ **Impact 3.11.8:** The 2014 RTP and SCS could alter existing drainage patterns or substantially increase the rate or amount of surface runoff in a manner that would result in flooding or produce or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems.

- ✓ **Impact 3.11.9:** Construction activities including the placement of structures within a 100-year flood hazard area can impede flood waters, altering the flood risks both upstream and downstream.

- ✓ **Impact 3.12.2:** Construction and implementation of projects would result in the loss of open space and community recreation areas. This would be considered a potentially significant impact. Pockets of open space vary in size and location throughout the County and within the cities. Open space land uses include agricultural areas, public parks, recreational facilities, and areas planned for such uses.

- ✓ **Impact 3.12.3:** Development of RTP and SCS-related projects and programs could result in the disturbance or loss of open spaces and recreational resources.

- ✓ **Impact 3.12.4:** The proposed Project will likely increase populations in areas without ample park space, thus resulting in creased use and deterioration of existing neighborhood and regional parks.

- ✓ **Impact 3.13.1:** Noise-sensitive land uses could be exposed to noise in excess of normally acceptable noise levels and/or could experience substantial increases in noise as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new highways, addition of highway lanes, roadways, ramps, and new transit facilities as well as increased use of existing transit facilities, etc.) and future noise generating land use developments.

- ✓ **Impact 3.13.3: A**mbient noise levels could increase in the region to exceed normally acceptable noise levels or have substantial increases in noise as a result of the operation of expanded or new transportation facilities (i.e., increased traffic resulting from new highways, addition of highway lanes, roadways, ramps, and new use of new transit facilities as well as increased use of existing transit facilities, etc.).

- ✓ **Impact 3.13.4:** Construction activities related to the 2014 RTP and SCS could cause substantial temporary or periodic increases in ambient noise levels in the immediate vicinity of the construction sites, sometimes for extended durations.

- ✓ **Impact 13.13.5:** Construction of new highway and transit facilities or the modification of an existing system near one of the public airports located in Fresno County could expose workers to excessive noise levels.

- ✓ **Impact 13.13.6:** Construction of new highway and transit facilities or the modification of an existing system near one of the private airstrips located in Fresno County could expose workers to excessive noise levels.

- ✓ **Impact 3.14.1:** The Project could potentially displace or relocate residences and businesses through acquisition of land and buildings necessary for highway, arterial, and transit improvement.

- ✓ **Impact 3.14.2:** The Project has the potential to displace or cause the relocation of residences and businesses through acquisition of land and buildings necessary for highway, arterial, and transit improvements, as well as future land use development.

- ✓ **Impact 3.14.3:** The Project has the potential to disrupt or divide a community by separating community facilities, restricting community access and eliminating community amenities.

- ✓ **Impact 3.14.5:** Depending upon the timing, location, and duration of construction activities, proposed transportation improvement projects and land use development projects could delay emergency response times or otherwise disrupt delivery of emergency services. Emergency routes would be impaired if one or more lanes of a roadway in Fresno County were closed off due to transportation or land use development construction activities. Traffic delays and prevention of access to calls for service could potentially result.

- ✓ **Impact 3.15.4:** Growth and development and transportation improvements expected to occur as part of the 2014 RTP and SCS would be primarily focused in previously developed urban areas. A limited number of new developments in urban areas would convert undeveloped land to impermeable surfaces, resulting in an increase in storm water runoff, which could potentially exceed the capacity of existing storm water drainage facilities.

- ✓ **Impact 3.17.1:** The proposed RTP and SCS are based on regional employment and population forecasts, and accommodate this growth through land use and transportation projects. Although the project focuses on relieving vehicle congestion to the extent possible, it does cause an increase in VMT and that leads to an increase in traffic congestion. This is a significant impact of the project.

  The RTP and SCS will tend to make changes to the distribution of trips in adjacent counties and therefore does have the potential to cause significant traffic impacts in adjacent counties. This is considered to be a significant and unavoidable impact of the Project.

- ✓ **Impact 3.17.2:** While improved mobility will result from implementation of the projects contained in the RTP, some significant unavoidable impacts, considering the regional minimum LOS policy of "D" will occur. LOS deficiencies will result along a number of regional street and highway segments and associated intersections because of the inability to widen such facilities due to funding and other constraints even with RTP projects. It is anticipated that even with implementation of the Project significant LOS deficiencies will continue therefore.

- ✓ **Impact 3.17.4:** Development of RTP and SCS-related projects and programs could result in a substantial increase in hazards due to a design feature or incompatible uses by increasing the opportunities for walking and biking, thereby making it necessary that multi-modal facilities be designed to enhance the safety of these users.

- ✓ **Impact 3.17.5:** Congestion is expected to worsen between now and 2040 which could adversely impact emergency access. While the 2014 RTP and SCS would generally enhance mobility and access to destinations (including access for emergency vehicles) as compared to the No Project Alternative, measures should be implemented to maintain adequate emergency access in the design of RTP projects.

- ✓ **Impact 3.17.6:** While the 2014 RTP and SCS will not directly result in inadequate parking capacity, measures should be implemented to ensure that negative parking impacts are minimized in the design of the individual transportation projects included in the RTP. Expected population increases as well as land use development in Fresno County will increase the traffic volumes and parking demand.

- ✓ **Impact 3.17.7:** The 2014 RTP and SCS includes a list of improvement projects and programs (including public transit, bicycle and trail, and pedestrian projects) to enhance Fresno County's multi-modal transportation system. These RTP projects are consistent with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. At the time of project implementation, additional environmental analyses will be required which the implementing agency will use to ensure adequate access for transit and active mode users in the design of RTP projects.

  While the RTP and SCS would generally enhance and improve mobility for transit and active modes, it also contains roadway projects that have the potential to create conflicts between motorists and transit riders, pedestrians and cyclists.

OVERRIDING CONSIDERATIONS

Fresno COG is required to prepare this Statement of Overriding Considerations to explain the reasons for approving the 2014 RTP and SCS, despite the unavoidable impacts identified in the PEIR and Findings of Fact (as per Section 15093 of the State CEQA Guidelines). In preparing this Statement, Fresno COG has balanced the benefits of the Proposed Plan Option against its unavoidable environmental risks. Fresno COG finds that the unavoidable significant adverse effects of the individual improvement projects are overridden by the benefits of those projects and the considerations described below. Fresno COG, therefore, makes and adopts the following Overriding Considerations:

- ✓ The requirement for updates to the RTP every four (4) years, which provides for the identification of transportation modes to address population and employment growth, is required by State Law and sound local planning practice, and is an overriding concern.

- ✓ The specific need to provide necessary, feasible and sustainable transportation system improvements within the region is an overriding concern.

- ✓ The need to provide choice in the availability of transportation modes for County residents as a means to avoid significant delay and congestion, which may indirectly harm businesses and residents that depend upon a viable transportation system, is an overriding concern.

- ✓ Because there is no alternative other than the "No Build", "No Project" (2011 Regional Transportation Plan), and VMT Reduction Alternatives to converting some prime farmland for expansion of the circulation system, the need for such conversion is an overriding concern.

- ✓ While the individual improvement projects will not result in emissions beyond those allowed through the conformity process, and construction and hot spot emission impacts can be mitigated or are not found to be significant, the fact that the Valley continues to be nonattainment for volatile organic compounds, nitrogen oxides, and PM emissions, is an overriding concern.

- ✓ Because there is no alternative other than "No Build", "No Project", and VMT Reduction Alternatives to the loss of some biological resources for expansion of the circulation system, the loss of such resources is an overriding concern.

- ✓ The 2014 RTP and SCS balances the need to preserve valuable agricultural and biological resources with the region's need to provide a viable transportation system to accommodate anticipated population and employment growth and the related increased need for employment opportunities and municipal revenue. This planning balance is an overriding concern.

- ✓ Regional benefits associated with implementation of the 2014 RTP and SCS (reduced vehicular emissions, reduced congestion, reduced travel time, reduced vehicle miles traveled and improved mobility), will result from the implementation of planned improvement projects, which outweigh the potentially unavoidable localized impacts to land use development that may result from the individual improvement projects.

- ✓ Implementation of the 2014 RTP and SCS will result in increased unavoidable noise levels as a result of expansion of the planned transportation system, but the specific need to provide necessary, feasible and sustainable transportation system improvements within the region that supports planned growth and development, is an overriding concern.

- ✓ Implementation of the 2014 RTP and SCS would result in positive impacts on public services; however, long-term maintenance of various transportation modes including streets and highways is an overriding concern.

- ✓ Regional and localized benefits associated with implementation of the 2014 RTP and SCS (reduced vehicular emissions, reduced congestion, reduced travel time, reduced vehicle miles traveled and improved mobility), that will result from the implementation of planned improvement projects, outweigh the potentially unavoidable impacts associated with individual or localized improvement projects and other projects identified in the Project alternatives. These other alternatives will result in a greater number of Level of Service (LOS) deficiencies and infeasible transportation projects that will not result in further benefits beyond implementation of the 2014 RTP and SCS.

Based on substantial evidence in the public record, Fresno COG finds that, for the reasons set forth above, the economic, social and other consideration of the individual improvement projects outweigh the unavoidable agricultural, biological, land use/planning, noise, and transportation/circulation impacts identified in the PEIRs. First, the individual improvement projects identified in the 2014 RTP and SCS are required to meet travel demand of residents and businesses through to the year 2040. Second, the planned transportation improvements will enhance continued economic growth in the region. Third, the planned improvements will reduce levels of vehicular emissions and LOS deficiencies compared to the other project alternatives. Fourth, appropriate and achievable mitigation measures have been proposed, which are within Fresno COG's and its member agencies' jurisdiction to mitigate or avoid the significant environmental effects identified in the PEIRs.

OVERRIDING REASONS

Therefore, in accordance with Section 15093 of the State CEQA Guidelines, Fresno COG is required to prepare this Statement of Overriding Considerations to explain the reasons for approving the 2014 RTP and SCS, despite the unavoidable impacts identified in the PEIR and Findings of Fact. In preparing this

Statement, Fresno COG has balanced the benefits of the Project against its unavoidable environmental risks. For the reasons specified below, Fresno COG finds that the benefits of the Project outweigh the unavoidable environmental risks. In addition, the Findings of Fact identify a number of recommended mitigation measures that are found to be within the jurisdiction of other public agencies and not Fresno COG, and that these measures have been or should be adopted by such other agencies. Fresno COG finds that, for the reasons specified below, the Project should be adopted as the 2014 RTP and SCS notwithstanding the fact that responsibility for mitigating the potential adverse impacts rests with agencies other than Fresno COG.

The following reasons are consistent with the intent and purpose of the 2014 RTP and SCS:

Quality of Life

- ✓ The Project is intended to contribute to the quality of life that is experienced and will be experienced by the residents of Fresno County.

- ✓ The Project is designed to meet the needs of everyday travel for all types of purposes as well as for large regional movements over the long-term. Transportation is closely connected with many other issues, such as air quality, the environment, and land use, health, safety, and economic vitality and the Project contains goals and actions to address these issues.

Access and Mobility

- ✓ The Project includes many strategies to address both access and mobility and acknowledges that certain major corridors will need major investments in all modes of transportation to maintain and improve both access and mobility for the growth in travel that is occurring.

    - ➢ Access: Significant increases are planned for the street and highway, transit, and bicycle, trails, and pedestrian systems in the County. The projects must undergo extensive planning and analysis processes with community involvement.

    - ➢ Mobility: The Project includes a slate of projects aimed at reducing the most critical areas of congestion from a regionwide viewpoint. In addition to expanded transit service, which will reduce congestion in particular corridors, mobility projects additional lanes along streets and highways, interchange improvements, maintenance and rehabilitation of the existing system of streets and highways, and other capacity enhancements throughout the region.

- ✓ The Project also includes funding for rail consolidation, car and van pools, and local road improvements, including lane additions, intersection improvements, and rehabilitation and maintenance of the existing street and highways system.

Air Quality

- ✓ The Project includes funding for significant increases in alternative modes of transportation -- public transit, bicycle, pedestrian projects and community design projects -- that will make alternative modes of transportation more attractive.

- ✓ While the individual improvement projects will not result in emissions beyond those allowed through the conformity process, and construction and hot spot emission impacts can be mitigated or are not found to be significant, the fact that the Valley continues to be nonattainment for ozone, PM_{10} and $PM_{2.5}$ emissions is an overriding concern.

Travel Choices

- ✓ The Project invests significant funding into offering choices of travel mode to future residents. Major increases in, bus, bicycle, and pedestrian modes are envisioned, along with promotion of sharing rides.

- ✓ Regional and localized benefits associated with implementation of the 2014 RTP and SCS (reduced vehicular emissions, reduced congestion, reduced travel time, reduced vehicle miles traveled and improved mobility), that will result from the implementation of planned improvement projects, outweigh the potentially unavoidable impacts associated with individual or localized improvement projects and other projects identified in the Project alternatives. These other alternatives will result in a greater number of Level of Service (LOS) deficiencies and infeasible transportation projects that will not result in further benefits beyond implementation of the 2014 RTP and SCS.

Economic Vitality

- ✓ The Project includes major corridor improvements that connect areas around the periphery of the urban core, providing better access to the region's major job center – the Fresno-Clovis Metropolitan Area (FCMA). It also includes significantly enhanced bus transit systems to help manage demand.

- ✓ Investment in road maintenance and rehabilitation is provided, particularly a problem in rural areas where farm-to-market truck travel is important.

Equity

- ✓ The Project incorporates the priorities of local communities and many of these local projects are paid for from local funds. Major projects of regional concern are located throughout the region as well.

