

Chapter 5

Climate Change Element

5.1 Background:

The addition of the *Climate Change Element* for the 2011 *Regional Transportation Plan (RTP)* is a new component in the RTP process, reflecting developments pertaining to climate change/global warming that have occurred in the past four years, since the last RTP update in 2007.

--- **September of 2006**, California strengthened its commitment to develop a comprehensive approach to address Global Climate Change when Gov. Schwarzenegger signed **Assembly Bill 32** "*The Global Warming Solutions Act of 2006*"-the goal of this Act is to reduce greenhouse gas emissions to 1990 levels no later than 2020. For the full text of AB 32 please see: http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf

--- **May 2007 Fresno COG adopted the 2007 RTP**

During the public comment period for the draft Environmental Impact Report (EIR) for the 2007 Regional Transportation Plan, Fresno COG received requests to address greenhouse gas emission policies. Following a number of letters and meetings, Fresno COG adopted a resolution to incorporate greenhouse gas policies. This resolution demonstrates the level of commitment that Fresno COG has made toward participation in the reduction of emissions that contribute to global climate change.

--- **June 2008 Fresno COG adopted Resolution No. 2008-08 -Adopting Greenhouse Gas Policies**

Since Fresno COG's resolution for greenhouse gas policies was adopted, the political and scientific communities have expedited their work to address the issue of climate change. The legislation and subsequent requirements regarding climate change have often resulted in many more questions than answers for Regional Planning Agencies. The following is a brief description of the legislative actions.

--- **September 2008 Senate Bill 375** (Steinberg, Chapter 728) was signed by Governor Schwarzenegger which builds upon the climate change legislation of AB 32. SB 375 provides the approach to achieve AB 32 goals through the reduction of greenhouse gas emissions from cars and light duty trucks. SB 375 uses the regional transportation planning process to achieve greenhouse gas reductions consistent with AB 32's goals using a three pronged approach: it employs California Environmental Quality Act (CEQA) incentives to encourage projects that are consistent with a "Sustainable Communities Strategy" that will reduce greenhouse gas emissions; it links the regional housing needs allocation process to the regional transportation process; and establishes a process to establish SB 375 regional emission reduction targets for regional planning agencies to incorporate into long-range transportation plans (RTP) and investments. For the full text of SB 375 please see: http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_0351-0400/sb_375_bill_20080930_chaptered.pdf

--- **December 2008 the California Air Resources Board adopted the "Climate Change Scoping Plan"** This plan serves as the framework for implementing the *Global Warming Solutions Act of 2006* (AB 32). It specifically points to SB 375 as the process to reduce greenhouse gas emissions through more sustainable land use and transportation planning. The Scoping Plan stated that the emission reductions were to be measured against greenhouse gas regional emission targets to be determined by the California Air Resources Board (ARB). Early in the process, the ARB recognized the difficulty of setting these targets. In order to balance the political implications, modeling requirements, and the incredible coordination that would be required between the state, regions, counties and cities, ARB established a working group to address the methodology to be used in setting the "Regional Targets". **The Regional Targets Advisory Committee** began this work January 1, 2009, and made their recommendation on the

methodology to set the targets to ARB on September 30, 2009. For the full text of the Scoping Plan please see: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf

--- **September 2010 The final SB 375 greenhouse gas reduction targets will be set by ARB** - unfortunately too late to incorporate into this 2011 RTP cycle.

This accelerated timeline of legislation has had a direct impact on many elements of Fresno COG's Resolution to Incorporate/Adopt Greenhouse Gas Policies. This chapter will highlight Fresno COG's greenhouse gas policies and achievements while still representing only the first phase in our approach to reduce mobile sources of greenhouse gases. The second phase of full compliance with SB 375 will be in the 2014/15 RTP cycle.

This RTP will interconnect many aspects together in a unified and coordinated plan for transportation in Fresno County. For example: the Congestion Management Process, the San Joaquin Valley Regional Blueprint Process, the Valley-wide Chapter, and the Climate Change Element are all interrelated.

Fresno COG will adopt the 2011 RTP before final emission reduction targets are determined. Therefore, this Climate Change Element is the first phase in Fresno COG's approach to address the issue of global climate change. The 2011 RTP Environmental Impact Report (EIR) process will meet the requirements of AB 32. The second phase of our approach to address climate change will occur in the 2014/15 RTP update cycle and will incorporate the requirements of SB 375, including the regional targets that will not be available prior to the adoption of the current 2011 RTP. Either a Sustainable Communities Strategy will be adopted in the 2014/15 RTP or Fresno COG will incorporate an Alternative Planning Strategy in order to be fully compliant with SB 375. Subsequent RTP cycles will evaluate the progress of the implemented strategies and make modifications as necessary.

5.2 Greenhouse Gas Resolution

Fresno COG's greenhouse gas resolution includes a number of components to incorporate in the 2011 RTP Climate Change Element. The following discussion covers the content included in the resolution.

In order to comply with Fresno COG's resolution on greenhouse gas emission reductions, and to understand how the control of greenhouse gases differ from what we commonly refer to as "air pollution", a brief overview of the current air quality challenges that face the Fresno County region is needed.

