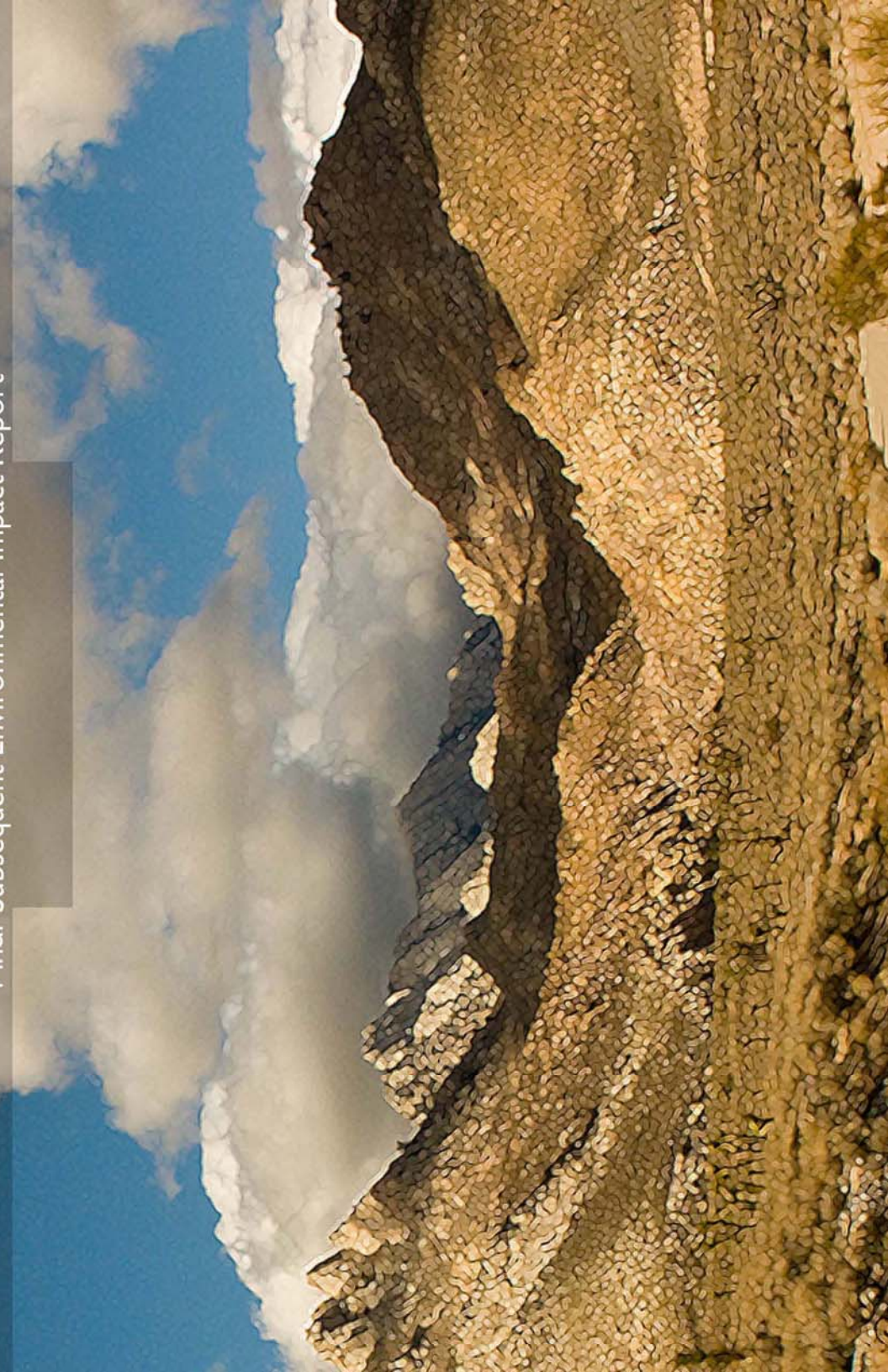


# Kern COG 2011 Regional Transportation Plan



Final Subsequent Environmental Impact Report



Final Subsequent Environmental Impact Report  
for the  
Kern County 2011 Regional Transportation Plan

July 6, 2010

Prepared For:



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## 1.0 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that a Final Subsequent Environmental Impact Report (FSEIR) must be prepared, certified, and considered by decision-makers prior to taking action on a project. The Final SEIR provides the local agency with an opportunity to respond to comments received on the Draft SEIR and to incorporate any changes or additions necessary to clarify and/or supplement the information contained in that document. This Final SEIR, therefore, represents the culmination of all environmentally related issues raised during the comment period on the Draft SEIR for the Kern COG 2011 Regional Transportation Plan (RTP). In addition, this Final SEIR contains a Mitigation Monitoring and Reporting Program that identifies the necessary processes that are required to ensure that the mitigation measures recommended in the Draft SEIR are implemented. Finally, the FSEIR contains the Statement of Overriding Considerations, which identifies the significant, adverse, and unavoidable impacts in the Draft SEIR. The Kern COG Board of Directors is required to balance the benefits of the proposed Project (RTP) 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 forty-five day Draft SEIR review and comment period began on April 30, 2010 and ended on June 14, 2010. Comments received and staff responses to those comments are contained in Section 2 of this Final SEIR. Section 3 provides a listing of changes, additions, and corrections to the Draft SEIR recommended by VRPA. Such changes, additions, and corrections are necessary to address revisions resulting from written comments on the Draft EIR and other necessary changes identified by staff. In addition, this document also includes the Statement of Overriding Considerations (reference Exhibit A) and the Mitigation Monitoring and Reporting Program (reference Exhibit B).