- ✓ The Project will provide alternatives -- public transit, bicycle, and pedestrian facilities -- for those who cannot or do not drive. Finally, a large increase in paratransit service (door-to-door wheelchair-equipped van service) is included for the expected increase in the elderly population over the RTP and SCS period.

- ✓ The need to provide choice in the availability of transportation modes for County residents as a means to avoid significant delay and congestion, which may indirectly harm businesses and residents that depend upon a viable transportation system, is an overriding concern.

Transportation and Land Use

- ✓ Investment in the transportation system will offer opportunities to grow logically and address the interaction between land use and transportation more effectively.

- ✓ The requirement for amendments to the RTP every four years, which provides for the identification of transportation modes to address population and employment growth, is required by State Law and sound local planning practice, and is an overriding concern.

- ✓ The specific need to provide necessary, feasible and sustainable transportation system improvements within the region is an overriding concern.

- ✓ Because there is no alternative other than the "No Build", "No Project" (2007 Regional Transportation Plan), and VMT Reduction Alternatives to converting some prime farmland for expansion of the circulation system, the need for such conversion is an overriding concern.

- ✓ Implementation of the 2014 RTP and SCS would result in positive impacts on public services; however, long-term maintenance of various transportation modes including street and highway is an overriding concern.

Funding and Revenue

- ✓ The Project shows revenues available from all sources -- federal, state, and local. The 2014 RTP and SCS would provide additional funding than that included in the RTP. The region will continue to receive federal and state funding to program projects through to the Year 2040.

- ✓ Overall, the Project provides funding transit operations and improvements, highway, street and road improvements, highway, street and road maintenance and rehabilitation, and for other kinds of improvements (bicycle, pedestrian, community design, etc.).

Health And Safety

- ✓ Pedestrian and bicycle plans and projects are specifically allocated funding in the 2014 RTP and SCS and funds have also been identified for such improvements in the RTP. Local road and state highway safety-related improvements are also included.

- ✓ Regional benefits associated with implementation of the 2014 RTP and SCS (reduced vehicular emissions, reduced congestion, reduced travel time, reduced vehicle miles traveled and improved mobility), will result from the implementation of planned improvement projects, which outweigh the potentially unavoidable localized impacts to land use development that may result from the projects.

Environmental Sustainability

- ✓ The Project includes a number of projects and programs that mitigate environmental issues.

- ✓ Because there is no alternative other than "No Build", "No Project", and VMT Reduction Alternatives to the loss of some biological, cultural and agricultural resources for expansion of the circulation system, the loss of such resources is an overriding concern.

- ✓ The 2014 RTP and SCS balances the need to preserve valuable agricultural and biological resources with the region's need to provide a viable transportation system to accommodate anticipated population and employment growth and the related increased need for employment opportunities and municipal revenue. This planning balance is an overriding concern.

- ✓ Implementation of the 2014 RTP and SCS will result in increased unavoidable noise levels as a result of expansion of the planned transportation system, but the specific need to provide necessary, feasible and sustainable transportation system improvements within the region that supports planned growth and development, is an overriding concern.

Based on substantial evidence in the public record, Fresno COG finds that, for the reasons set forth above, the economic, social and other considerations of the project outweigh the unavoidable agricultural, biological, land use/planning, noise, and transportation/circulation impacts identified in the PEIR. First, the individual improvement projects identified in the 2014 RTP and SCS are required to meet travel demand of residents and businesses through to the Year 2040. Second, the planned transportation improvements will enhance continued economic growth in the region. Third, the planned improvements will reduce levels of vehicular emissions and LOS deficiencies compared to the other project alternatives. Fourth, appropriate and achievable mitigation measures have been proposed, which are within Fresno COG's and its member agencies' jurisdiction to mitigate or avoid the significant environmental effects identified in the PEIR.

EXHIBIT B - MITIGATION MONITORING PROGRAM

STATUTORY REQUIREMENT

This Mitigation Monitoring Program for the Fresno COG 2014 Regional Transportation Plan and Sustainable Communities Strategy Program EIR has been developed in accordance with Section 21081.6 of the Public Resources Code, which requires a Lead Agency that approves or carries out a project, where a PEIR has identified significant environmental effects, to adopt a reporting or monitoring program. The purpose of this program is to identify the changes to the project, which the Lead Agency has adopted or made a condition of a project approval in order to mitigate or avoid significant effects on the environment. Fresno COG is the Lead Agency that must adopt the mitigation monitoring program.

Section 21069 of the CEQA statute defines Responsible Agency as a public agency, other than the Lead Agency, which has the responsibility for carrying out or approving a project. Fresno COG finds that the implementation of some mitigation measures listed on the following pages of the Final PEIR are not within its jurisdiction, and can and should be implemented and monitored by agencies responsible for implementing the projects, including but not limited to the following: cities, Counties, Caltrans, transit districts, and other responsible agencies.

CEQA statutes and Guidelines provide direction for clarifying and managing the complex relationships between a Lead Agency and other agencies with respect to implementing and monitoring mitigation measures. In accordance with CEQA Guidelines Section 15097.d, “each agency has the discretion to choose its own approach to monitoring or reporting; and each agency has its own special expertise.” This discretion will be exercised by implementing agencies at the time they undertake any of the individual improvement projects identified in the Draft and Final EIRs.

Regular review and update of the 2014 RTP and SCS will be conducted by Fresno COG, as appropriate. These updates involve a determination of regional transportation and air quality impacts and require air quality conformity pursuant to the federal Clean Air Act.

ADMINISTRATION OF THE MITIGATION MONITORING PROGRAM

Mitigation measures listed in this Mitigation Monitoring Program (reference Table B-1) will be implemented by one or more responsible or implementing agencies when those agencies undertake individual transportation improvement projects identified in the Regional Transportation Plan.

The Mitigation Monitoring Program consists of the following components and is reflected in Table B-1):

- ✓ Mitigation measures contained in the Draft and Final PEIR
- ✓ Identification of Responsible Party
- ✓ Description of mitigation measure timing
- ✓ Identification of monitoring agency

This Mitigation Monitoring Program shall be maintained in Fresno COG files for the Fresno COG 2014 Regional Transportation Plan and Sustainable Communities Strategy.

TABLE B-1 - Mitigation Monitoring and Reporting Program

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
3.2.1 Obstruction of Views	✓ Implement design guidelines, local policies, and programs aimed at protecting views of scenic corridors and avoiding visual intrusions. ✓ To the extent feasible, noise barriers that will not degrade or obstruct a scenic view will be constructed. Noise barriers will be well landscaped, complement the natural landscape and be graffiti-resistant.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.2.2 Altered Appearance of Scenic Resources	✓ Avoid construction of transportation facilities and new development in state and locally designated scenic highways and vista points. ✓ If transportation facilities and new development are constructed in state and locally designated scenic highways and/or vista points, design, construction, and/or operation of the transportation facility or new development will be consistent with applicable guidelines and regulations for the preservation of scenic resources along the designated scenic highway.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.2.3 Development of Previously Undeveloped Sites with Visual Qualities	✓ Where appropriate, encourage the development of design guidelines for each type of transportation facility and land use that make elements of proposed projects visually compatible with surrounding areas. Visual guidelines will, at a minimum, include setback buffers, landscaping, color, texture, signage, and lighting criteria. The following methods will be employed whenever possible: ➢ Transportation systems and new development will be designed in a manner where the surrounding landscape dominates. ➢ Transportation systems and new development will be developed to be compatible with the surrounding environment (i.e., colors and materials of construction material). ➢ If exotic vegetation is used, it will be used as screening and landscaping that blends in and complements the natural landscape. ➢ Trees bordering highways will remain or be replaced so that clear cutting is not evident. ➢ Grading will blend with the adjacent landforms and topography. ✓ Project implementation agencies should design transportation and new development projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Project implementation agencies should design projects to minimize their intrusion into important view sheds and use contour grading to better match surrounding terrain. To the maximum extent feasible, landscaping along highway corridors should be designed to add significant natural elements and visual interest to soften the hard-edged, linear travel experience that would otherwise occur. ✓ Project implementation agencies should use natural landscaping to minimize contrasts between the Project (RTP and SCS) and surrounding areas. Wherever possible, interchanges and transit lines should be designed at the grade of the surrounding land to limit view blockage. Edges of major cut and- fill slopes should be contoured to provide a more natural looking finished profile. Project implementation agencies should replace and renew landscaping to the greatest extent possible along corridors with road widenings, interchange projects, and related improvements. New corridor landscaping should be designed to respect existing natural and man-made features and to complement the dominant landscaping of surrounding areas. ✓ Project implementation agencies should construct sound walls of materials whose color and texture complements the surrounding landscape and development and to the maximum extent feasible, use color, texture, and alternating facades to “break up” large facades and provide visual interest. Where there is room, project sponsors should landscape the sound walls with plants that screen the sound wall, preferably with either native vegetation or landscaping that complements the dominant landscaping of surrounding areas.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
3.2.4 New Sources of Light and Glare	✓ Where appropriate, encourage the development of design guidelines for each type of transportation facility and land use development that make light elements of proposed facilities visually compatible with surrounding areas. The following methods will be employed whenever possible: ➢ Transportation systems and new development areas will be designed in a manner where the surrounding landscape dominates. ➢ Transportation systems and new development areas will be developed to be compatible with the surrounding environment. ➢ Lighting devices will be employed such as downward facing light, light shields, and amber lumens.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.3.1 Conversion of Important Farmland or Forest/Timber Lands	✓ As part of the RTP and SCS formulation process; and at the request of a collection of community based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on agricultural mitigation measures for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to: ➢ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects. Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities. ✓ Implementing agencies should encourage in-fill development, in place of development in rural and environmentally sensitive areas. Agencies should seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. ✓ Implementing agencies should consider resource lands when considering project designs. Prior to the design approval of RTP and SCS projects, the implementing agency should assess the project area for agricultural resources and constraints. For federally funded projects, implementing and local agencies are required to follow the rules and regulations of Farmland Protection Policy Act including determining the impact by completing the Farmland Conversion Impact Rating form (AD- 1006). For non-federally funded projects, implementing and local agencies should assess projects for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance), and if present, perform a Land Assessment and Site Evaluation (LESA). ✓ Implementing agencies should consider agricultural resources in all projects, and seek to avoid or minimize the encroachment and/or impact on these areas. Agencies should consider measures such as, but not limited to, relocation or redesign of site features, reduction of the project footprint, or compensation and/or preservation activities to lessen the overall impact on resource lands. Prior to final approval of each individual transportation improvement project, the implementing agency should establish inclusion into a conservation easement program, or arrange for the enrollment of agricultural lands into the Williamson Act program.	✓ May 2014 through _____, 201_ ✓ Ongoing over the life of the Plan	✓ Fresno COG ✓ Implementing agency or project sponsor
3.3.2 Conflict with Existing Zoning for Agriculture Use, or a Williamson Act Contract	✓ As part of the RTP and SCS formulation process; and at the request of a collection of community based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on agricultural mitigation measures for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to:	✓ May 2014 through _____, 201_	✓ Fresno COG

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects. ➢ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities. ✓ Implementing agencies should encourage in-fill development, in place of development in rural and environmentally sensitive areas. Agencies should seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. ✓ Implementing agencies should consider agricultural resource lands when considering project designs. Prior to the design approval of RTP and SCS projects, the implementing agency should assess the project area for agricultural resources and constraints. For federally funded projects, implementing and local agencies are required to follow the rules and regulations of Farmland Protection Policy Act including determining the impact by completing the Farmland Conversion Impact Rating form (AD- 1006). For non-federally funded projects, implementing and local agencies should assess projects for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance), and if present, perform a Land Assessment and Site Evaluation (LESA). ✓ Implementing agencies should consider agricultural resources in all projects, and seek to avoid or minimize the encroachment and/or impact on these areas. Agencies should consider measures such as, but not limited to, relocation or redesign of site features, reduction of the project footprint, or compensation and/or preservation activities to lessen the overall impact on resource lands. Prior to final approval of each individual transportation improvement project, the implementing agency should establish inclusion into a conservation easement program, or arrange for the enrollment of agricultural lands into the Williamson Act program. ✓ Individual projects will be consistent with federal, state, and local policies that preserve agricultural lands and support the economic viability of agricultural activities, as well as policies that provide compensation for property owners if preservation is not feasible. ✓ For projects in agricultural areas, project implementation agencies should contact the California Department of Conservation and the Agricultural Commissioner's office to identify the location of prime farmlands and lands that support crops considered valuable to the local or regional economy. ✓ Prior to final approval of each individual improvement project, the implementing agency should avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.3.3 Other Changes in the Existing Environment	✓ As part of the RTP and SCS formulation process; and at the request of a collection of community based organizations, following the selection of the preferred scenario, the Fresno COG Policy Board directed the Fresno COG Policy Advisory Committee (PAC) (which is comprised of the city managers and county administrator) to form a sub-committee to analyze, discuss and provide recommendation on agricultural mitigation measures for inclusion into the transportation planning process at Fresno COG. Working collaboratively with the community-based organizations, interested stakeholders and professional staff, this committee is currently on-going, and discussing the formulation of policy and program language to: ➢ Develop a methodology to help implementing agencies quantify the conversion of prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance associated with their proposed projects. ➢ Develop a methodology for implementing agencies to consider preservation ratios to minimize loss of prime, unique, and statewide importance farmland; and coordinate efforts to provide a mechanism for preservation activities.	✓ May 2014 through _____, 201_	✓ Fresno COG