5.3 Status of Air Quality in the San Joaquin Valley

(The following discussion contains content from *AB 170 Requirements for General Plans, San Joaquin Valley Unified Air Pollution Control District -4/2/09*)

The California Air Resources Board (ARB) and the United States Environmental Protection Agency (EPA) have established "criteria" air pollution standards in an effort to protect human health and welfare. "Criteria" air pollutants are those that have been proven to be harmful to human health and welfare. "Standards" are the concentrations (amounts) of air pollutants that will attain health protective levels. Nationally, the levels are referred to as National Ambient Air Quality Standards or NAAQS. In addition, the State of California sets standards that are more stringent than the federal levels. Geographic areas are designated as "attainment" if these standards are met or are designated as "nonattainment" if they are not met. More detailed information regarding current federal and state standards can be found online on the ARB website at: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

At the federal level, the entire eight county San Joaquin Valley Air Basin (SJVAB) is currently designated as "nonattainment" for the 8-hour ozone standard, attainment for PM₁₀ and CO, and nonattainment for PM_{2.5}. At the state level the SJVAB is designated as nonattainment for the 8-hour ozone, PM₁₀, and PM_{2.5}

standards. The District's current attainment status can be found on the San Joaquin Valley Unified Air Pollution Control District's (SJVUAPCD) website at: <http://www.valleyair.org/aqinfo/attainment.htm>

The following section summarizes the air pollutants of greatest importance in the San Joaquin Valley. It provides a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

Air pollution in the Valley results from emissions generated in the Valley as well as from emissions and secondary pollutants transported into the Valley. It is thought that the bulk of the Valley's summer and winter air pollution is caused by locally generated emissions. Due to the Valley's meteorology, topography, and the chemical composition of the air pollutants, oxides of nitrogen are the primary culprits in the formation of both ozone and PM_{2.5}.

Ozone – Ozone (O₃) and particulate matter are the two pollutants that are responsible for the bulk of the Valley's air quality problems. Ozone is the major component of the Valley's summertime "smog," and it affects human health and vegetation. Ozone is not emitted directly into the air, but is created by a series of chemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_x) that take place in the presence of sunlight. ROG and NO_x are emitted from fuel combustion, agricultural processes, and industrial processes that are widespread throughout the Valley as well as from natural sources. Studies have also linked urban areas with both higher regional temperatures and higher ozone levels (a phenomenon known as the "urban heat island effect").

High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments. Ozone also damages natural ecosystems such as forests and foothill communities, agricultural crops, and some man-made materials, such as rubber, paint, and plastics.

Reactive Organic Gases – Reactive organic gases (ROG), also known as volatile organic compounds (VOC), are photochemically reactive hydrocarbons that are important for ozone formation. The primary sources of ROG are petroleum transfer and storage, oil and gas production, mobile sources, organic solvent use, farming operations, and miscellaneous processes. No separate health standards exist for ROG as a group. Because some compounds that make up ROG are also toxic, like the carcinogen benzene, they are often evaluated as part of a toxic risk assessment.

Oxides of Nitrogen – Oxides of Nitrogen (NO_x) are a family of gaseous nitrogen compounds and are precursors to the formation of ozone and particulate matter. The major component of NO_x, nitrogen dioxide (NO₂), is a reddish-brown gas that is toxic at high concentrations. NO_x results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of this air pollutant.

Particulate Matter – Particulate matter (PM) is any material except pure water that exists in the solid or liquid state in the atmosphere. Suspended particulate matter (airborne dust) consists of particles small enough to remain suspended in the air for long periods. Respirable particulate matter consists of particles small enough to be inhaled, pass through the respiratory system, and lodge in the lungs with resultant detrimental health effects. Respirable particulate matter includes two size classifications: "inhalable coarse particles" with diameters larger than 2.5 micrometers and smaller than 10 micrometers referred to as particulate matter 10 (PM₁₀), and "fine particles" with diameters that are 2.5 micrometers and smaller referred to as particulate matter 2.5 (PM_{2.5}).

PM₁₀ and PM_{2.5} are both primary pollutants which are emitted directly to the atmosphere, while secondary pollutants are formed in the atmosphere by chemical reactions among precursors. Generally, PM_{2.5} sources tend to be produced from combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM₁₀ sources include these same sources plus road and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust (PM₁₀), in the Valley.

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.

Carbon Monoxide – Carbon monoxide (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone). Because of the local nature of CO emissions, the ARB and EPA designate CO nonattainment by urban areas instead of the entire air basin as is done with ozone and PM₁₀. The main source of CO in the San Joaquin Valley is on-road motor vehicles. Other CO sources in the Valley include other mobile sources, miscellaneous processes, and fuel combustion from stationary sources. Emissions of CO from motor vehicles have been declining since 1985, despite increases in vehicle miles traveled (VMT), due to the introduction of new automotive emission controls and fleet turnover.

Sulfur Dioxide – Sulfur Dioxide (SO₂) is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. The SJVAB is in attainment of both the federal and California standards. However, like airborne NO_x, suspended SO_x particles contribute to the poor visibility that sometimes occurs in the Valley. These SO_x particles are also a component of PM₁₀. The prevalence of low-sulfur fuel use in Valley has minimized problems from this pollutant.

Lead – Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. The health effects of lead poisoning include loss of appetite, weakness, apathy, and miscarriage; it can also cause lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract.

Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically. Lead concentrations were last systematically measured in the SJVAB in 1989, when the average concentrations were approximately five percent of the state lead standard. Though monitoring was discontinued in 1990, lead levels are probably well below applicable standards, and the SJVAB is designated as attainment for lead.

A detailed discussion of selected criteria air pollutants can be found in the *District's Guide for Assessing and Mitigating Air Quality Impacts: Technical Document*, available on the District's website at: www.valleyair.org/transportation/ceqa_guidance_documents.htm

Additional information regarding the health impacts of air pollution including environmental costs and societal costs can be found in Appendix E *Transportation Pricing Strategies Analysis* of the 2011 FTP.

Regulation of Criteria Pollutants

The reduction of criteria pollutants is achieved using a complex, interwoven, collaborative approach. At the federal level the EPA is charged with implementing national air quality programs to meet the National Ambient Air Quality Standards. The mandates are set forth in the federal Clean Air Act (CAA) first signed into law in 1963. EPA sets standards for vehicles, stationary sources, and provides research and guidance for air pollution programs. The CAA requires states with nonattainment areas to put into practice State Implementation Plans (SIPs) which detail the strategies and control measures each state will employ to reduce air pollution. The California Air Resources Board is tasked with setting standards to reduce emissions from new motor vehicles and consumer products. Due to the size of the state of California and the very serious levels of air pollution throughout the majority of the state, designated areas have "local" air districts that prepare the SIPs. The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is responsible for preparing the SIP for the eight counties in the SJV Air Basin (San Joaquin, Stanislaus, Madera, Merced, Fresno, Tulare, Kings and the valley portion of Kern County) The SJVUAPCD is tasked with the primary goal of reducing emissions from all sources, other than those from motor vehicles. With the passage of the California Clean Air Act, the SJVUAPCD is also responsible to implement transportation control measures and is encouraged to adopt indirect source control programs

to reduce mobile source emissions. Cities, counties and regional planning agencies are tasked with developing programs that conform to the SIP and reduce emissions from transportation sources.

