

## **Fresno COG 2015 CMP Update/Transportation Monitoring Report Scope**

Fresno COG's 2015 CMP update is scheduled to kick-off in the spring of 2015. The following work scope provides a road map for the next six months (March – August). Fresno COG will work closely with FHWA California Division to ensure the updated CMP become an effective planning tool for Fresno COG and local agencies as well as satisfying federal requirements.

The following project milestones will reflect the update progress in the near term:

### **1) Kick-off meeting and reconvening of Fresno COG CMP Steering Committee (March 2015)**

Representatives from FHWA will open the kick-off meeting with a presentation regarding the federal requirement and expectations for the Congestion Management process.

The Steering Committee will meet regularly for about 6 months (depending on how long the project will take) and provide guidance on CMP-related technical topics and issues.

### **2) Re-defining CMP network (April 2015)**

The Steering Committee will refine and develop a new CMP network that contains corridors with high risk of congestion. The committee will decide on an appropriate transportation network of transportation facilities for CMP analysis and monitoring. The focus will be on existing & near-term congestions and data availability.

The existing CMP network includes all regionally significant roads in the entire county. Although providing good geographically coverage, the existing CMP network doesn't emphasize the high-risk corridors that could potentially be congested in the near-term and channel the limited resources toward these corridors. The 2015 CMP update will be focused on the corridors that are starting to show signs of congestions or those high-risk corridors that needs to be monitored closely.

Another important consideration is data availability. Previously, Fresno COG's CMP applied LOS based analyses, which were supported by traffic counts and travel demand modeling. New data sources, such as "big data" harvested from cell phone data, made speed and travel delay monitoring a viable option, as they become less time-consuming and cost-prohibitive.

However, as these new technologies are still maturing, they have limitations in their coverage. For example, less data points can be gathered on arterials than on freeways, hence the data quality and availability are less for arterial network. National Performance Management

Research Data Set (NPMRDS) provided by FHWA covers National Highway System (NHS) in Fresno County.