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ Implementing agencies should encourage in-fill development, in place of development in rural and environmentally sensitive areas. Agencies should seek funding to prepare specific plans and related environmental documents to facilitate mixed-use development, and to allow these areas to serve as receiver sites for transfer of development rights away from environmentally sensitive lands and rural areas outside established urban growth boundaries. ✓ Implementing agencies should consider agricultural resource lands when considering project designs. Prior to the design approval of RTP and SCS projects, the implementing agency should assess the project area for agricultural resources and constraints. For federally funded projects, implementing and local agencies are required to follow the rules and regulations of Farmland Protection Policy Act including determining the impact by completing the Farmland Conversion Impact Rating form (AD- 1006). For non-federally funded projects, implementing and local agencies should assess projects for the presence of important farmlands (prime farmland, unique farmland, farmland of statewide importance), and if present, perform a Land Assessment and Site Evaluation (LESA). ✓ Implementing agencies should consider agricultural resources in all projects, and seek to avoid or minimize the encroachment and/or impact on these areas. Agencies should consider measures such as, but not limited to, relocation or redesign of site features, reduction of the project footprint, or compensation and/or preservation activities to lessen the overall impact on resource lands. Prior to final approval of each individual transportation improvement project, the implementing agency should establish inclusion into a conservation easement program, or arrange for the enrollment of agricultural lands into the Williamson Act program. ✓ Individual projects will be consistent with federal, state, and local policies that preserve agricultural lands and support the economic viability of agricultural activities, as well as policies that provide compensation for property owners if preservation is not feasible. ✓ For projects in agricultural areas, project implementation agencies should contact the California Department of Conservation and the Agricultural Commissioner's office to identify the location of prime farmlands and lands that support crops considered valuable to the local or regional economy. ✓ Prior to final approval of each individual improvement project, the implementing agency should avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.4.2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation	✓ Project implementation agencies will ensure implementation of mitigation measures to reduce PM and NOx emissions from construction sites, including: ➢ Maintain on-site truck loading zones. ➢ Configure on-site construction parking to minimize traffic interference and to ensure emergency vehicle access. ➢ Provide temporary traffic control during all phases of construction activities to improve traffic flow. ➢ Use best efforts to minimize truck idling to not more than two minutes during construction. ➢ Apply non-toxic soil stabilizers (according to manufacturers' specifications) to all inactive construction areas. ➢ During construction, replace ground cover in disturbed areas as quickly as possible. ➢ During construction, enclose, cover, water twice daily or apply non-toxic soil binders (according to manufacturers' specifications) to exposed piles with 5 percent or greater silt content and to all unpaved parking or staging areas or unpaved road surfaces. ➢ During the period of construction, install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. ➢ During the period of construction, assure that traffic speeds on all unpaved roads be reduced to 15 mph or less. ➢ Pave all construction access roads at least 100 feet on to the site from permanent roadways. ➢ Cover all haul trucks.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ Project implementation agencies will require that construction sites employ a balanced cut/fill ratio to the extent possible, thus reducing haul-truck trip emissions.		
3.4.4 Expose sensitive receptors to substantial pollutant concentrations.	✓ As air toxics research continues, implementing agencies should utilize the tools and techniques that are developed for assessing health outcomes as a result of lifetime MSAT exposure. The potential health risks posed by MSAT exposure should continue to be factored into project-level decision making in the context of environmental review. Specifically, at the project level, implementing agencies shall require or perform air toxic risk assessments to determine mobile source air toxic impacts.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.4.5 Create Objectionable Odors Affecting a Substantial Number of People	✓ Implementing agencies should require assessment of new and existing odor sources for transportation improvement projects and future land use development projects to determine whether sensitive receptors would be exposed to objectionable odors and apply recommended applicable mitigation measures as defined by the applicable local air district and best practices.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.5.1 Removal or Degradation of Sensitive Natural Communities	✓ When applicable to federally-funded projects, responsible and implementing agencies should commit to improved interagency coordination and integration of the National Environmental Policy Act (NEPA) and the Clean Water Act Section 404 procedures during three stages: transportation planning, project programming, and project implementation. Affected State and local agencies should commit to ensuring the earliest possible consideration of environmental concerns pertaining to U.S. water bodies, including wetlands, at each of the three stages identified above. In addition, the agencies should place a high priority on the avoidance of adverse impacts to waters of the U.S. and associated sensitive species, including threatened and endangered species. Implementation of NEPA-404 requirements will expedite construction of necessary transportation projects, with benefits to mobility and the economy at large. The process will also enable more street and highway projects to proceed on budget and on schedule. Finally, the process will improve cooperation and efficiency of governmental operations at all levels, thereby better serving the public. ✓ Construction and operational Best Management Practices (BMPs) will be identified, installed and maintained by implementing agencies in order to prevent silt and other pollutants from entering jurisdictional waters and wetlands thereby degrading or destroying wildlife and/or natural habitat. BMPs may include straw bales and/or mats, temporary sedimentation basins, silt fence, sand bag check dams, dry season construction, etc. ✓ Native soils in construction areas will be removed, stockpiled separately, and replaced by implementing agencies in those areas where onsite revegetation of the native habitat is planned. ✓ Any disturbed natural areas will be replanted by implementing agencies with appropriate native vegetation following the completion of construction activities. ✓ During the individual improvement or future land use development project design phase, impacts to jurisdictional waters and wetlands will be minimized by implementing agencies to the greatest extent feasible. ✓ Implementing agencies will obtain and comply with appropriate regulatory requirements prior to construction.	✓ Ongoing over the life of the Plan	✓ Responsible and Implementing agencies or project sponsor
3.5.2 Direct Impacts on Rare, Threatened, or Endangered Plant & Wildlife Species	✓ Each proposed individual transportation improvement project and future land use development will consider the displacement of sensitive habitat, sensitive species, and non-native habitat. ✓ When avoidance of native vegetation removal is not possible, each transportation improvement project and future land use development shall replant disturbed areas with commensurate native vegetation of high habitat value adjacent to the project (i.e., as opposed to ornamental vegetation with relatively less habitat value).	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ Focused sensitive plant and wildlife species and non-native habitat surveys will be conducted within suitable habitat to determine the distribution of sensitive species within the biological impact area of each transportation improvement project and future land use development. Sensitive plant and nonnative habitat surveys will be conducted during the appropriate flowering season for sensitive plant species with the potential to occur within the individual transportation improvement project or future land use development area. In all cases, impacts on special-status species and/or their habitat shall be avoided during construction to the extent feasible. ✓ If sensitive plant or wildlife species and non-native habitat are identified within the biological impact area, a Biological Resource Management Plan (BRMP) will be developed to address appropriate avoidance and minimization measures. These measures may include seed collection and salvage measures for sensitive plant species and non-native habitat, silt fencing, exclusion fencing and/or appropriate compensation where impacts cannot be fully avoided. ✓ Individual transportation improvement projects and future land use developments shall include offsite habitat enhancement or restoration to compensate for unavoidable habitat losses from the project site. ✓ Locations of sensitive species, sensitive habitat, and non-native habitat will be mapped and shown on construction drawings and identified as Environmentally Sensitive Areas (ESAs). Prior to construction, these areas will be flagged and/or fenced to prevent unnecessary impacts from machinery and foot traffic. ✓ Temporary access roads and staging areas will not be located within areas containing sensitive plant, sensitive wildlife species or non-native habitat wherever feasible, so as to avoid or minimize impacts to these species. ✓ Construction activities will be scheduled, as appropriate and feasible, to avoid sensitive times that have a greater likelihood to affect significant resources such as spawning periods for fish, nesting season for birds and/or the rainy season for riparian habitat and sediment/erosion control. ✓ All vegetation (including tall grasses) will be removed between August 16th and February 14th, if possible, to avoid potential conflicts with nesting birds. If it is not possible to remove vegetation during that time frame, a nest clearance survey will be completed prior to vegetation clearing. Any detected nests will be mapped and provided with an appropriate buffer as recommended by a qualified biologist. Construction activities within the buffer area will not be allowed until after September 15 or until fledglings have abandoned the nest. ✓ A Worker Awareness Program (environmental education) shall be developed and implemented to inform project workers of their responsibilities in regards to avoiding and minimizing impacts on sensitive biological resources. ✓ An Environmental Inspector shall be appointed to serve as a contact for issues that may arise concerning implementation of mitigation measures, and to document and report on adherence to these measures. ✓ A qualified wetland scientist shall review construction drawings as part of each project-specific environmental analysis to determine whether wetlands will be impacted, and if necessary perform a formal wetland delineation. Appropriate State and federal permits shall be obtained, but each project EIR will contain language clearly stating the provisions of such permits, including avoidance measures, restoration procedures, and in the case of permanent impacts compensatory creation or enhancement measures to ensure a no net loss of wetland extent or function and values. ✓ Sensitive habitats (native vegetative communities identified as rare and/or sensitive by the CDFW) and special-status plant species (including vernal pools) impacted by projects shall be restored and augmented, if impacts are temporary, at a 1.1:1 ratio (compensation		

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	acres to impacted acres). Permanent impacts shall be compensated for by creating or restoring habitats at a 3:1 ratio as close as possible to the site of the impact. ✓ When work is conducted in identified sensitive habitat areas and/or areas of intact native vegetation, construction protocols shall require the salvage of perennial plants and the salvage and stockpile of topsoil (the surface material from 6 to 12 inches deep) and shall be used in restoring native vegetation to all areas of temporary disturbance within the project area. ✓ If specific project area trees are designated as "Landmark Trees" or "Heritage Trees", then approval for removals shall be obtained through the appropriate entity, and appropriate mitigation measures shall be developed at that time, to ensure that the trees are replaced. Due to the close proximity of these areas to sensitive wildlife habitats, all mitigation trees will use only locally-collected native species.		
3.5.3 Impacts on Rate, Threatened, or Endangered Species from Project Noise, Lighting and Deterrents	✓ The height, spacing, number and type of light fixtures will be selected and installed to minimize intrusive light escaping from the physical boundaries of the site. ✓ Road noise minimization methods, such as native brush and tree planting adjacent to heavy noise producing transportation facilities, will be incorporated where feasible.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.5.4 Temporary and Permanent Impacts to Terrestrial and Aquatic Wildlife Movement	✓ During final design, implementing agencies will design, construct, and maintain terrestrial wildlife crossings in order to minimize barrier effects and habitat fragmentation created by individual transportation projects and future land use developments. ✓ During final design, implementing agencies will design, construct, and maintain any structure/culvert placed within a stream where endangered or threatened fish occur/may occur. The structure/culvert will not constitute a barrier to upstream or downstream movement of aquatic life, or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth for fish migration.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.5.5 Siltation Impacts	✓ For Individual transportation and future land use development projects near water resources implementing agencies should implement Best Management Practices (BMPs) at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport. ✓ For individual transportation and future land use development projects, implementing agencies should schedule construction activities to avoid sensitive times for biological resources (e.g., steelhead spawning periods during the winter and spring) and to avoid the rainy season when erosion and sediment transport is increased.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.5.6 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	✓ Implementing agencies should require project applicants to prepare biological resources assessments for specific projects proposed in areas containing, or likely to contain, protected trees or other locally protected biological resources. The assessment should be conducted by appropriately trained professionals pursuant to adopted protocols, and standards in the industry. Mitigation should be implemented when significance thresholds are exceeded. Mitigation should be consistent with the requirements of CEQA and/or follow applicable plans promulgated to protect species/habitat. ✓ Implementing agencies should design projects such that they avoid and minimize direct and indirect impacts to protected trees and other locally protected resources where feasible, defined in section 15364 of the CEQA Guidelines. ✓ As part of project-level environmental review, implementing agencies will ensure that projects comply with the most recent general plans, policies, and ordinances, and conservation plans. Review of these documents and compliance with their requirements will be	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	demonstrated in project-level environmental documentation. Review of these documents and compliance with their requirements should be demonstrated in project-level environmental documentation.		
3.6.1 Increased Transportation GHG Emissions May Contribute to Climate Change	✓ Through Implementation of the Regional Blueprint and the RTP SCS, and in coordination with implementation agencies, the following mitigation measures will result in reduced GHG emissions: ➢ Develop land use patterns, consistent with the 2024 RTP SCS, which encourage people to walk, bicycle, or use public transit for a significant number of their daily trips. ▪ Use comprehensive community plans and specific plans to ensure development is consistent and well connected by alternative transportation modes. ▪ Adopt transit-oriented or pedestrian-oriented design strategies and select areas appropriate for these designs in the general plan. ▪ Support higher density development in proximity to commonly used services and transportation facilities. ➢ Develop in a compact, efficient form to reduce vehicle miles traveled and to improve the efficiency of alternatives to the automobile consistent with the 2014 RTP and SCS. ▪ Use the control of public services to direct development to the most appropriate locations. ▪ Promote infill of vacant land and redevelopment sites. ➢ Encourage project site designs and subdivision street and lot designs that support walking, bicycling, and transit use. ▪ Adopt design guidelines and standards promoting plans that encourage alternative transportation modes. ▪ Require certain sites to be created to allow convenient access by transit, bicycle, and walking.	✓ Ongoing over the life of the Plan	✓ Responsible agencies
	✓ Intelligent Transportation ➢ Develop an Intelligent Transportation Systems strategy, consistent with the updated ITS Strategic Plan, to implement the Integrated Performance Management System Network that will: ▪ Interconnect the region's local transportation management centers, including the use of cameras, and computer hardware and software to detect and clear accidents ▪ Use technology to improve traffic signal timing in order to optimize traffic flow and transit service ▪ Involve new equipment to improve on-time transit performance and provide real-time transit information at stops and stations.	✓ 2015	✓ Fresno COG and Responsible Agencies
	✓ Continue Development of a GHG Reduction Funding Program Fresno COG will continue to develop a GHG Reduction Funding Program to reduce GHG emissions from transportation projects. Fresno COG member agencies (the cities and the County) will be eligible to apply for the funding through a formal funding application process.	✓ 2015	✓ Fresno COG
	✓ Continue the Public Education Program on Individual Transportation Behavior and Climate Change Through the Valley Planners' Network and in conjunction with key partners such as local air districts, public utility providers, area chambers of commerce and others, Fresno COG will continue the public information program to educate the public about the connection between individual transportation behavior and global climate change, including transportation behavior modifications the public can make to reduce their GHG emissions over time. Fresno COG shall continue to include information on its website that is focused on global climate change. The website shall continue to identify actions the public can take to reduce their carbon footprint, and provide web links to sources of information designed to promote alternative mode use (carpools, vanpools, public transit, bicycling, walking, and telecommuting) and other travel demand management strategies.	✓ On-Going	✓ Fresno COG
	✓ Provide Funding for Workshop on Global Climate Change for Local Government Officials and Include in the Blueprint Toolkit	✓ FY 2015/16	✓ Fresno COG