The fundamental nature of greenhouse gases and especially the control of their emissions are substantially different than “traditional” air pollutants. It is important to understand and detail these differences in our approach to controlling greenhouse gas emissions.

5.4 Greenhouse Gases

Greenhouse gases are gases that absorb and emit thermal, infrared radiation trapping heat in the earth's atmosphere similar to the effect of sunlight warming the interior of a glass-covered greenhouse-hence the name “greenhouse gas”. Greenhouse gases 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 (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃), 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 CO₂, CH₄, N₂O, and fluorinated carbons.

- **Carbon Dioxide** – CO₂ enters the atmosphere through the burning of fossil fuels, solid waste, trees and wood products. CO₂ is also as a result of other chemical reactions (e.g., certain manufacturing processes). CO₂ is removed from the atmosphere through the photosynthesis process (the process in which plants absorb and convert CO₂ into energy).
- **Methane** – CH₄ is emitted during the production and transport of coal, natural gas, and oil. CH₄ 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** – N₂O 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 SJVUAPCD's website at: http://www.valleyair.org/Programs/CCAP/CCAP_idx.htm

Regulation of Greenhouse Gases

As mentioned above, the current federal and State approach to reduce greenhouse gases is through legislation. California is not only leading the nation but indeed the world in its far reaching approach to reduce greenhouse gas emissions. The legislation is specific in intent, yet presents a substantial challenge for local governments to meet those intentions.

5.5 Potential Impacts of Global Climate Change on Fresno County

Projected temperature rise from 1°C to 2.3°

Increase in extreme heat days

Model suggests near similar precipitation, but with a variation of 15-20%

Greater storm intensity, but overall fewer storms and reduced duration

Snow level rise to higher elevation

Warming will cause earlier snowpack melt

Increase in temperature, causing increase in summertime ozone levels

Projected increase in wildfires

Warmer winters projected to decrease secondary fine particulate matter

Warming is projected to increase agricultural weeds, pests, and pathogens

Crop changes; stone fruits will lack the hours of chill necessary for production

Potential increase in amount and strength of allergens

Increase energy costs will impact agriculture transportation costs

Increasing population growth (influx from more severely affected areas) will exacerbate high single occupancy vehicle use

Data from: *Mitigation and Adaptation Strategies for Climate Change in Fresno, California*; Institute for Climate Change-Oceans and Atmosphere, California State University, Fresno, August 2008.

5.6 Greenhouse Gas Potential Reductions-Fresno County

SB 375 and the ARB's *Climate Change Scoping Plan* were adopted after the drafting of Fresno COG's Greenhouse Gas Resolution. These two documents detail the implementation of a Sustainable Communities Strategy for regions that are to have SB 375 Regional Emission Targets set by the ARB by September 2010. ARB established the Regional Targets Advisory Committee (RTAC) to recommend a method that would evaluate the potential for reducing greenhouse gas emissions in each major region of the state. Following nine months of meetings, the RTAC published their recommendation for the methodology to be used. (September 2009). The Committee considered data needs; modeling techniques; growth forecasts; impacts of regional jobs-housing balance on interregional travel; economic trends (including current economic conditions); the funding required for implementation; demographic trends; the magnitude of greenhouse gas reduction benefits from a variety of land use and transportation strategies; appropriate methods to describe regional targets and how to monitor performance in attaining those targets. Fresno COG has been proactive in their approach and dedication to the reduction of greenhouse gases and has participated in the Regional Target Advisory Committee meetings and modeling committee subgroups. The RTAC's recommendations state that, "Prior to setting targets for a region, ARB is required to exchange technical information with each MPO and the affected air districts." Fresno COG entered into a contract with the consulting firm of Fehr & Peers to study and provide data to ARB regarding Fresno County's estimates for greenhouse gas reduction targets. Fehr & Peers then prepared "proposed greenhouse gas reduction targets" for Fresno County. Those emission reduction targets were submitted to ARB on May 19, 2010.

Potential Sectors Identified for Emission Reductions

Fresno COG identified four sectors with potential for greenhouse gas emission reductions, on a local level, in the resolution regarding greenhouse gas policies: transportation, land use, energy and education.

In order to fully explore Fresno's future efforts regarding greenhouse gas policies it is important to recognize the work accomplished since the last RTP update in 2007.

As previously noted, the interest in reducing the effects of greenhouse gases on climate change has seen incredible growth in the past four years. From the international stage, to the federal and State regulatory processes, local governments are struggling to keep up with and meet the all new requirements. In order to meet the commitments made in Fresno COG's resolution to incorporate greenhouse gas policies, the Fresno region has taken the task head-on. The following section highlights just a few of the many great, proactive, and innovative achievements that the Fresno County region has made in the last few years. While not every achievement listed is solely related to greenhouse gas reductions, they are powerful indicators of the Fresno County area's dedication to the concepts of sustainability. Fresno has much to be proud of and has received significant recognition for their commitment to environmental stewardship and climate change in particular. Even with the economic downturn and in spite of the Valley being a traditionally under-funded region, the work of our member agencies is incredible and deserves acknowledgment.

5.7 Current Climate Change/Sustainable Community Achievements

AWARDS/RECOGNITION RECEIVED:

UCDavis listed Fresno as the "Most Sustainable City" in a survey of 100 Central Valley Cities. Lubell, Mark; Bret Beheim; Vicken Hillis; Susan L. Handy (2009) *Achieving Sustainability in California's Central Valley*. Institute of Transportation Studies, University of California, Davis, Research Report UCD-ITS-RR-09-06

Tree Fresno Cityscape Award 2007 "Special Landscape Project": City of Clovis "The Heritage Walk" along Clovis Old Town Trail

Tree Fresno Cityscape Award 2007 "Green" Project Award: City of Clovis Fire Station #5.