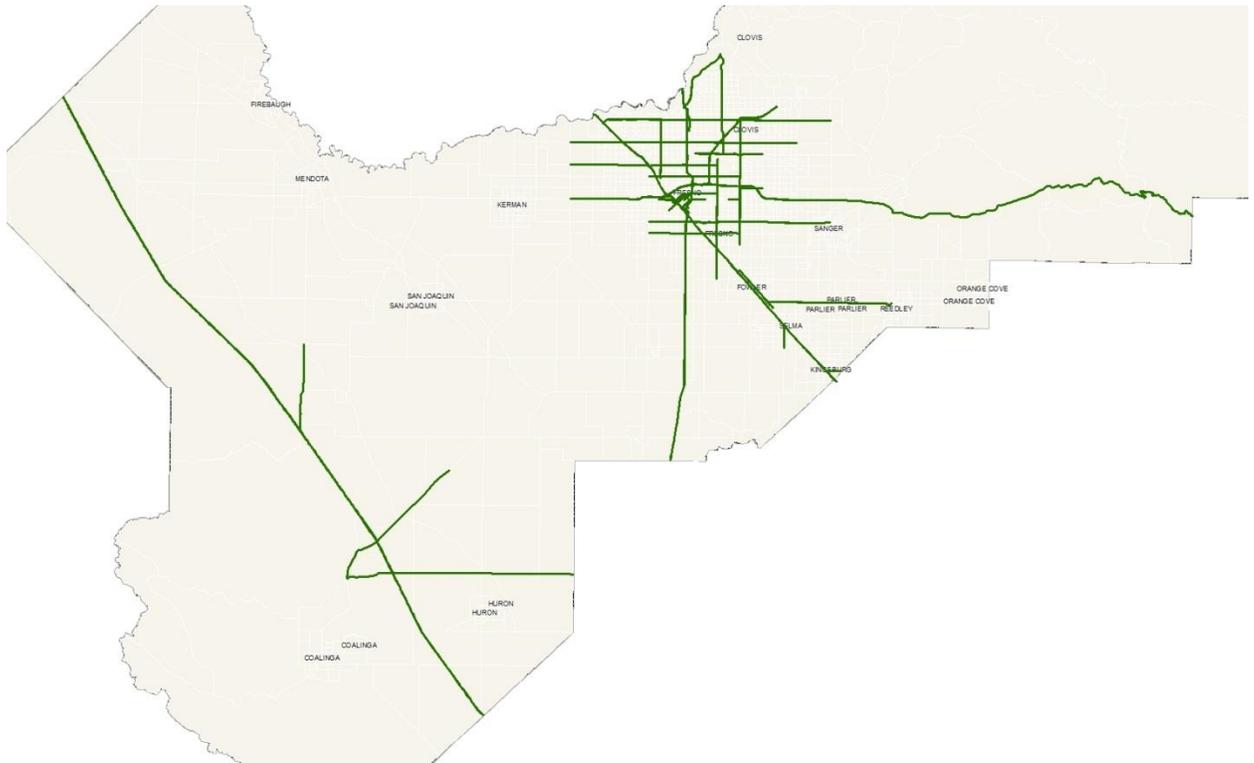


Figure 1: Map of NPMRDS coverage in Fresno County

### 3) Defining congestion in Fresno County (May 2015)

As a region, Fresno County doesn't experience the type of chronic congestions witnessed in the big metropolitan areas such as LA and the Bay Area. However, transient congestions, often triggered by traffic accidents or special events do cause significant delay on major roadways. Morning and afternoon peak hour traffic also increasingly create bottlenecks on certain freeway sections, where capacity is limited.

The Steering Committee will decide on a set of reasonable expectations with regard to congestion specific to the Fresno County region. With the recent advances in "Big Data" technologies, congestion measures become more and more real-time. There is a paradigm shift in congestion management as the focus of CMP is increasingly evolving from long-term planning to near-term monitoring. Fresno COG's CMP update provides an opportunity to put forward a new set of performance measures that suit local needs and comply with federal requirements.

### 4) Quantifying congestion with performance measures (June 2015)

Continue the discussion on how to quantify delay with a new set of performance measures.

FHWA issued its first Notice of Proposed Rulemaking (NPRM) in March 2014 in a series of rulemaking and proposed performance measures for safety. Based on the proposed performance measure, Fresno COG will include data for serious injuries, fatalities and annual vehicle miles traveled in the CMP/Transportation Monitoring Report. In the 3<sup>rd</sup> NPRM, the FHWA will propose performance measure for traffic congestion, on-road mobile source emission, and system performance on National Highway System and Interstate System later this year. Fresno COG will incorporate relevant measures into the 2015 CMP/Transportation Monitoring Report subject to data availability.

In tandem with the selection process of CMP performance measures, Fresno COG plans to incorporate RTP/SCS performance measures in the monitoring system to keep track of the progress of the RTP/SCS. SCS performance measures that can be tracked and monitored with ground data (not modeled data) include: VMT, total lane miles of bike lanes, total lane miles of sidewalks, transit ridership, number of single family housing units and multiple family housing units built between 2010-2014

**5) RFP out to solicit consultant's help to process Big Data and produce congestion monitoring data (July 2015)**

Cell phone data produced by HERE or INRIX have been used for CMP purposes in large metropolitan areas. They are used to develop speed or hours of delay information for the CMP network. These data sets provide coverage of the entire network if desired by the member cities and the County of Fresno. Data quality and reliability should also be studied before making long-term commitment.

In addition, FHWA provide NPMRDS data at NHS level free of charge to any MPO users. Investigation of the feasibility of this data set will be pursued to provide the synergy in data collection process.

An RFP will be issued to seek consultant service to process the Big Data and obtain speed or hours of delay information.

Further analysis may be needed when FHWA releases the 3rd NPRM for congestion performance measures.

**6) Other data collection efforts (August 2015)**

Fresno COG is selected as one of the MPOs to participate in the FHWA's Bicycle-Pedestrian Count Technology Pilot Program. The program funds the purchase of a limited number of portable automatic counters for collecting bike & pedestrian counts, and provide a series of internal webinars and other technical assistance opportunities.

Fresno COG will work with FHWA and the member cities and the County of Fresno to identify locations for such bike and pedestrian counts. With technical assistance from the FHWA team, cities and the County will be provided with opportunities to learn about non-motorized counts collection technology.

Other related transportation performance monitoring data to be collected include:

- Safety data: fatal and injury collisions. Produce a county-wide map with collision locations
- Vehicle miles traveled, county-wide
- Commute travel time, county-wide
- Commute mode, county-wide
- Cost of travel, county-wide
- Auto ownership
- Transit service and ridership
- Household income
- Jobs, workers and housing balance
- Population and Housing changes
- Employment and jobs

The data collection efforts will lay the foundation for Fresno COG's CMP update. Portions of the data collection will be performed in-house, and the rest acquired through external consultants. Fresno COG will serve as the data center to facilitate the analyses and monitoring dashboard development.

As a separate effort to support travel demand model development, Fresno COG is collecting traffic counts at designated screen lines in the spring of 2015. In the meantime, Highway Performance Monitoring System (HPMS) is also collecting classification counts in Fresno County in 2015. In addition, City of Fresno, City of Clovis and Fresno County are collecting cycle counts in over 500 count locations every other year. All these count collection efforts will be integrated, and the count information will be attached as an appendix in the CMP/Transportation Monitoring Report as references