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	Fresno COG will provide funding for a workshop on global climate change for local government officials that will focus on practical techniques that local governments can implement to reduce greenhouse gas emissions at the city and county level. Workshop topics shall include, but are not limited to the following: ➢ The basic science behind climate change and its effects on the Fresno County Region ➢ Addressing the California Environmental Quality Act (CEQA) and the effects of AB 32 ➢ What cities and counties are doing to address climate change and CEQA ➢ Cost effective actions cities can take to reduce greenhouse emissions ➢ Actions being taken in the Fresno County area to advance and support innovative 'green" business		
	Fresno COG shall work closely with its member agencies to help them participate in the statewide Active Transportation Program (ATP) as well as develop a MPO-Level Active Transportation Program at Fresno COG.	✓ FY 2015/16	✓ Fresno COG
	✓ Continue to Work with the SCS Implementation Committee Fresno COG will continue to work with the SCS implementation committee or a Policy Advisory Committee (PAC) subcommittee as directed by the Fresno COG Policy Board to develop SCS implementation policies and strategies, and identify appropriate funding mechanisms. Stakeholders will be invited to attend the meetings; however, only committee members (member agencies) will have voting authority.	✓ On-Going	✓ Fresno COG
	✓ Project level environmental documents shall analyze construction and maintenance and land use development project Greenhouse Gas (GHG) emissions.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.7.1 Impacts on Historic Resources	✓ As part of the appropriate environmental review of individual projects, the project implementation agencies will identify potential impacts to historic resources. A record search at the appropriate Information Center will be conducted to determine whether the individual transportation improvement project or future land use development area has been previously surveyed and whether resources were identified.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
	✓ As necessary, prior to construction activities, the implementing agencies will obtain a qualified architectural historian to conduct historic architectural surveys as recommended by the Archaeological Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the individual transportation improvement project or future land use development area for cultural resources.		
	✓ Implementing agencies will comply with Section 106 of the National Historic Preservation Act if federal funding or approval is required. This law requires federal agencies to evaluate the impact of their actions on resources included in or eligible for listing in the National Register of Historic Places. Federal agencies must coordinate with the State Historic Preservation Officer in evaluating impacts and developing mitigation. These mitigation measures may include, but are not limited to the following: ➢ Carry out the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, relocation, or reconstruction of any impacted historic resource, which will be conducted in a manner consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.		
	✓ In some instances, the following mitigation measure may be appropriate in lieu of the previous mitigation measure:		

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ Secure a qualified environmental agency and/or architectural historian, or other such qualified person to document any significant historical resource(s), by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of a resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.		
3.7.2 Construction Impacts on Archaeological Resources	✓ As part of the appropriate environmental review of individual projects, the implementation agencies will consult with the Native American Heritage Commission to determine whether known sacred sites are in the project area, and identify the Native American(s) to contact to obtain information about the project site. ✓ Prior to construction activities, the implementation agencies will obtain a qualified archaeologist to conduct a record search at the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified. ✓ As necessary prior to construction activities, the implementation agencies will obtain a qualified archaeologist or architectural historian (depending on applicability) to conduct archaeological and/or historic architectural surveys as recommended by the Information Center. In the event the records indicate that no previous survey has been conducted, the Information Center will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for cultural resources. ✓ If the record search indicates that the project is located in an area rich with cultural materials, the implementing agencies will retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property. ✓ Construction activities and excavation will be conducted to avoid cultural resources (if found). If avoidance is not feasible, further work may need to be done to determine the importance of a resource. The implementation agencies will obtain a qualified archaeologist familiar with the local archaeology, and/or an architectural historian should make recommendations regarding the work necessary to determine importance. If the cultural resource is determined to be important under State or federal guidelines, impacts on the cultural resource will be mitigated. ✓ The project implementation agencies will stop construction activities and excavation in the area where cultural resources are found until a qualified archaeologist can determine the importance of these resources.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.7.3 Construction Impacts on Paleontological Resources	✓ As part of the appropriate environmental review of individual projects, the project implementation agencies will obtain a qualified paleontologist to identify and evaluate paleontological resources where potential impacts are considered high; the paleontologist will also conduct a field survey in these areas. ✓ Construction activities will avoid known paleontological resources, especially if the resources in a particular lithic unit formation have been determined through detailed investigation to be unique. If avoidance is not feasible, paleontological resources will be excavated by the qualified paleontologist and given to a local agency, State University, or other applicable institution, where they can be displayed.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.7.4 Impacts on Human Remains	✓ If the remains are of Native American origin, the coroner will contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner will make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains. ✓ If the Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission, in which case:	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ The landowner or his authorized representative will obtain a Native American monitor - and an archaeologist, if recommended by the Native American monitor - and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following conditions occur: ▪ The Native American Heritage Commission is unable to identify a descendent. ▪ The descendant identified fails to make a recommendation. ▪ The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.		
3.8.1 Energy Consumption and Conservation Impacts	✓ Implementing agencies shall review energy impacts as part of any CEQA-required project-level environmental analysis and specify appropriate mitigation measures for any identified energy impacts. ✓ During the design and approval of transportation improvements and future land use development projects, the following energy efficiency measures shall be incorporated when applicable: ➢ The design or purchase of any lighting fixtures shall achieve energy reductions beyond an estimated baseline energy use for such lighting. ➢ LED technology shall be used for all new or replaced traffic lights, rail signals, and other new development lighting features compatible with LED technology. ✓ Implementing agencies should consider various best practices and technological improvements that can reduce the consumption of fossil fuels such as: ➢ Expanding light-duty vehicle retirement programs ➢ Increasing commercial vehicle fleet modernization ➢ Implementing driver training modules on fuel consumption ➢ Replacing gasoline powered mowers with electric mowers ➢ Reducing idling from construction equipment ➢ Incentivizing alternative fuel vehicles and equipment ➢ Developing infrastructure for alternative fueled vehicles ➢ Implementing truck idling rules, devices, and truck-stop electrification ➢ Requiring electric truck refrigerator units ➢ Reducing locomotives fuel use ➢ Modernizing older off-road engines and equipment ➢ Encouraging freight mode shift ➢ Limit use and develop fleet rules for construction equipment ➢ Requiring zero-emission forklifts ✓ Implementing agencies should include energy analyses in environmental documentation and general plans with the goal of conserving energy through the wise and efficient use of energy. For any identified energy impacts, appropriate mitigation measures should be developed and monitored. Fresno COG recommends the use of Appendix F, Energy Conservation, of the *CEQA Guidelines.* ✓ Project and land use development implementing agencies should streamline permitting and provide public information to facilitate accelerated construction of solar and wind power. ✓ Project and land use development implementing agencies should adopt a “Green Building Program” to promote green building standards. Green buildings can reduce local environmental impacts, regional air pollutant emissions and global greenhouse gas emissions. Green	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	building standards involve everything from energy efficiency, usage of renewable resources and reduced waste generation and water usage. For example, water-related energy use consumes 19 percent of the state's electricity. The residential sector accounts for 48 percent of both the electricity and natural gas consumption associated with urban water use. While interest in green buildings has been growing for some time, cost has been a main consideration as it may cost more up front to provide energy efficient building components and systems. Initial costs can be a hurdle even when the installed systems will save money over the life of the building. Energy efficiency measures can reduce initial costs, for example, by reducing the need for over-sized air conditioners to keep buildings comfortable. Undertaking a more comprehensive design approach to building sustainability can also save initial costs through reuse of building materials and other means. A comprehensive study of the value of green building savings is the 2003 report to California's Sustainable Building Task Force. In the words of the report: "While the environmental and human health benefits of green building have been widely recognized, this comprehensive report confirms that minimal increases in upfront costs of about 2% to support green design would, on average, result in life cycle savings of 20% of total construction costs -- more than ten times the initial investment. For example, an initial upfront investment of up to $100,000 to incorporate green building features into a $5 million project would result in a savings of $1 million in today's dollars over the life of the building." ✓ Where identified, local governments should alter zoning to improve jobs/housing balance, create communities where people live closer to work, and bike, walk, and take transit as a substitute for personal auto travel consistent and in support of the SCS. Creating walkable, transit oriented modes would generally reduce energy use and greenhouse gas emissions. Residential energy use (electricity and natural gas) accounts for 7 percent of California's greenhouse gas emissions. It is estimated that households in transit-oriented developments drive 45 percent less than residents in auto-dependent neighborhoods. In addition, mixed land uses (i.e., residential developments near work places, restaurants, and shopping centers) with access to public transportation have been shown to save consumers up to 512 gallons of gasoline per year. Furthermore, studies have shown that the type of housing (such as multi-family) and the size of a house have strong relationships to residential energy use. Residents of single-family detached housing consume over 20 percent more primary energy than those of multifamily housing and 9 percent more than those of single-family attached housing. ✓ Project and land use development implementing agencies should increase the number of AFVs (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in publically owned vehicles, as well as those owned by franchisees of these agencies, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers. ✓ Bid solicitations for construction of projects should preference the use of alternative formulations of cement and asphalt with reduced GHG emissions to the extent that such cement and asphalt formulations are available at a reasonable cost in the marketplace. Solicitations should also preference the recycling of construction waste and debris if market conditions permit. ✓ Fresno COG shall continue to develop, in coordination with the California Air Resources Board, a data and information collection and analysis system that provides an understanding of the energy demand and greenhouse gas emissions in the Fresno region. ✓ All mitigation measures listed in Chapter 3, Section 3.6 (Climate Change) of this EIR, are incorporated by reference and shall be implemented by implementing agencies to address energy conservation impacts.	✓ On-Going	✓ Fresno COG
3.9.1 Damaged Transportation Infrastructure and other Land Use Development Structures from Seismic Activity	✓ Implementing agencies will be responsible for ensuring that transportation improvement projects and future land use development projects are built to the seismic standards contained in the most recent edition of the Uniform Building Code (UBC).	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ Implementing agencies will ensure that transportation improvement projects and future land use development projects located within or across active fault zones comply with design requirements, published by the CGS, as well as local, regional, state, and federal design criteria for construction of projects in seismic areas. ✓ Implementing agencies will guarantee that geotechnical analysis is conducted within construction areas to establish soil types and local faulting prior to the construction of transportation improvements and future land use developments is subject to geotechnical analysis.		
3.9.2 Slope Failure and Erosion Due to Project Construction	✓ Implementing agencies will ensure that individual transportation improvement projects and future land use developments provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion. ✓ Transportation improvement project and future land use development design features will include measures to reduce erosion from storm water. ✓ Road cuts will be designed to maximize the potential for revegetation. ✓ Implementing agencies will ensure that transportation improvement projects and future land use developments avoid landslide areas and potentially unstable slopes wherever feasible. ✓ Where practicable, transportation improvement project and future land use development designs that would permanently alter unique geologic features will be avoided.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.9.3 Subsidence and Presence of Expansive Soils	✓ Implementing agencies will ensure that geotechnical investigations are conducted by a qualified geologist to identify the potential for subsidence and expansive soils. ✓ Implementing agencies should take corrective measures, such as structural reinforcement and replacing soil with engineered fill, will be implemented in individual transportation improvement project and future land use development site designs, where applicable. ✓ Implementing agencies will ensure that, prior to preparing individual transportation improvement project and future land use development site designs, new and abandoned wells are identified within construction areas to ensure the stability of nearby soils.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.9.4 Loss of Availability of a Designated Mineral Resource that would be of Value to the Region and the Residents of the State	✓ The implementing agency should protect against the loss of availability of a designated mineral resource through identification of locations with designated mineral resources and adoption and implementation of policies to conserve land that is most suitable for mineral resource extraction from development of incompatible uses. ✓ Where possible, transportation improvement project and future land use development sites will be designed by responsible agencies to limit potential impacts on mineral resource lands.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.9.5 Loss of Availability of a Locally-Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan, or Other Land Use Plan	✓ The implementing agency should protect against the loss of availability of a locally-important mineral resource recovery site through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection of mineral resource production and extraction activities.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.10.1 Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials	✓ The implementation agency and project sponsors shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
3.10.2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	✓ Implementing agencies shall encourage the USDOT, the Office of Emergency Services, and Caltrans to continue to conduct driver safety training programs and encourage the private sector to continue conducting driver safety training. ✓ Implementing agencies shall encourage the USDOT and the CHP to continue to enforce speed limits and existing regulations governing goods movement and hazardous materials transportation. ✓ The implementing agencies and project sponsors shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.10.3 Disturb contaminated property during the construction of new transportation or future land use developments or the expansion of existing transportation facilities or land use developments.	✓ Prior to approval of any improvement project or future land use development project, the project implementation agency shall consult all known databases of contaminated sites and undertake a standard Phase 1 Environmental Site Assessment in the process of planning, environmental clearance, and construction for projects included in the 2014 RTP and SCS. If contamination is found the implementing agency shall coordinate clean up and/or maintenance activities. ✓ Where contaminated sites are identified, the project implementation agency shall develop appropriate mitigation measures to assure that worker and public exposure is minimized to an acceptable level and to prevent any further environmental contamination as a result of construction. ✓ Local agencies should contact the Chevron Environmental Management Company (CEMC) to determine whether an improvement or future land use development project may be in the vicinity of the Tidewater Oil Company or Standard Oil Company historical pipeline alignments.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.10.4 Emit Hazardous Materials within One-Quarter Mile of a School	✓ The implementing agencies shall comply with all applicable laws, regulations, and health and safety standards set forth by federal, state, and local authorities that regulate the proper handling of such materials and their containers to the routine transport, use, and disposal of hazardous materials does not create a significant hazard to the public or the environment.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.10.5 For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.	✓ Implementing agencies should comply with ALUC plans as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.10.6 For a project located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.	✓ Implementing agencies should analyze and adhere to all safety and compatibility issues as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.10.7 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	✓ Implementing agencies should adhere to all emergency plans as a part of their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
3.10.8 Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands.	✓ Implementing agencies should analyze and adhere to all safety and compatibility issues as a part of their design and construction of transportation facilities and their land use approval authority through policies incorporated into general plans, specific plans, and other land use plans. Such policies would provide protection for a project located within wild land areas.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.11.1 Violate Regional Water Quality Control Board water quality standards or waste discharge requirements	✓ Improvement projects and new development will include upgrades to storm water drainage facilities to accommodate increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce velocity. ✓ Transportation network improvements and future land use developments will comply with local, state and federal floodplain regulations. Proposed transportation improvements and applicable new developments will be engineered by responsible agencies to accommodate storm drainage flow. ✓ Responsible agencies should ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are provided to prevent water quality degradation. Responsible agencies implementing projects requiring continual water removal facilities should provide monitoring systems including long-term administrative procedures to ensure proper operations for the life of the Project. ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.11.2 Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level	✓ Transportation network improvements and future land use developments will comply with local, state and federal floodplain regulations. Proposed transportation improvements and applicable new developments will be engineered by responsible agencies to accommodate storm drainage flow. ✓ Responsible agencies should ensure that operational best management practices for street cleaning, litter control, and catch basin cleaning are provided to prevent water quality degradation. Responsible agencies implementing projects requiring continual water removal facilities should provide monitoring systems including long-term administrative procedures to ensure proper operations for the life of the Project.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.11.3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site	✓ Prior to construction within the vicinity of a watercourse, the project sponsor can and should obtain all necessary regulatory permits and authorizations from the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), California Department of Fish and Game, California Coastal Commission, and local jurisdictions, and should comply with all conditions issued by applicable agencies. Required permit approvals and certifications may include, but not be limited to the following: ➢ U.S. Army Corps of Engineers (Corps): Section 404. Permit approval from the Corps should be obtained for the placement of dredge or fill material in Waters of the U.S., if any, within the interior of the project site, pursuant to Section 404 of the federal Clean Water Act. ➢ Regional Walter Quality Control Board (RWQCB): Section 401 Water Quality Certification. Certification that the project will not violate state water quality standards is required before the Corps can issue a 404 permit, above. ➢ California Department of Fish and Game (CDFG): Section 1602 Lake and Streambed Alteration Agreement. Work that will alter the bed or bank of a stream requires authorization from CDFG.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	A qualified environmental consultant can and should be retained and paid for by the project sponsor to make site visits as necessary; and as a follow-up, submit to the Lead Agency a letter certifying that all required conditions have been instituted during the grading activities. ✓ Project sponsors can and should comply with the State-wide construction storm water discharge permit requirements including preparation of Storm Water Pollution Prevention Plans for transportation improvement construction projects. Roadway construction projects can and should comply with the Caltrans storm water discharge permit. BMPs can and should be identified and implemented to manage site erosion, wash water runoff, and spill control. ✓ Project sponsors can and should implement BMPs to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. Plans demonstrating BMPs should be submitted for review and approval by the lead agency. At a minimum, the project sponsor can and should provide filter materials deemed acceptable to the lead agency at nearby catch basins to prevent any debris and dirt from flowing into the local storm drain system and creeks. ✓ Project sponsors can and should submit an erosion and sedimentation control plan for review and approval by the appropriate government agency. All work should incorporate all applicable BMPs for the construction industry, including BMPs for dust, erosion and water quality. The measures should include, but are not limited to, the following: ➢ On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the street, gutters, storm drains. ➢ In accordance with an approved erosion control plan, the project sponsor should implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent degradable erosion control fabric should be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas should be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected. ➢ Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible. ➢ Install filter materials acceptable to the appropriate agency at the storm drain inlets nearest to the project site prior to the start of the wet weather season; site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the storm drain system. Filter materials should be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding. ➢ Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into water courses, street gutters, or storm drains. ➢ Direct and locate tool and equipment cleaning so that wash water does not discharge into the street, gutters, or storm drains. ➢ Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the storm drain system by the wind or in the event of a material spill. No hazardous waste material should be stored on-site. ➢ Gather all construction debris on a regular basis and place them in a dumpster or other container which is emptied or removed on a weekly (or other interval approved by the lead agency) basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. ➢ Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.		