The City of Fresno, Department of Public Utilities; Solid Waste Division was named as the Nation's leader in recycling by *Men's Health Magazine*. Fresno was ranked #1 out of 100 cities for its Residential Recycling Program.

The California Integrated Waste Management Board ranked the City of Fresno #1 in the state, in recognition of the City successfully diverting 71% of their waste out of the landfill and into recycling programs.

The City of Clovis Wastewater Treatment/Water Reuse Facility received an Honorable Mention from Global Water Intelligence (GWI) for 2009 Global Water Awards.

The City of Mendota received an award from the California Association for Local Economic Development (CALED) for creating green energy jobs through the development of a five-megawatt utility scale photovoltaic solar farm to be located in Mendota. It will provide triple benefits for job creation, air quality and energy self-sufficiency. This solar farm is one of the largest in California.

INITIATIVES/WORK IN PROGRESS:

The following section details the innovative work being done currently in the Fresno County area. These are not all Fresno COG's achievements, and many reflect the broad based interagency, collaborative approach used in the Fresno region. These are presented as examples of the tremendous commitment this region has made toward building a sustainable approach to planning for the future.

City of Fresno: Received an Energy Efficiency and Conservation Block Grant from the Department of Energy (\$4,603,600) for the Sustainable Fresno Environmental and Renewable Resource Center Program. (December 2009) Fresno will perform over 7,000 energy and water conservation audits per year over the initial three year period of residences, businesses, and institutions within the Fresno Metropolitan Area. The program goals are to achieve 30% reduction in energy usage and 50% reduction in water usage from existing buildings and new construction by 2025.

"*Fresno Green*" is the city's Green Element to support the 2025 Fresno General Plan and has set the goal to have Fresno be a sustainable city by 2025.

The City of Fresno has one of the largest fleets of clean-air vehicles in the state. Soon, every city garbage truck in Fresno will be clean-air certified.

San Joaquin Valley Express Transit Study: The Study was approved by the San Joaquin Valley Regional Planning Agencies Policy Council (June 2009). The study is a valley-wide comprehensive documentation of existing inter and intra-Valley transit services. It will serve as a guide to developing the most cost-effective travel modes in the Valley.

Route 99 Corridor Business Plan: Caltrans will support the goals of AB 32 and SB 375 to reduce greenhouse gases in their business plan.

FAX Senior 7 Program: Provides free fixed-route service to seniors age 65 and over any day, any time, and any trip.

City of Clovis: Clovis has developed a new program for home builders called *Water Saver Homes* (a program similar to the *Energy Star* label) to recognize homes that will save the owners water-saving money for the customers and reducing demand for new water infrastructure.

Measure "C": This measure received 78% voter approval in 2006, evidence of the strong public support to address major regional transportation needs thorough 2027. Measure "C" provides significant investment in reducing the vehicle miles traveled in Fresno County, which will play a large part in achieving the SB 375 greenhouse gas reduction targets. Funding is identified for:

- Completion of the Bus Rapid Transit Master Plan (June 17, 2008)
- School Bus replacement
- Improved fixed-route service (cities)
- Fare subsidy program
- Improved rural transit program
- Purchase of 15-twenty-two passenger CNG cut-away vans
- Phase II of the Public Transportation Infrastructure Study
- Farm Worker/Car/Vanpool Incentive Program
- Regional Public Transit New Technology Reserve Program-to review vehicle technology prototypes and identify innovative technology to increase public ridership and reduce associated air pollution emissions
- Rail Consolidation Program-strong involvement with High-Speed Rail Authority
- Taxi Script Program
- Carpool Incentive Program/Contest
- Transit Oriented Infrastructure for In-fill Program
- Bicycle Master Plan-trails, bike lanes and safety education

Carpool Incentive: This program incorporates public outreach, education, public/private partnerships (partnership with a Fresno Grizzlies promotion, San Joaquin Valley Unified Air Pollution Control District, private businesses, and a local car dealer). The contest has monetary awards for participants, leading to the grand prize of a hybrid vehicle.

Fresno Model Farmland Conservation Program: California's Central Valley is a huge agricultural producer for the United States and the World. As its population continues to grow, the prosperity of agriculture, and the entire community it supports, will depend on striking a balance between urban development and

conservation of farmland. The California Partnership for the San Joaquin Valley recognized this by awarding the Council of Fresno County Governments a grant to design a Model Farmland Conservation Program. Over an 18-month period, public and private agricultural sector leaders were consulted to classify Fresno County's farmland according to its significance to agriculture, to document current conditions and trends affecting farmland, and to propose a set of policies that responds to these trends by establishing a framework for effectively conserving the county's most "strategic" and valuable farmland. The elements of this model farmland conservation program build on the principles of *A Landscape of Choice* and are intended to help implement the Blueprint planning process.

San Joaquin Valley Inter-regional Corridor Program: The Inter-regional Corridor Program is an innovative regional development approach envisioning a multimodal, multicity and multicounty, transportation oriented development corridor system. It would directly and efficiently link the development of valley cities along SR 99. The corridor would define one of the most significant, sustainable and effective smart-growth oriented regional systems for the future of the San Joaquin Valley and California.

Public Transportation Infrastructure Study: Fresno COG is in the second study phase to evaluate mobility needs and opportunities in Fresno County and identify strategies for public transit and transit infrastructure development that will result in wider acceptance and ultimately offer more transportation options for the residents of Fresno County. Also, planning for Bus Rapid Transit (BRT) is ongoing. Fresno Area Express (FAX) was granted \$2,337,190 (2009 CMAQ Funds) for the purchase of 3 new articulated compressed natural gas (CNG) buses in preparation for the upcoming Bus Rapid Transit lines on major Fresno corridors.