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ As appropriate, broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt should be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the street, gutter, and/or storm drains. ➢ All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management should be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the RWQB. ➢ All erosion and sedimentation control measures should be monitored regularly by the project sponsor. If measures are insufficient to control sedimentation and erosion then the project sponsor should develop and implement additional and more effective measures immediately.		
3.11.4 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	✓ Prior to construction, and when a potential drainage issue is known, a drainage study should be conducted by responsible agencies for new capacity-increasing projects and new land use developments, where applicable. Drainage systems should be designed to maximize the use of detention basins, vegetated areas, and velocity dissipaters to reduce peak flows where possible. Transportation and new development improvements will comply with federal, state and local regulations regarding storm water management. State-owned freeways must comply with Storm Water Discharge NPDES permit for Caltrans facilities. ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff. ✓ *A Board permit is required prior to working in the Central Valley Flood Protection Board's jurisdiction for the following:* ➢ *Placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee (23 CCR Section 6);* ➢ *Existing structures that predate permitting, or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (23 CCR Section 6);* ➢ *Vegetation plantings require submission of detailed design drawings; identification of vegetation type; plant and tree names (both common and scientific); quantities of each type of plant and tree; spacing and irrigation method; a vegetative management plan for maintenance to prevent the interference with flood control operations, levee maintenance, inspection, and flood fight procedures (23 CCR Section 131).* *Other local, federal and State agency permits may be required and are the responsibility of the applicant to obtain.* *Board permit application forms and complete 23 CCR regulations can be found on the following website at http://www/cvfpb.ca.gov/. Maps of the Central Valley Flood Protection Board's jurisdiction including all tributaries and distributaries of the Sacramento and San Joaquin Rivers, and Board designated floodways are also available on a Department of Water Resources website at http://gis.bam.wate.ca.gov/bam/.*	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
3.11.5 Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	✓ Project sponsors can and should ensure that new facilities include structural water quality control features such as drainage channels, detention basins, oil and grease traps, filter systems, and vegetated buffers to prevent pollution of adjacent water resources by polluted runoff where required by applicable urban storm water runoff discharge permits. ✓ Drainage of roadway runoff can and should comply with Caltrans' storm water discharge permit. Wherever possible, roadways can and should be designed to convey storm water through vegetated median strips that provide detention capacity and allow for infiltration before reaching culverts. ✓ Project sponsors can and should assure projects mitigate for changes to the volume of runoff, where any downstream receiving water body has not been designed and maintained to accommodate the increase in flow velocity, rate, and volume without impacting the water's beneficial uses. Pre-project flow velocities, rates, and volumes must not be exceeded. This applies not only to increases in storm water runoff from the project site, but also to hydrologic changes induced by flood plain encroachment. Projects should not cause or contribute to conditions that degrade the physical integrity or ecological function of any downstream receiving waters. ✓ Impacts can and should be reduced to the extent possible by providing culverts and facilities that do not increase the flow velocity, rate, or volume and/or acquiring sufficient storm drain easements that accommodate an appropriately vegetated earthen drainage channel. ✓ Project sponsors of improvement projects on existing facilities can and should include upgrades to stormwater drainage facilities to accommodate any increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce flow velocities, including expansion and restoration of wetlands and riparian buffer areas. System designs can and should be completed to eliminate increases in peak flow rates from current levels. ✓ Local jurisdictions can and should encourage Low Impact Development and incorporation of natural spaces that reduce, treat, infiltrate and manage storm water runoff flows in all new developments, where practical and feasible.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.11.6 Otherwise substantially degrade water quality	✓ Improvement projects along existing facilities and future land use developments will include upgrades to storm water drainage facilities to accommodate increased runoff volumes. These upgrades may include the construction of detention basins or structures that will delay peak flows and reduce velocity.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.11.7 Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map	✓ Prior to construction, and when a potential drainage issue is known, a drainage study should be conducted by responsible agencies for new capacity-increasing projects and new land use developments, where applicable. Drainage systems should be designed to maximize the use of detention basins, vegetated areas, and velocity dissipaters to reduce peak flows where possible. Transportation and new development improvements will comply with federal, state and local regulations regarding storm water management. State-owned freeways must comply with Storm Water Discharge NPDES permit for Caltrans facilities. ✓ Responsible agencies should ensure that new facilities include water quality control features such as drainage channels, detention basins, and vegetated buffers to prevent pollution of adjacent water resources by runoff. ✓ Letters of Map Revision (LOMR) will be prepared and submitted to FEMA (when applicable) by responsible agencies where construction would occur within 100-year floodplains. The LOMR will include revised local base flood elevations for projects constructed within flood-prone areas.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.11.8 Expose people or structures to a significant risk of loss, injury or death involving flooding, including	✓ Fresno COG will encourage implementing and local agencies to conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with applicable federal, state, and local agency flood-control regulations.	✓ Ongoing over the life of the Plan	✓ Fresno COG and Implementing

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
flooding as a result of the failure of a levee or dam	These studies should identify project design features or mitigation measures that reduce impacts to either floodplains or flood flows such that the project is consistent with federal, state, and local regulations and laws related to development in the floodplain. ✓ Fresno COG will encourage implementing and local agencies to, the extent feasible and appropriate, prevent development in flood hazard areas that do not have appropriate protections.		agency or project sponsor
3.11.9 Place within a 100-year flood hazard area structures which would impede or redirect flood flows	✓ Fresno COG will encourage implementing and local agencies to conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with applicable federal, state, and local agency flood-control regulations. These studies should identify project design features or mitigation measures that reduce impacts to either floodplains or flood flows such that the project is consistent with federal, state, and local regulations and laws related to development in the floodplain. ✓ Fresno COG will encourage implementing and local agencies to, the extent feasible and appropriate, prevent development in flood hazard areas that do not have appropriate protections.	✓ Ongoing over the life of the Plan	✓ Fresno COG and Implementing agency or project sponsor
3.12.1 Physically Divide a Community	✓ Individual transportation and future land use development projects will be consistent with local transportation system and land use plans and policies that designate areas for urban land use and transportation improvements, as identified by the agency with jurisdiction over said land(s). ✓ Prior to final approval of each individual transportation improvement project and future land use development project, the implementing agency will conduct the appropriate transportation improvement project-specific and future land use development-specific environmental review, to address impacts from land use and transportation system projects that may physically divide a community.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.12.2 Land Use Impacts	✓ Individual transportation and future land use development projects will be consistent with local land use plans and policies that designate areas for urban and rural land use and preserve recreational, open space, and other lands. ✓ Prior to final approval of each individual improvement project and future land use development project, the implementing agency will conduct the appropriate transportation improvement project specific and future land use development-specific environmental review, including consideration of potential land use impacts.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.12.3 Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	✓ Project and future land use development implementation agencies will ensure that projects and future land use developments are consistent with federal, state, and local plans that preserve open space and recreation. ✓ Project and future land use development implementation agencies should identify open space and recreation areas that could be preserved and will include mitigation measures (such as dedication or payment of in-lieu fees) for the loss of open space. ✓ Prior to final approval of each individual improvement and future land use development project, the implementing agency will conduct the appropriate improvement project- and land use development-specific environmental review, including consideration of loss of open space and recreation. ✓ For projects that require approval or funding by the U.S. Department of Transportation, project implementation agencies will comply with Section 4(f) of the U.S. Department of Transportation Act.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.12.4 Does the project include recreational facilities or require the construction or expansion of recreational facilities which might	✓ Project and future land use development implementation agencies will ensure that projects and future land use developments are consistent with federal, state, and local plans that preserve open space and recreation.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
have an adverse physical effect on the environment	✓ Project and future land use development implementation agencies should identify open space and recreation areas that could be preserved and will include mitigation measures (such as dedication or payment of in-lieu fees) for the loss of open space. ✓ Prior to final approval of each individual improvement and future land use development project, the implementing agency will conduct the appropriate improvement project- and land use development-specific environmental review, including consideration of loss of open space and recreation. ✓ Project and future land use development implementation agencies should conduct the appropriate project-specific environmental review, including consideration of loss of open space. Potential significant impacts to open space shall be mitigated, as feasible. The project sponsors or local jurisdiction can and should be responsible for ensuring adherence to the mitigation measures prior to construction. ✓ For projects that require approval or funding by the U.S. Department of Transportation, project implementation agencies will comply with Section 4(f) of the U.S. Department of Transportation Act.		
3.13.1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	✓ As part of the implementing agency's appropriate environmental review of each project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented. ✓ Implementing agencies should employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses. ✓ Implementing agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities. ✓ Implementing agencies should construct sound reducing barriers between noise sources and noise sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors. ✓ Implementing agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. ✓ Implementing agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts. ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.13.2 Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels.	✓ As part of the implementing agency's appropriate environmental review of each project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented. ✓ Implementing agencies should employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating land uses. ✓ Implementing agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and other future noise generating facilities.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ Implementing agencies should construct sound reducing barriers between noise sources and noise sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors. ✓ Implementing agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. ✓ Implementing agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts. ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.		
3.13.3 A substantial permanent increase in ambient noise levels	✓ As part of the implementing agency's appropriate environmental review of each transportation or land use development project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented. ✓ Implementing agencies shall employ, where their jurisdictional authority permits, land use planning measures, such as zoning, restrictions on development, site design, and use of buffers to ensure that future development is compatible with adjacent transportation facilities and other noise generating uses. ✓ Implementing agencies shall, to the extent feasible and practicable, maximize the distance between noise-sensitive land uses and new roadway lanes, roadways, rail lines, transit centers, park-and-ride lots, and future noise generating land uses. ✓ Implementing agencies should construct sound reducing barriers between noise sources and noise sensitive land uses. Sound barriers can be in the form of earth-berms or soundwalls. Constructing roadways so as appropriate and feasible that they are depressed below-grade of the existing sensitive land uses also creates an effective barrier between the roadway and sensitive receptors. ✓ Implementing agencies shall, to the extent feasible and practicable, improve the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. ✓ Implementing agencies shall implement, to the extent feasible and practicable, speed limits and limits on hours of operation of rail and transit systems, where such limits may reduce noise impacts. ✓ Passenger stations, central maintenance facilities, decentralized maintenance facilities, and electric substations should be located away from sensitive receptors.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.13.4 A substantial temporary or periodic increase in ambient noise levels	✓ Implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances. ✓ Implementing agencies will limit the hours of construction to between 6:00 a.m. and 8:00 p.m. on Monday through Friday and between 7:00 a.m. and 8:00 p.m. on weekends. ✓ Equipment and trucks used for construction will utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts. ✓ Impact equipment (e.g., jackhammers, pavement breakers, and rock drills) used for individual improvement project or land use development construction will be hydraulically or electrical powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	tools themselves will be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures will be used such as drilling rather than impact equipment whenever feasible. ✓ Implementing agencies will ensure that stationary noise sources will be located as far from sensitive receptors as possible. If they must be located near existing receptors, they will be adequately muffled. ✓ Implementing agencies will designate a complaint coordinator responsible for responding to noise complaints received during the construction phase. The name and phone number of the complaint coordinator will be conspicuously posted at construction areas and on all advanced notifications. This person will be responsible for taking steps required to resolve complaints, including periodic noise monitoring, if necessary. ✓ Noise generated from any rock-crushing or screening operations performed within 3,000 feet of any occupied residence will be mitigated by the individual improvement project proponent by strategic placement of material stockpiles between the operation and the affected dwelling or by other means approved by the local jurisdiction. ✓ Implementing agencies will direct contractors to implement appropriate additional noise mitigation measures including, but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources to comply with local noise control requirements. ✓ Implementing agencies will implement use of portable barriers during construction of subsurface barriers, debris basins, and storm water drainage facilities. ✓ No pile-driving or blasting operations will be performed within 3,000 feet of an occupied residence on Sundays, legal holidays, or between the hours of 8:00 p.m. and 8:00 a.m. on other days. Any variance from this condition will be obtained from the individual improvement project or new land use development proponent and must be approved by the local jurisdiction. ✓ Wherever possible, sonic or vibratory pile drivers will be used instead of impact pile drivers, (sonic pile drivers are only effective in some soils). If sonic or vibratory pile drivers are not feasible, acoustical enclosures will be provided as necessary to ensure that pile-driving noise does not exceed speech interference criterion at the closest sensitive receptor. ✓ In residential areas, pile driving will be limited to daytime working hours. ✓ Engine and pneumatic exhaust controls on pile drivers will be required as necessary to ensure that exhaust noise from pile driver engines are minimized to the extent feasible. ✓ Where feasible, pile holes will be pre-drilled to reduce potential noise and vibration impacts.		
3.13.5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.	✓ Compliance with Occupational Safety and Health Administration's (OSHA) hearing conservation amendment. The Permissible Exposure Level (PEL) is defined as an 8-hour time-weighted average sound level of 90 dBA integrating all sound levels from at least 90 dBA to at least 140 dBA. Project implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
3.13.6 For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.	✓ Compliance with Occupational Safety and Health Administration's (OSHA) hearing conservation amendment. The Permissible Exposure Level (PEL) is defined as an 8-hour time-weighted average sound level of 90 dBA integrating all sound levels from at least 90 dBA to at least 140 dBA. Project implementing agencies will comply with all local sound control and noise level rules, regulations, and ordinances.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.14.1 Impacts on Regional Growth and Dispersion	✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect projects included in the 2014 RTP and future land use allocations reflected in the SCS.	✓ Ongoing over the life of the Plan	✓ Fresno COG and Implementing agency or project sponsor
3.14.2 Impacts on Community Displacement	✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect projects included in the 2014 RTP and future land use allocations reflected in the SCS. ✓ For projects with the potential to displace homes or businesses, project and future development implementation agencies will evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses. An iterative design and impact analysis would help where impacts to persons or businesses are involved. Potential impacts will be minimized to the extent feasible. ✓ Project implementation agencies should identify businesses and residences to be displaced. As required by law, relocation and assistance will be provided to displaced residents and businesses, in accordance with the federal Uniform Relocation and Real Property Acquisition Policies Act of 1970 and the State of California Relocation Assistance Act, as well as any applicable City and County policies. ✓ Project implementation agencies will develop a construction schedule that minimizes potential neighborhood deterioration from protracted waiting periods.	✓ Ongoing over the life of the Plan ✓ Over the life of the Plan ✓ Over the life of the Plan ✓ Over the life of the Plan	✓ Fresno COG and Implementing agency or project sponsor ✓ Implementing agency or project sponsor ✓ Implementing agency or project sponsor ✓ Implementing agency or project sponsor
3.14.3 Disrupt or Divide Communities	✓ Project implementation agencies will design new transportation facilities that protect access to existing community facilities. During the design phase of the individual improvement project, community amenities and facilities should be identified and access to them considered in the design of the individual improvement project. ✓ Project implementation agencies will design roadway improvements, in a manner that minimizes barriers to pedestrians and bicyclists. During the design phase, pedestrian and bicycle routes will be determined that permit easy connections to community facilities nearby in order not to divide the communities.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.15.1 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental	✓ Prior to construction, the project implementation agency will ensure that all necessary local and state permits are obtained. The project implementation agency also will comply with all applicable conditions of approval. As deemed necessary by the governing jurisdiction, road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans should include the following requirements:	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, and other public facilities	➢ Identify all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow. ➢ Develop circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. ➢ Schedule truck trips outside of peak morning and evening commute hours. ➢ Limit lane closures during peak hours to the extent possible. ➢ Use haul routes, minimizing truck traffic on local roadways, to the extent possible. ➢ Include detours for bicycles and pedestrians in all areas potentially affected by individual improvement project construction. ➢ Install traffic control devices as specified in the Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones. ➢ Develop and implement access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. Access plans will be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions will be asked to identify detours for emergency vehicles, which will then be posted by the contractor. The facility owner or operator will be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures. ➢ Store construction materials only in designated areas. ➢ Coordinate with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary. ✓ Transportation and future land use development projects requiring police protection, fire service, and emergency medical service will coordinate with the local fire department and police department to ensure that the existing public services and utilities would be able to handle the increase in demand for their services. If the current levels of service at the individual improvement project or future land use development site are found to be inadequate, infrastructure improvements and personnel requirements for the appropriate public service will be identified in each individual improvement project's CEQA documentation. ✓ The growth inducing potential of individual transportation and future land use development projects will be carefully evaluated so that the full implications of the 2014 RTP and SCS are understood. Individual environmental documents will quantify indirect impacts (growth that could be facilitated or induced) on public services and utilities. Lead and responsible agencies should then make any necessary adjustments to the applicable general plan. ✓ As part of transportation project-specific or future land use development project-specific environmental review, implementing agencies will evaluate the impacts resulting from the potential for severing underground utility lines during construction activities. Appropriate mitigation measures will be identified for all impacts. The implementing agencies will be responsible for ensuring adherence to mitigation measures. Fresno COG will be provided with documentation indicating compliance with mitigation measures. ✓ Prior to construction, the implementing agency or contractor will identify the locations of existing utility lines. All known utility lines will be avoided during construction.		
3.15.2 Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	✓ During the CEQA review process for individual facilities, implementing agencies should apply necessary mitigation measures to reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
3.15.3 Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	✓ Projects requiring wastewater service, solid waste collection, or potable water service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation. ✓ Reclaimed water will be used for landscaping purposes instead of potable water wherever feasible. ✓ Recently, the Governor declared an emergency drought declaration for the State. Long-term water supply documents anticipate that drought (including severe single-year drought) are regular occurrences within the State. Because the 2014 RTP and SCS do not propose or approve development of any water demand projects, the Governor's drought declaration does not indicate that there is a significant water supply impact associated with the RTP and SCS. ✓ Each of the proposed transportation improvement projects or future land use developments will comply with applicable regulations related to solid waste disposal. ✓ The construction contractor will work with Recycling Coordinators to ensure that source reduction techniques and recycling measures are incorporated into individual transportation improvement or future land use development project construction. ✓ The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal sites will be identified and utilized.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.15.4 Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	✓ During the CEQA review process for individual RTP and SCS projects, implementing agencies with responsibility for the construction of new storm water drainage facilities or the expansion of existing facilities to adequately meet projected capacity needs should apply necessary mitigation measures, including actions set forth in regional watershed management plans, to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. ✓ As part of transportation project-specific and future land use development project-specific environmental review, implementing agencies will evaluate the impacts resulting from soil accumulation during construction of the transportation projects and future land use developments. Appropriate mitigation measures will be identified for all impacts. The implementing agencies will be responsible for ensuring adherence to the mitigation measures. Fresno COG will be provided with documentation indicating compliance with mitigation measures. ✓ Implementing agencies should implement appropriate measures, such as the washing of construction vehicles undercarriages before leaving the construction site or increasing the use of street cleaning machines, to reduce the amount of soil on local roadways as a result of construction.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.15.5 Have sufficient water supplies available to serve the project from existing entitlements and resources, or the need for new or expanded entitlements	✓ Projects requiring potable water service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation. ✓ Reclaimed water will be used for landscaping purposes instead of potable water wherever feasible.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
3.15.6 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	✓ Projects requiring wastewater service will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.15.7 Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	✓ Projects requiring solid waste collection will coordinate with the local agencies to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual transportation improvement or future land use development project sites is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual transportation improvement or future land use development project's CEQA documentation. ✓ Each of the proposed transportation improvement projects or future land use developments will comply with applicable regulations related to solid waste disposal. ✓ The construction contractor will work with Recycling Coordinators to ensure that source reduction techniques and recycling measures are incorporated into individual transportation improvement or future land use development project construction. ✓ The amount of solid waste generated during construction will be estimated prior to construction, and appropriate disposal sites will be identified and utilized.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.15.8 Comply with federal, state, and local statutes and regulations related to solid waste	✓ During the CEQA review process for individual facilities, implementing agencies should apply necessary mitigation measures to reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor
3.17.1 Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system	✓ Measures intended to reduce vehicle miles traveled (VMT) and reduce vehicle hours of delay (VHT) or congestion levels are part of the RTP and SCS. These include: increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use/transportation connection through increased densities, other Travel Demand Management measures described in the RTP and in local agency General Plans, and key transportation investments targeted to reduce congestion levels and improve LOS. ✓ Fresno COG will continue to score funding programs considering a projects ability to enhance complete streets objectives. ✓ Beyond the currently financially and institutionally feasible measures included in the 2014 RTP and SCS, Fresno COG will identify further reductions in VMT, and fuel consumption that could be obtained through land-use strategies, additional car-sharing programs, additional vanpools, and additional bicycle programs. ✓ Transportation Planning: Fresno COG will assist local jurisdictions to encourage new developments incorporate both local and regional transit measures into the project design that promote the use of alternative modes of transportation. ✓ Local jurisdictions can and should promote ride sharing programs e.g., by designating a certain percentage of parking spaces for high-occupancy vehicles, providing larger parking spaces to accommodate vans used for ride-sharing, and designating adequate passenger loading and unloading and waiting areas.	✓ Ongoing over the life of the Plan	✓ Fresno COG and Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ The Plan includes measures intended to reduce vehicle hours of delay. These include: system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce delay. Fresno COG shall encourage local agencies to fully implement these policies and projects. ✓ The Plan includes measures intended to reduce daily heavy-duty truck vehicle hours of delay. These include: goods movement capacity enhancements, system management, increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation, maximizing the benefits of the land use-transportation connection and key transportation investments targeted to reduce heavy-duty truck delay. Fresno COG shall encourage local agencies to fully implement these policies and projects. ✓ Local jurisdictions can and should encourage the use of public transit systems by enhancing safety and cleanliness on vehicles and in and around stations, providing shuttle service to public transit, offering public transit incentives and providing public education and publicity about public transportation services. ✓ Local jurisdictions can and should encourage bicycling and walking by incorporating bicycle lanes into street systems in regional transportation plans, new subdivisions, and large developments, creating bicycle lanes and walking paths directed to the location of schools and other logical points of destination and provide adequate bicycle parking, and encouraging commercial projects to include facilities on-site to encourage employees to bicycle or walk to work. ✓ Transit agencies can and should encourage bicycling to transit facilities by providing additional bicycle parking, locker facilities, and bike lane access to transit facilities when feasible. ✓ Project sponsors can and should build or fund a major transit stop within or near the development. ✓ Local jurisdictions and transit agencies can and should provide public transit incentives such as free or low-cost monthly transit passes to employees, or free ride areas to residents and customers. ✓ Local jurisdictions and project sponsors can and should incorporate bicycle lanes, routes and facilities into street systems, new subdivisions, and large developments. ✓ Local jurisdictions can and should require amenities for non-motorized transportation, such as secure and convenient bicycle parking. ✓ Local jurisdictions can and should ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation. ✓ Local jurisdictions can and should connect parks and open space through shared pedestrian/bike paths and trails to encourage walking and bicycling. ✓ Local jurisdictions can and should create bicycle lanes and walking paths directed to the location of schools, parks and other destination points. ✓ Local jurisdictions can and should work with the school districts to improve pedestrian and bike access to schools and to restore or expand school bus service using lower-emitting vehicles.		