San Joaquin Valley Regional Blueprint Process: The Regional Blueprint Planning Process began in early 2006 as a broad based collaborative effort with the eight Valley Regional Planning Agencies; Caltrans; California's Business, Transportation, and Housing Agency; and additional funding and participation from the San Joaquin Valley Unified Air Pollution Control District. The Valley-wide Regional Blueprint (incorporating all eight of the Valley Regional Planning Agencies) plans for population growth that is anticipated over the next 40+ years. The San Joaquin Valley Regional Planning Agencies' Policy Council has adopted the Valley-wide Blueprint. Fresno COG's Policy Board has endorsed Fresno County's own Blueprint Scenario B+ which represents new growth trends that will more than double the new-growth density by 2050. The Blueprint's smart growth principles are included in the Regional Project Evaluation matrix quantitative and qualitative criteria used in the 2011 RTP.

Assembly Bill 170: Requires each of the eight counties and 62 cities in the San Joaquin Valley to incorporate strategies to improve air quality in their general planning efforts. The addition of Air Quality Elements to General Plans should include feasible implementation measures to reduce air quality impacts.

San Joaquin Valley Unified Air Pollution Control District - Indirect Source Review: Rule 9510

This was the first rule of its kind in California. Rule 9510 requires developers to account for air quality impacts that result from building activity and from the development's future use. Developers have options for offsetting pollution through a variety of mitigation measures. For example, builders may include bike paths, increase energy efficiency, or build new housing developments close to transit stops. While Rule 9510 does not directly address greenhouse gas emission reductions, there will be associated co-pollutant reductions from the mitigations to reduce the use of single-vehicle occupancy use.

San Joaquin Valley Unified Air Pollution Control District – Employer-based Trip Reduction: Rule 9410

This rule requires large employers to develop employee commute trip reduction programs. Implementation of the rule will encourage employees to reduce single-occupancy vehicle trips associated with work commutes. Again, while this rule does not directly address the reduction of greenhouse gases, there will be expected co-pollutant reductions from the reduced commute single-occupancy trips.

San Joaquin Valley Air Pollution Control District - Climate Change Action Plan:

The local air district's Governing Board adopted California's first comprehensive regional policy and guidance on addressing and mitigating greenhouse gas emission impacts caused by industrial, commercial, and residential development in the San Joaquin Valley. This guidance will be of use in the implementation phase of the Fresno as well as the San Joaquin Valley Blueprint process

The first comprehensive regional policy and guidance on addressing and mitigating greenhouse gas (GHG) emission impacts caused by industrial, commercial, and residential development in the San Joaquin Valley was adopted by the Valley Air District's Governing Board December 17, 2009. This set of guidance documents is designed to assist local permitting agencies and businesses by answering several questions related to the California Environmental Quality Act (CEQA) and how to address GHG impacts under existing CEQA law. For more information please see http://www.valleyair.org/Programs/CCAP/CCAP_idx.htm.

Solar Installation: California State University, Fresno: The Fresno State project, a partnership with the Chevron Energy Solutions division of Chevron, provides the first sheltered parking on campus, protecting nearly 700 vehicles from the elements. The 3,872 photovoltaic cells atop the parking shelters generate 20 percent of Fresno State's electricity demand. The \$11.9 million project – the largest of its kind on a university campus – was completed in fall 2007.

Solar Installation: Fresno Yosemite International Airport (FYI): Installed and operates one of the largest airport solar installations in the world.

Solar Installation: California Air National Guard Base in Fresno, CA: This solar installation on the 144th Fighter Wing is the first of any guard base nationwide, covering almost 40,000 square feet, on carports and a rooftop.

One of California's Largest Solar Farms: On August 24, 2009, ground was broken on one of California's largest solar farms in the City of Mendota. It is the first utility-sized solar farm to connect directly to California's electrical transmission grid. It now provides 5 megawatts of emission-free solar electricity to PG&E under a long-term power purchase agreement. Avoided emissions are estimated to be 6.3 million lbs/year of CO₂. (CO₂ is a greenhouse gas)

Solar Developments in Huron and Firebaugh: The small communities of Huron and Firebaugh are also in the process of establishing solar farms which will not only provide "green" energy but create employment in "green energy" jobs. Job development is critical to these smaller Fresno County communities so badly impacted by the economic downturn.

Fresno Recognized in Top-10 Solar List: July 2009 *Environment California* ranked Fresno as third in the state for number of kilowatts its solar projects produce. Fresno ranked fifth for projects on roofs with Clovis close behind at seventh.

High-speed Rail: Fresno County is aggressively seeking to site the maintenance yard and the first station for the High-speed Rail.

Fresno Economic Development Corporation: Actively seeks out sustainable industries to bring to Fresno County.

California Partnership for the San Joaquin Valley: This is a public-private partnership focused on improving the quality of life for residents of the San Joaquin Valley. The Partnership has ten work groups: air quality; economic development; energy, health and human services; higher education and workforce development; PreK-12 education; land use, agriculture, and housing; advanced communications services; transportation; and water quality, supply and reliability. The Partnership has also funded a number of seed grants to fund the vision of the Partnership.

This is by no means a comprehensive list of all the region's accomplishments. It is meant to highlight the tremendous involvement and commitment that the Fresno region has dedicated to the implementation of sustainable growth, which will in turn reduce the region's contribution to greenhouse gas emissions.

CHALLENGES FACING OUR REGION:

The listed accomplishments are even more striking when the challenges that Fresno County faces are considered. Fresno County is the 10th most populous county in California, and has experienced a more rapid rate of population growth than the State average. In comparison with the State of California, Fresno County residents are more ethnically diverse and less likely to be proficient in English, and experience a higher rate of unemployment. Fresno County has fewer homeowners, more disabled residents, more families living in poverty, and more school age children with a lower rate of graduation from high school than the State of California, on average. In October 2009 Fresno County ranked 15th in the nation in foreclosures. The costs of implementing measures to reduce greenhouse gas emission remain a hotly debated issue. The RTAC noted in their final recommendations that, "The Committee expects additional public input on the costs will come forward as SB 375 is implemented and recommends that the state work with the MPOs and local governments to identify those costs, as well as potential funding opportunities and new priorities within existing programs."