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ Local jurisdictions and transit agencies can and should provide information on alternative transportation options for consumers, residents, tenants and employees to reduce transportation related emissions. ✓ Local jurisdictions can and should educate consumers, residents, tenants and the public about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; vehicle performance and efficiency (e.g., keeping tires inflated); and low or zero-emission vehicles. ✓ Project Selection: Local jurisdictions can and should give priority to transportation projects that would contribute to a reduction in vehicle miles traveled per capita, while maintaining economic vitality and sustainability. ✓ System Interconnectivity: Local jurisdictions can and should create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car sharing, bicycling and walking, by incorporating the following: ➢ Ensure transportation centers are multi-modal to allow transportation modes to intersect; ➢ Provide adequate and affordable public transportation choices, including expanded bus routes and service, as well as other transit choices such as shuttles, light rail, and rail; ➢ To the extent feasible, extend service and hours of operation to underserved arterials and population centers or destinations such as colleges; ➢ Focus transit resources on high-volume corridors and high-boarding destinations such as colleges, employment centers and regional destinations; ➢ Coordinate schedules and routes across service lines with neighboring transit authorities; ➢ Support programs to provide “station cars” for short trips to and from transit nodes (e.g., neighborhood electric vehicles); ➢ Study the feasibility of providing free transit to areas with residential densities of 15 dwelling units per acre or more; ➢ Employ transit-preferential measures, such as signal priority and bypass lanes. Where compatible with adjacent land use designations, right-of-way acquisition or parking removal may occur to accommodate transit-preferential measures or improve access to transit. The use of access management should be considered where needed to reduce conflicts between transit vehicles and other vehicles; ➢ Provide safe and convenient access for pedestrians and bicyclists to, across, and along major transit priority streets; ➢ Use park-and-ride facilities to access transit stations only at ends of regional transit ways or where adequate feeder bus service is not feasible. ✓ Transit System Infrastructure: Local jurisdictions can and should upgrade and maintain transit system infrastructure to enhance public use, including: ➢ Ensure transit stops and bus lanes are safe, convenient, clean and efficient; ➢ Ensure transit stops have clearly marked street-level designation, and are accessible; ➢ Ensure transit stops are safe, sheltered, benches are clean, and lighting is adequate; ➢ Place transit stations along transit corridors within mixed-use or transit-oriented development areas at intervals of three to four blocks, or no less than one-half mile. ✓ Customer Service: Transit agencies can and should enhance customer service and system ease-of-use, including: ➢ Develop a Regional Pass system to reduce the number of different passes and tickets required of system users; ➢ Implement “Smart Bus” technology, using GPS and electronic displays at transit stops to provide customers with “real-time” arrival and departure time information (and to allow the system operator to respond more quickly and effectively to disruptions in service);		

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ Investigate the feasibility of an on-line trip-planning program. ✓ Transit Funding: Local jurisdictions can and should prioritize transportation funding to support a shift from private passenger vehicles to transit and other modes of transportation, including: ➢ Give funding preference to improvements in public transit over other new infrastructure for private automobile traffic; ➢ Before funding transportation improvements that increase roadway capacity and VMT, evaluate the feasibility and effectiveness of funding projects that support alternative modes of transportation and reduce VMT, including transit, and bicycle and pedestrian access. ✓ Transit and Multimodal Impact Fees: Local jurisdictions can and should assess transit and multimodal impact fees on new developments to fund public transportation infrastructure, bicycle infrastructure, pedestrian infrastructure and other multimodal accommodations. ✓ System Monitoring: Local jurisdictions can and should monitor traffic and congestion to determine when and where new transportation facilities are needed in order to increase access and efficiency. ✓ Arterial Traffic Management: Local jurisdictions can and should modify arterial roadways to allow more efficient bus operation, including bus lanes and signal priority/preemption where necessary. ✓ HOV Lanes: Local jurisdictions can and should encourage the construction of high-occupancy vehicle (HOV) lanes or similar mechanisms whenever necessary to relieve congestion and reduce emissions. ✓ Ride-Share Programs: Fresno COG and local jurisdictions can and should promote ride sharing programs, including: ➢ Designate a certain percentage of parking spaces for ride-sharing vehicles; ➢ Designate adequate passenger loading, unloading, and waiting areas for ride-sharing vehicles; ➢ Provide a web site or message board for coordinating shared rides; ➢ Encourage private, for-profit community car-sharing, including parking spaces for car share vehicles at convenient locations accessible by public transit; ➢ Hire or designate a rideshare coordinator to develop and implement ridesharing programs. ✓ Employer-based Trip Reduction: Local jurisdictions can and should support voluntary, employer-based trip reduction programs, including: ➢ Provide assistance to regional and local ridesharing organizations; ➢ Advocate for legislation to maintain and expand incentives for employer ridesharing programs; ➢ Require the development of Transportation Management Associations for large employers and commercial/ industrial complexes; ➢ Provide public recognition of effective programs through awards, top ten lists, and other mechanisms. ✓ Ride Home Programs: Local jurisdictions can and should implement a “guaranteed ride home” program for those who commute by public transit, ride-sharing, or other modes of transportation, and encourage employers to subscribe to or support the program. ✓ Local Area Shuttles: Transit agencies can and should encourage and utilize shuttles to serve neighborhoods, employment centers and major destinations. ✓ Local jurisdictions and transit agencies can and should create a free or low-cost local area shuttle system that includes a fixed route to popular tourist destinations or shopping and business centers. ✓ Local jurisdictions can and should work with existing shuttle service providers to coordinate their services.		

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ Low- and No-Travel Employment Opportunities: Local jurisdictions can and should facilitate employment opportunities that minimize the need for private vehicle trips, including: ➢ Amend zoning ordinances and the Development Code to include live/work sites and satellite work centers in appropriate locations; ➢ Encourage telecommuting options with new and existing employers, through project review and incentives, as appropriate. ✓ Local jurisdictions can and should support bicycle use as a mode of transportation by enhancing infrastructure to accommodate bicycles and riders, and providing incentives. ✓ Development Standards for Bicycles: Local jurisdictions can and should establish standards for new development and redevelopment projects to support bicycle use, including: ➢ Amending the Development Code to include standards for safe pedestrian and bicyclist accommodations, by incorporating the following: ▪ "Complete Streets" policies that foster equal access by all users in the roadway design; ▪ Bicycle and pedestrian access internally and in connection to other areas through easements; ▪ Safe access to public transportation and other non-motorized uses through construction of dedicated paths; ▪ Safe road crossings at major intersections, especially for school children and seniors; ▪ Adequate, convenient and secure bike parking at public and private facilities and destinations in all urban areas; ▪ Street standards will include provisions for bicycle parking within the public right of way. ✓ Local jurisdictions can and should require new development and redevelopment projects to include bicycle facilities, as appropriate with the new land use, including: ➢ Construction of weatherproof bicycle facilities where feasible, and at a minimum, bicycle racks or covered, secure parking near the building entrances; ➢ Provision and maintenance of changing rooms, lockers, and showers at large employers or employment centers. ➢ Prohibit projects that impede bicycle and pedestrian access, such as large parking areas that cannot be safely crossed by non-motorized vehicles, and developments that block through access on existing or potential bicycle and pedestrian routes; ➢ Encourage the development of bicycle stations at intermodal hubs, with attended or "valet" bicycle parking, and other amenities such as bicycle rental and repair, and changing areas with lockers and showers; ➢ Conduct a connectivity analysis of the existing bikeway network to identify gaps, and prioritize bikeway development where gaps exist. ✓ Bicycle and Pedestrian Trails: Local jurisdictions can and should establish a network of multi-use trails to facilitate safe and direct off-street bicycle and pedestrian travel, and will provide bike racks along these trails at secure, lighted locations. ✓ Bicycle Safety Program: Local jurisdictions can and should develop and implement a bicycle safety educational program to teach drivers and riders the laws, riding protocols, routes, safety tips, and emergency maneuvers. ✓ Bicycle and Pedestrian Project Funding: Local jurisdictions can and should pursue and provide enhanced funding for bicycle and pedestrian facilities and access projects, including, as appropriate: ➢ Apply for regional, State, and federal grants for bicycle and pedestrian infrastructure projects; ➢ Establish development exactions and impact fees to fund bicycle and pedestrian facilities;		

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ Use existing revenues, such as State gas tax subventions, sales tax funds, and general fund monies for projects to enhance bicycle use and walking for transportation. ✓ Bicycle Parking: Local jurisdictions can and should adopt bicycle parking standards that ensure bicycle parking sufficient to accommodate 5 to 10 percent of projected use at all public and commercial facilities, and at a rate of at least one per residential unit in multiple-family developments. ✓ Local jurisdictions can and should implement measures to reduce employee vehicle trips and to mitigate emissions impacts from municipal travel. ✓ Pedestrian and Bicycle Promotion: Local jurisdictions can and should work with local community groups and downtown business associations to organize and publicize walking tours and bicycle events, and to encourage pedestrian and bicycle modes of transportation. ✓ Trip Reduction Program: Local jurisdictions can and should implement a program to reduce vehicle trips by employees, including: ➢ Providing incentives and infrastructure for vanpooling and carpooling, such as pool vehicles, preferred parking, and a website or bulletin board to facilitate ride-sharing; ➢ Providing subsidized passes for mass transit; ➢ Offering compressed work hours, off-peak work hours, and telecommuting, where appropriate; ➢ Offer a guaranteed ride home for employees who use alternative modes of transportation to commute. ✓ Bicycle Transportation Support: Local jurisdictions can and should promote and support the use of bicycles as transportation, including: ➢ Providing bicycle stations with secure, covered parking, changing areas with storage lockers and showers, as well as a central facility where minor repairs can be made; ➢ Providing bicycles, including electric bikes, for employees to use for short trips during business hours; ➢ Implementing a police-on-bicycles program; ➢ Providing a bicycle safety program, and information about safe routes to work. ✓ Transit Access to Municipal Facilities: Local jurisdiction and agency facilities can and should be located on major transit corridors, unless their use is plainly incompatible with other uses located along major transit corridors.		
3.17.2 Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways	✓ A number of local street and road and State Route segments along the regional street and highway will experience deficient LOS conditions by 2040. Mitigation measures for these segments have not been identified or programmed in the RTP. Intersection improvements and lane additions would improve deficient levels of service to acceptable levels consistent with minimum LOS policies identified in the RTP; however, funding to address the improvements is not available or the costs to mitigate the deficiencies are prohibitive. Fresno COG should coordinate efforts to identify appropriate strategies that would improve deficient levels of service along the affected streets and highways. Fresno COG should work continue to with local agencies and Caltrans, District 6 to identify alternative improvements, associated cost estimates, and an implementation plan and schedule as part of various Caltrans studies and during update of local general plans and other planning efforts. Various funding sources should be analyzed as part of implementation plans and findings should be incorporated into future RTPs. ✓ Project sponsors of a commercial use can and should submit to the Lead Agency (or other appropriate government agency) a Transportation Demand Management (TDM) plan containing strategies to reduce on-site parking demand and single occupancy vehicle travel. The sponsor should implement the approved TDM plan. The TDM should include strategies to increase bicycle, pedestrian, transit, and carpools/vanpool use. All four modes of travel should be considered. Strategies to consider include the following:	✓ Ongoing over the life of the Plan	✓ Fresno COG and Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement ➢ Construction of bike lanes per the prevailing Bicycle Master Plan (or other similar document) ➢ Signage and striping onsite to encourage bike safety ➢ Installation of pedestrian safety elements (such as cross walk striping, curb ramps, countdown signals, bulb outs, etc.) to encourage convenient crossing at arterials ➢ Installation of amenities such as lighting, street trees, trash and any applicable streetscape plan. ➢ Direct transit sales or subsidized transit passes ➢ Guaranteed ride home program ➢ Pre-tax commuter benefits (checks) ➢ On-site car-sharing program ➢ On-site carpooling program ➢ Distribution of information concerning alternative transportation options ➢ Parking spaces sold/leased separately ➢ Parking management strategies; including attendant/valet parking and shared parking spaces ✓ Project sponsors and construction contractors can and should meet with the appropriate Lead Agency (or other government agency) to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project sponsor should develop a construction management plan for review and approval by the Lead Agency (or other government agency as appropriate). The plan should include at least the following items and requirements: ➢ A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. ➢ Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur. ➢ Location of construction staging areas for materials, equipment, and vehicles at an approved location. ➢ A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager should determine the cause of the complaints and should take prompt action to correct the problem. The Lead Agency should be informed who the Manager is prior to the issuance of the first permit. ➢ Provision for accommodation of pedestrian flow. ➢ As necessary, provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on street spaces. ➢ Any damage to the street caused by heavy equipment, or as a result of this construction, should be repaired, at the project sponsor's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair should occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety should be repaired immediately. The street should be restored to its condition prior to the new construction as established by the Lead Agency (or other appropriate government agency) and/or photo documentation, at the sponsor's expense, before the issuance of a Certificate of Occupancy. ➢ Any heavy equipment brought to the construction site should be transported by truck, where feasible. ➢ No materials or equipment should be stored on the traveled roadway at any time. ➢ Prior to construction, a portable toilet facility and a debris box should be installed on the site, and properly maintained through project completion.		