The following section details Fresno COG's efforts in the four sectors identified with potential for greenhouse gas emission reductions on a local level: transportation, land use, energy and education.

5.8 Transportation

Fresno COG's 2008 Resolution incorporating greenhouse gas policies in regional planning, reaffirms the commitment to the development of feasible greenhouse gas emission reduction measures related to transportation sources. The reduction and quantification of those achieved reductions of greenhouse gases is an evolving process. However, the science is clear that mobile sources contribute to greenhouse gas emissions, and that reducing trips and miles traveled will have a positive effect on criteria pollutants as well as greenhouse gas emissions. While many of Fresno COG's policies are primarily aimed at the reduction of criteria pollutants, the co-pollutant benefits of reducing greenhouse gases will be achieved at the same time.

The following section details the policies that Fresno COG has incorporated:

Fresno COG encourages the use of green construction practices during the development and implementation of the \$1.7 billion dollars allocated by Measure "C" for improvements in Fresno County.

Once the full range of candidate transportation projects are identified for the 2011 RTP, each project is evaluated to establish project priorities. Points are applied in categories including: "improves air quality"; is "environmentally sensitive"; "supports other modes of transportation including transit and trail/bike/pedestrian facilities"; and whether the project "supports Blueprint smart growth principles".

Fresno COG is making major improvements to its regional transportation model, which will improve the region's ability to model the greenhouse gas reductions achieved by the implementation of various policies, as well as transportation projects. The work on the San Joaquin Valley Modeling Improvement Plan is detailed below. The model improvements will enable the eight Valley Regional Planning Agencies to comply with the requirements of SB 375. In addition to these model improvements, the California Air Resources Board is facilitating the development of a valley-wide traffic model coordinated by U. C. Davis. These model improvements will enhance Fresno COG's efforts to further analyze the greenhouse gas contribution from goods movement.

Performance measures have been reviewed and revised for the 2011 RTP. The Performance Measures can be found in Appendix C. All rehabilitation/safety projects as well as capacity increasing projects are evaluated for *Environmental Quality Impacts* and *Sustainability*.

Funding under Fresno COG's discretion supports projects that reduce vehicle miles traveled such as transit projects, bike/pedestrian projects and ITS projects. The 2009 CMAQ program allocated 38% of funds to cost-effective projects that reduce emissions from transportation sources.

Fresno COG supports the increased use of alternative fuel vehicles. These projects received \$3.1 million dollars from the 2009 CMAQ program. Fresno COG is also a member of the executive committee of the Clean Cities Coalition. The Coalition works with public and private agencies to reduce petroleum use and dependence.

Through CMAQ funding and through public outreach of the Clean Cities Coalition Fresno COG actively works to reduce diesel particulate matter through funding of retrofits, replacement, and idle reduction projects.

Fresno COG continues with significant funding support for its comprehensive carpool, commuter vanpool and farm-worker vanpool programs. Measure "C" has allocated \$20 million dollars for this program.

An innovative and very popular taxi script program assists our growing senior citizen population. This program is funded through Measure "C".

Fresno COG has explored the potential of pricing strategies to reduce greenhouse gas emissions. Please see Appendix E for this analysis.

Fresno COG continues to actively support State and federal initiatives that will best serve our region's approach to reducing transportation sources of greenhouse gases. Fresno COG staff participates on the Strategic Growth Council and have successfully received a grant for \$2.5 million dollars on behalf of the eight San Joaquin Valley Regional Planning Agencies to be used for transportation model improvements. Fresno COG has actively participated in the legislative process to regulate greenhouse gases through in-person attendance during committee meetings, small focused meetings with State legislative leaders, as well as the transmission of comment letters on issues of importance to the Fresno and San Joaquin Valley regions.

A few examples of specific actions Fresno COG has made to reduce transportation related emissions follow:

San Joaquin Valley Express Transit Commute Study: This study is a partnership with the counties of Kern, Kings, Tulare, Merced, Madera, San Joaquin and Stanislaus to identify markets that can support inter-county commuter express transit service within the San Joaquin Valley. The study explored a mix of ridesharing, vanpool, bus and rail services. The study also identified four key corridors in the region that would derive maximum benefit from new transportation investments. Decreased single-occupancy vehicle trips may result from implementation of the policies recommended by this study.

Bus Rapid Transit: Fresno COG is proceeding with implementation of Bus Rapid Transit (BRT). The California Department of Transportation noted in their 3/2/09 review of the draft 2009 Overall Work Program that BRT warrants "strong consideration as a solution to the present and future mass transportation needs of Fresno County." Fresno FAX received \$2.3 million dollars (2009 CMAQ funding) for purchase of three new 60' articulated buses in preparation of the implementation of the BRT system in the city of Fresno. Nearly 70% of the FAX fleet now runs on clean-running CNG and hybrid technologies.

Air Quality/Greenhouse Gas Content Included in Fresno COG Planning Processes: The Measure "C" funded Golden State Corridor- Economic Development Infrastructure Improvements: Planning, Engineering, and Environmental Study RFP incorporated many elements to reduce the impact of the project. Included were requests that the contractor consider and/or incorporate: bike lanes/paths; feasibility for the use of reclaimed wastewater for landscape irrigation; the incorporation of green contracting; and full compliance with the requirements of AB 32 and SB 375.

Park-and-Ride Lots Funded: Park-and-Ride programs provide a place for drivers to park and utilize public transit, carpools, and vanpools for work commutes and other trips. Park-and-Ride programs can help to develop a balanced and sustainable transportation system. They improve the coordination of the entire transportation system by reducing congestion, providing transportation choices, and enhancing connectivity. In addition, they contribute to the development of a more eco-friendly transportation system.

Fresno COG granted \$380,294 in 2009 CMAQ funding to a Park-and-Ride project for the City of Fresno: the Sugar Pine Trail Park-and-Ride at Shepherd and Willow Ave.