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ All equipment should be equipped with mufflers. ➢ Prior to the end of each work-day during construction, the contractor or contractor should pick up and properly dispose of all litter resulting from or related to the project whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors. ✓ Project sponsors can and should ensure that prior to construction all necessary local and State road and railroad encroachment permits are obtained. As deemed necessary by the governing jurisdiction, the road encroachment permits may require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. Traffic control plans should include the following requirements: ➢ Identification of all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts to traffic flow. ➢ Development of circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. ➢ Scheduling of truck trips outside of peak morning and evening commute hours. ➢ Limiting of lane closures during peak hours to the extent possible. ➢ Usage of haul routes minimizing truck traffic on local roadways to the extent possible. ➢ Inclusion of detours for bicycles and pedestrians in all areas potentially affected by project construction. ➢ Installation of traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones. ➢ Development and implementation of access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. The access plans would be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions should be asked to identify detours for emergency vehicles, which will then be posted by the contractor. Notify in advance the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures. ➢ Storage of construction materials only in designated areas ➢ Coordination with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary. ✓ Local jurisdictions can and should implement traffic and roadway management strategies to improve mobility and efficiency, and reduce associated emissions. ✓ Signal Synchronization: Local jurisdictions can and should expand signal timing programs where emissions reduction benefits can be demonstrated, including maintenance of the synchronization system, and will coordinate with adjoining jurisdictions as needed to optimize transit operation while maintaining a free flow of traffic. ✓ Delivery Schedules: Local jurisdictions can and should establish ordinances or land use permit conditions limiting the hours when deliveries can be made to off-peak hours in high traffic areas.		
3.17.4 Substantially increase hazards due to a design feature or incompatible uses	✓ Implementing agencies should consider safety an objective in the design of RTP projects, and should plan to avoid, improve, or mitigate safety impacts in the course of project-level environmental review. ✓ Fresno COG shall conduct a forum where policy-makers can be educated and can develop consensus on regional transportation safety and security policies.	✓ Ongoing over the life of the Plan ✓ FY 2015/16	✓ Implementing agency or project sponsor ✓ Fresno COG

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	✓ Fresno COG shall work with local officials to assist with implementation of regional transportation safety and security policies.	✓ Ongoing over the life of the Plan	✓ Fresno COG and Implementing agency or project sponsor
3.17.5 Result in inadequate emergency access	✓ Fresno COG shall support local agencies with the rapid repair of transportation infrastructure in the event of an emergency. This will be accomplished by Fresno COG, in cooperation with local and State agencies, identifying critical infrastructure needs necessary for: a) emergency responders to enter the, region, b) evacuation of affected facilities, and c) restoration of utilities. In addition, Fresno COG shall establish transportation infrastructure practices that promote and enhance security.	✓ Ongoing over the life of the Plan	✓ Fresno COG and Implementing agency or project sponsor
3.17.6 Result in inadequate parking capacity	✓ Local jurisdictions can and should establish parking policies and requirements that capture the true cost of private vehicle use and support alternative modes of transportation. ✓ Parking Policy: Local jurisdictions can and should adopt a comprehensive parking policy to discourage private vehicle use and encourage the use of alternative transportation by incorporating the following: ➢ Reduce the available parking spaces for private vehicles while increasing parking spaces for shared vehicles, bicycles, and other alternative modes of transportation; ➢ Eliminate or reduce minimum parking requirements for new buildings; ➢ "Unbundle" parking (require that parking is paid for separately and is not included in the base rent for residential and commercial space); ➢ Use parking pricing to discourage private vehicle use, especially at peak times; ➢ Create parking benefit districts, which invest meter revenues in pedestrian infrastructure and other public amenities; ➢ Establish performance pricing of street parking, so that it is expensive enough to promote frequent turnover and keep 15 percent of spaces empty at all times; ➢ Encourage shared parking programs in mixed-use and transit-oriented development areas. ✓ Event Parking Policies: Local jurisdictions can and should establish policies and programs to reduce onsite parking demand and promote ride-sharing and public transit at large events, including: ➢ Promote the use of peripheral parking by increasing on-site parking rates and offering reduced rates for peripheral parking; ➢ Encourage special event center operators to advertise and offer discounted transit passes with event tickets; ➢ Encourage special event center operators to advertise and offer discount parking incentives to carpooling patrons, with four or more persons per vehicle for on-site parking; ➢ Promote the use of bicycles by providing space for the operation of valet bicycle parking service. ✓ Parking "Cash-out" Program: Local jurisdictions can and should require new office developments with more than 50 employees to offer a Parking "Cash-out" Program to discourage private vehicle use. ✓ Electric/Alternative Fuel Vehicle Parking: Local jurisdictions can and should require new commercial and retail developments to provide prioritized parking for electric vehicles and vehicles using alternative fuels. ✓ Municipal Parking Management: Local jurisdictions can and should implement a Parking Management Program to discourage private vehicle use, including: ➢ Encouraging carpools and vanpools with preferential parking and a reduced parking fee;	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

Impact	Mitigation Measure (s)	Timing of Implementation	Responsible Agency or Party
	➢ Institute a parking cash-out program; ➢ Renegotiate employee contracts, where possible, to eliminate parking subsidies; ➢ Install on-street parking meters with fee structures designed to discourage private vehicle use; establish a parking fee for all single-occupant vehicles. ✓ Local jurisdictions can and should adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation.		
3.17.7 Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)	✓ Local agencies will be encouraged to update general, area, community and specific plans to reflect the current status of future 2014 RTP street and highway improvements and future land use allocations reflected in the SCS.	✓ Ongoing over the life of the Plan	✓ Implementing agency or project sponsor

EXHIBIT C

LIST OF PREPARERS, ORGANIZATIONS, AND AGENCIES REFERENCED OR CONSULTED

LIST OF PREPARERS

The following provides a list of firms and staff members involved in the preparation process of this document:

COUNCIL OF FRESNO COUNTY GOVERNMENTS

Tony Boren, Executive Director
Barbara Steck, Deputy Director
Michael Bitner, Principal Planner
Rob Terry, Senior Regional Planner, Fresno COG Project Manager
Kristine Kai, Senior Regional Planner
Kathy Chung, Senior Regional Planner
Kai Han, Senior Regional Planner
Clark Thompson, Senior Regional Planner
Lauren Dawson, Senior Regional Planner
Melissa Garza, Senior Regional Planner
Brenda Veenendaal, Senior Regional Planner
Lindsey Monge, Associate Regional Planner
Laurel Fawcett, Associate Regional Planner
Peggy Arnest, Associate Regional Planner
Seth Scott, GIS Specialist

VRPA TECHNOLOGIES, INC.

VRPA Technologies, Inc.

Georgiena Vivian, Vice President, VRPA Team Project Manager
Erik Ruehr, P.E., Director of Traffic Engineering
Jeff Stine, Senior Transportation Planner
Jason Ellard, Transportation Engineer
Erica Thompson, Transportation/Traffic Engineer
Dena Graham, Research Specialist
Hector Guerra Jr., Intern

Appendix D Item 3:
Resolution of Certification

BEFORE THE
FRESNO COUNCIL OF GOVERNMENTS
RESOLUTION 2014-19

In the Matter of)	RESOLUTION CERTIFYING THE FINAL
)	PROGRAM ENVIRONMENTAL IMPACT
CERTIFYING THE FINAL)	REPORT (PEIR) FOR THE 2014 RTP/SCS
PROGRAM ENVIRON-)	
MENTAL IMPACT REPORT)	
(PEIR) FOR THE 2014 RTP)	

WHEREAS, the Council of Fresno County Governments is a Regional Transportation Planning Agency and a Metropolitan Planning Organization, pursuant to State and Federal designation; and

WHEREAS, federal planning regulations require Metropolitan Planning Organizations to prepare and adopt a long range Regional Transportation Plan (RTP) for their region; and

WHEREAS, Senate Bill (SB) 375 (Steinberg, 2008) requires that Metropolitan Planning Organizations prepare a Sustainable Communities Strategy (SCS) as part of the 2014 RTP that demonstrates how the region will reduce the greenhouse gas emissions (GHG) from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the California Air Resources Board (ARB); and

WHEREAS, the Council of Fresno County Governments (Fresno COG) has prepared a Program Environmental Impact Report (PEIR) for the 2014 Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) relating to and assessing environmental effects related to the development of the 2014 RTP/SCS; and

WHEREAS, in accordance with the provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines, a Notice of Completion of the Draft PEIR was filed and the Draft PEIR was routed to the State Clearinghouse, responsible agencies, other governmental and trustee agencies having discretionary approval or jurisdiction by law over natural resources affected by the Project, the County of Fresno, affected transportation agencies, and other interested persons and agencies; and

WHEREAS, all comments on the PEIR concerning environmental issues that were received during the public review period were evaluated by Fresno COG Staff and a written response was prepared in accordance with the requirements of CEQA Guideline, section 15088. Both the comments and responses thereto are included in the Final PEIR; and

WHEREAS, the Final PEIR contains the elements required by CEQA, including, but not limited to:

(a) Identification, description and discussion of all potential significant environmental effects of the proposed project, both direct and indirect, both short term and long term.

(b) A description of mitigation measures proposed to minimize potentially significant environmental effects of the proposed project identified in the Final PEIR.

(c) A description of those potentially significant environmental effects which cannot be avoided or which can be mitigated, but not reduced to a level of insignificance.

(d) A description of a range of reasonable alternatives to the proposed project and evaluation of the comparative merits and potentially significant environmental effects of the alternatives, including the "no project" alternative.

(e) A discussion of cumulative impacts, in accordance with the requirements of CEQA Guidelines section 15130.

(f) A list of all Federal, State and local agencies or other organizations and private individuals consulted in preparing the PEIR, and the firm preparing the PEIR; and

WHEREAS, the mitigation measures contained in the Final PEIR have been incorporated into the Mitigation Monitoring Program designed to insure the implementation of measures imposed to alleviate or lessen significant environmental impacts; and

WHEREAS, the responses to comments were supplied to public agencies that had submitted comments on the draft PEIR: and

WHEREAS, the Fresno COG has heard, been presented with and is familiar with the information in the administrative record, has reviewed and considered the information in the PEIR for completeness and compliance with CEQA; and

WHEREAS, the Fresno COG held a public hearing on April 24, 2014 to consider the 2014 RTP/SCS PEIR and the 2014 RTP/SCS; and

WHEREAS, all public comments received during the review period of the PEIR have been addressed, and are contained within the Final PEIR.

NOW, THEREFORE BE IT RESOLVED by the Fresno COG, based on the foregoing facts and circumstances as follows:

1. The Fresno COG finds that the Findings and Statement of Overriding Consideration, included as Appendix A in the Final PEIR and incorporated herein by reference, accurately summarized the project addressed in the PEIR, its impacts and benefits to the community.

2. The Fresno COG finds that the Mitigation Monitoring Program, included as Appendix B in the Final PEIR, as and incorporated herein by reference, is an adequate Mitigation Monitoring Program pursuant to Public Resources Code section 21081.6. The Fresno COG hereby adopts the Mitigation Monitoring Program set forth in Exhibit 2 with respect to those mitigation measures imposed on the project pursuant to the conditions.

3. The Final PEIR reflects the independent judgment of the Fresno COG Policy Board, has been completed and processed in compliance with the requirements of CEQA.

4. The Final PEIR has been completed and processed in compliance with CEQA.

5. The 2014 Regional Transportation Plan and Sustainable Communities Strategy Final Program EIR is thus certified.

6. The Policy Board further directs Fresno COG staff to file a Notice of Determination with the California State Clearinghouse, as required by CEQA.

THE FOREGOING RESOLUTION was passed and adopted by the Fresno Council of Governments this 26th day of June, 2014.

AYES:

NOES:

ABSTAIN:

ABSENT:

Signed: _____
Amarpreet Dhaliwal, Chairman

ATTEST:

I hereby certify that the foregoing is a true copy of a resolution of the Fresno Council of Governments duly adopted at a regular meeting thereof held on the 26th day of June, 2014.

Signed: _____
Tony Boren, Executive Director