The Measure "C" funded *Valleyrides Carpool Incentive Program*: provides a monthly cash prize as an incentive to increase carpooling in Fresno County. Each month one participant in the incentive program is rewarded with a \$1,000 cash prize, as well as being entered in an annual grand prize drawing. The grand prize to be awarded in July 2010 is a hybrid vehicle. The incentive has proven to be very successful. This program is definitely an example of a win-win strategy. The incentive encourages residents to experience a different commute style, a few receive an additional monetary prize, and all residents are able to benefit from the emission reductions and improved air quality. The advertising appears on both TV and radio using the tag line: "Save our air, save on gas, win cash!!"

Regional Transportation Model Improvements:

The San Joaquin Valley Modeling Improvement Plan (MIP) consists of short term and long term goals.

The Short Term Model Improvement Plan consists of:

- updating and improving each of the 8 Valley MPO transportation models to improve their sensitivity to smart growth strategies,
- integration of the 4D elasticity or similar process into each model, and
- the improvement of interregional travel estimates

The Short Term Improvement Plan is focused on fulfilling the AB 32 and SB 375 requirements for the first cycle of San Joaquin Valley Regional Transportation Plans to be completed in 2014/15.

The Long Term Model Improvement Plan consists of:

- Undertaking development of a detailed Long-Term Model Improvement Plan (post 2014/15)
- Inventory each MPO's modeling capabilities and determine the best fit of long term improvements to meet the requirements of SB 375.

The Long Term Improvement Plan may include the development of advanced 3 - 4 step models and/or activity based model(s). Developing the Long-Term Plan will take in place parallel to the implementation of the Short-Term Plan.

Fresno COG SB 375 Implementation Process Task Force: Fresno COG established this committee to both inform and receive input from a wide sector of Fresno County stakeholders, cities, Caltrans, and ARB staff to develop Fresno COG's approach for compliance with SB 375. The committee was actively involved with developing the SB 375 greenhouse gas emission reduction target estimates that best represent aggressive and achievable goals for Fresno County. The target estimates were submitted to ARB on 5/19/2010.

San Joaquin Valley SB 375 Implementation Working Group- The Working Group was established for the staff members of the eight Valley Regional Planning Agencies to coordinate a unified, collaborative, interagency approach to facilitate compliance with the upcoming requirements of SB 375.

Congestion Mitigation and Air Quality Improvement Program (CMAQ): Fresno COG, along with the other Valley Regional Planning Agencies, has adopted an aggressive commitment to allocate at least 20% of CMAQ funding to cost-effective projects. During the 2009 cycle Fresno COG allocated 38% of the total funding available for cost-effective projects. These projects will decrease congestion on Fresno County roads, replace older diesel vehicles with cleaner alternative fueled vehicles, promote the use of transit, and enhance bike and pedestrian access, thereby reducing dependence on single-occupancy vehicles and reducing transportation sources of both criteria pollutants and greenhouse gas emissions.

5.9 Land Use

Fresno COG continues to work with regional agencies to integrate the Valley-wide Blueprint Process into regional planning efforts. The Blueprint addresses greenhouse gas emissions through its smart growth principles. The Regional Blueprint (incorporating all eight of the Valley Regional Planning Agencies) plans for population growth that is anticipated over the next 40+ years. Blueprints are regional in scope and integrate land use, transportation and resource planning. The planning process considers the "Three Es"

of sustainable communities: *prosperous economy, quality environment, and social equity*. The San Joaquin Valley Regional Planning Agencies' Policy Council adopted the Valley-wide Blueprint which would increase new-growth density (on an eight county average) from 4.3 average dwelling units/acre to 6.8 average dwelling units/acre. Fresno COG's Policy Board has endorsed Fresno County's own Blueprint Scenario B+ which represents new growth trends that will more than double the new-growth density by 2050. This increase in density tracks well with the overall goal of AB 32 to achieve a 30% reduction in greenhouse gas emissions by 2020. The Blueprints' smart growth principles are included in the Regional Project Evaluation matrix-quantitative and qualitative criteria used in the 2011 RTP.

Please see Chapter 1 for a full discussion of the Valley-wide Blueprint Process and Chapter 3 for a specific discussion of Fresno County's Blueprint and the smart growth principles that will reduce greenhouse gas emissions in the Fresno region.

5.10 Energy

Fresno COG's 2008 resolution adopting greenhouse gas policies proposed the incorporation of energy efficiency measures in transportation improvements when applicable. One suggested measure was the incorporation of LED technology in traffic lights. The Fresno/Clovis metropolitan areas currently are using LED technology for traffic signals and have done so for a period of time. They both adhere to the State standards for LED use, and Fresno City is in the process of investigating the use of LED technology in street lights along arterials and collectors. The technology is expensive, and as funds are identified the transition to LED technology will continue.

Fresno COG continues to promote the expanded availability and use of renewable fuels through funding mechanisms under the control of the Council of Governments, i.e., CMAQ funding, as well as through active participation with the Clean Cities Coalition. The mission of the Coalition is to reduce dependence on petroleum.

5.11 Education/Public Outreach

Public involvement, participation, and education in transportation planning are fundamental to Fresno COG's goal to meet the transportation needs of the region. Outreach activities are generally broad based; topics are covered as interest is identified. Due to the extreme amount of news related to global warming/climate change as well as the regulation of greenhouse gases, questions regarding Fresno COG's approach and plans regarding greenhouse gases are common. Questions are handled as they arise, more extensive meetings, letters and even trips to meet with legislators have been arranged as requested by our stakeholders. Not only is there extensive outreach during major RTP updates but in every activity the COG is involved in, major effort is made to increase public involvement, build public support, acceptance, and enhance the role of citizens and interest groups. Fresno COG developed and adopted the *2007 Public Participation Plan* (11/29/2007) which provides direction for public participation activities to be conducted by Fresno COG and contains detailed procedures, strategies, and techniques to be employed. For the complete discussion related to the public outreach employed for the 2011 RTP process, please see the *2011 Regional Transportation Plan for the Fresno County Region-Public Outreach Plan*, Chapter 7 of the 2011 RTP. For the full text of the *2007 Public Participation Plan* please see:

http://www.fresnocog.org/files/Get%20Involved/Final_Amend1-2007%20Public%20Participation%20Plan-120408.pdf

In an effort to widen its public outreach, Fresno COG adopted the *Fresno County Environmental Justice Plan*, May 2009, to eliminate barriers to participation and encourage low-income and minority populations to take an active roll in transportation decision making. Fresno COG actively engages Native American tribal groups and communities to respond to any transportation related issues. For information (available in English and Spanish) on the Environmental Justice Plan please see: <http://www.fresnocog.org/document.php?pid=175>

In order to enhance public awareness and education regarding greenhouse gas regulation, Fresno COG established the *SB 375 Implementation Process Task Force*. The Task Force informs and receives input from a wide sector of Fresno County stakeholders, cities, Caltrans, and Air Resources Board staff. For more information on the Task Force please see: <http://www.fresnocog.org/document.php?pid=370>

Fresno COG (through Measure "C") is funding a major update of the Fresno Bike Master Plan. An important component is outreach to schools to encourage bike riding to and from school. An exciting website was launched in April 2010 "I Bike Fresno" which is the hub for all things biking in Fresno. For further information please see: <http://www.ibikefresno.org/>

Fresno COG co-sponsors the "Bike-to-Work" event in May of each year. An exciting event was the Million Mile/Corporate Challenge where Fresno challenges all residents to ride a million collective miles in the month of May.

Fresno COG continues to fund bike trails/paths near schools as part of its CMAQ funding program. Recently when worthy projects were identified, yet funding was not available, Fresno COG received assistance from Caltrans' "Safe Routes to Schools" program to assist with funding. Enhancing the infrastructure to enable safe bike riding to schools is an important part of educating students on the linkage of individual travel behavior and global climate change.

Fresno COG maintains an excellent educational resource at the Valleyrides website <http://www.valleyrides.com/>. It provides carpool/vanpool matching services, tips for successful ridesharing, cost calculator, transit information and information on greenhouse gas reductions from transportation sources.

Fresno COG's partner in improving air quality, the San Joaquin Valley Unified Air Pollution Control District has developed an excellent source of activities for educators. While the focus is not aimed specifically at greenhouse gases, the message of playing an active roll in living a "healthy air life" is one that is easily understandable and the behavioral changes made will play a large part in the reduction of transportation related sources of greenhouse gases. <http://www.healthyliving.com/your-school/>

Fresno COG has established a "Climate Change Portal" website with sections for educators, general education information, and environmental education. <http://www.fresnocog.org/files/Air%20Quality/Climate%20Change/website%20content5-14-09.pdf>

Fresno COG has funded four grants for community-based organizations to facilitate outreach as part of the 2011 RTP. One grant was awarded to "Green Footprint" a clean energy fuel/biofuel cooperative. Extensive outreach focusing on schools will center on air pollution and how students can play a part in making Fresno a greener community. Another grant recipient, El Concilio de Fresno is a Latino non-profit organization serving residents of Fresno County, is facilitating a transportation survey to non-traditional participants in underserved, smaller rural areas of Fresno County. They are targeting their outreach to the school districts.

5.12 Economic Challenges

Fresno County is in many ways leading the way to reducing greenhouse gases in the San Joaquin Valley. The work already in progress that was detailed above is evidence of the commitment already made to reducing greenhouse gases in the Fresno region. In spite of the recent economic downturn, and in spite of historically being under-represented and under-funded by both the state and federal governments, the work of the Fresno area was recognized when a ground breaking study by the University of California at Davis recognized the City of Fresno as the number #1 city on a sustainability index in a study of 100 Central Valley cities.

During the same period of time that Governor Schwarzenegger activated the California Disaster Assistance Act for Fresno County and requested that the federal government to issue a federal disaster

declaration for the county due to the economic impact of the natural and regulatory drought (June 19, 2009), Fresno still excelled in promoting policies and actions to reduce greenhouse gas emissions.

The current economic situation has come up repeatedly in the SB 375 Regional Target Advisory Committee's discussions. The primary point of concern is that the economic downturn will have a direct impact on how much change is possible by 2020. Even with sustainable planning in place, the current pace of development will slow implementation of that sustainable planning.

"Planning departments rely on city or county general funds and on developer fees to fund staff positions and both of these revenue sources have suffered in recent years. In the current economy, many have had to cut back planning staff—precisely at the time more planning is needed if SB 375 is to live up to its promise. Planning resources for RTPs and compatible local general plans will be critical to the success of SB 375." Recommendations of the Regional Targets Advisory Committee (RTAC) Pursuant to Senate Bill 375-A Report to the California Air Resources Board, September 29, 2009

Precisely at the time Fresno County and its cities are struggling to provide even basic services, facing staff furloughs and reductions, and even jail inmate early releases to meet budgetary requirements we are faced with a new level of legislated requirements to reduce greenhouse gas emissions. The need for funding for the implementation of the policies required under AB 32 and SB 375 can not be minimized.

5.13 Conclusion

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 implements the resolution; and at the same time provides the first phase toward the reduction of greenhouse gas emissions. Fresno COG will be adopting this 2011 RTP before the final SB 375 emission reduction targets are determined. Therefore, this *Climate Change Element* is the first phase in Fresno COG's approach to address the issue of global climate change. (The next RTP update will occur in 2014/15-when actual SB 375 regional targets will be available)

The 2011 RTP Environmental Impact Report (EIR) process meets the requirements of AB 32: *The Global Warming Solutions Act of 2006*. The second phase of our approach to address climate change will occur in the 2014/15 RTP update cycle. As such, this *Climate Change Element* Chapter is transitional work toward the next RTP cycle which will include either a "Sustainable Communities Strategy" in the 2014/15 RTP or Fresno COG will incorporate an "Alternative Planning Strategy", in order to be fully compliant with SB 375. 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.