The Final SEIR is composed of the following documents and incorporates them by reference:

- ◆ Kern COG 2011 Regional Transportation Plan, Draft Subsequent Environmental Impact Report, April 30, 2010;
- ◆ Kern COG 2011 Regional Transportation Plan, April 30, 2010; and
- ◆ Kern COG 2011 Regional Transportation Plan, Final Subsequent Environmental Impact Report, July 6, 2010.

### 1.2 PROJECT DESCRIPTION

The project, as defined by CEQA Statutes, Section 21065, is the preparation of the 2011 Regional Transportation Plan. Kern Council of Governments (Kern COG) has prepared the RTP 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 RTP 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 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 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*.

As the designated Regional Transportation Planning Agency (RTPA), Kern COG is mandated by state and federal law to update the Regional Transportation Plan every four (4) years. The 2007 RTP, adopted on May 17, 2007 by Kern COG, included a list financially constrained improvement projects. On January 15, 2009, Kern COG amended the 2007 RTP (Amendment #1) to reflect changes to the list of projects and certified an Addendum EIR (AEIR) to address potential environmental effects. Improved project financing sources and project delivery schedules reflected in the 2007 RTP and in Amendment #1 were revised again as part of RTP Amendment #2 approved on September 17, 2009.

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 EIR. The RTP is also used as a transportation planning document by each of the twelve member jurisdictions of Kern COG. The members include the County of Kern and the cities of Arvin, Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco.

The RTP identifies the region's mobility needs and issues through to the year 2035, 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 2011 RTP include Climate Change (including a Climate Change Plan and other greenhouse gas policies), Environmental Justice, Goods Movement, and Blueprint Planning. In addition, the 2011 RTP will include updated project lists and updated performance measures.

The 2011 RTP consists of required elements and is organized into various chapters. A description of each Chapter for the RTP follows.

- ◆ **Chapter 1.** Introduction;
- ◆ **Chapter 2.** Transportation Planning Policies;
- ◆ **Chapter 3.** Planning Assumptions;
- ◆ **Chapter 4.** Strategic Investments;
- ◆ **Chapter 5.** Financing Transportation;
- ◆ **Chapter 6.** Future Links;
- ◆ **Chapter 7.** Monitoring Progress;
- ◆ **Chapter 8.** References; and
- ◆ **Appendices.** (Includes the San Joaquin Valley Regional Transportation Overview and other required documents).

## 2.0 WRITTEN COMMENTS AND FINAL RESPONSES TO COMMENTS (Comments received are provided beginning on Page 2-9)

**FROM:** Scott Morgan, Acting Director, State Clearinghouse

**DATED:** June 16, 2010

**RESPONSE #1:** No comments regarding the Draft Subsequent Environmental Impact Report (SEIR) were received by the State Clearinghouse from State agencies.

**FROM:** Chris Ganson, Environmental Review Office, United States Environmental Protection Agency, Region IX

**DATED:** June 21, 2010

**RESPONSE #2:** Thank you for your comments regarding the 2011 RTP and its Draft SEIR. Kern COG finds the EPA's recommendations and guidance most helpful. As noted in the EPA letter, the comments provided will be incorporated when Kern COG begins its 2014 RTP that will comply with the new federal surface transportation act, as well as State requirements from AB 32 and SB 375.

The 2011 RTP incorporates most of the recommendations made. For example, with this update, Kern COG has incorporated the Caltrans' *Smart Mobility Framework* in the RTP's performance measure section of Chapter 2.

Further, staff agrees with EPA's request to "expand discussion of impacts to critical habitat areas and connect it to a broader regional mitigation strategy in the RTP" and incorporated EPA's recommendations as mitigation measures in Chapter 3 of this Final SEIR (titled Changes to the Draft SEIR).

Finally, the Draft SEIR contains information regarding the use of available data used to inform regional transportation planning decisions. The Draft SEIR provides a detailed description of data sources and information available to identify potential natural or historic resource impacts, as well as appropriate mitigation measures to address impacts associated with the short- and long-range improvement projects to be implemented by various state, local, and other agencies. The Draft SEIR is incorporated in the 2011 RTP by reference. In addition, the specific references to each data source listed in the comment letter, which was not included in the Draft SEIR, has been included in Chapter 3 of the Final SEIR (titled Changes to the Draft SEIR) including U.S. Fish & Wildlife Service's species recovery plans, the USDA Natural Resources Conservation Service wetland data, the Nature Conservancy data and regional planning document, and local non-profit and land trust group information.

**FROM:** Bill Pfanner, Supervisor, Local Energy & Land Use Assistance Unit, Special Projects Office, Fuels & Transportation Division, California Energy Commission

**DATED:** May 13, 2010

**RESPONSE #3:** While the 2011 SEIR Notice of Preparation did not indicate expected Energy and Energy Conservation impacts that would result from the 2011 Regional Transportation Plan, potential impacts and mitigation measures to fully address such impacts have been incorporated in Chapter 3 of this Final SEIR (Changes to the Draft SEIR) to ensure compliance with Appendix F of CEQA. Further, energy impacts associated with the 2011 RTP are not expected to be greater than other project alternatives analyzed in the Draft SEIR. Finally, remaining significant effects are not expected and overriding considerations and findings will not be required.

**FROM:** Eugene S. Wilson, California Clean Energy Committee

**DATED:** June 10, 2010

**RESPONSE #4:** Thank you for your comments regarding the 2011 Regional Transportation Plan and its Draft SEIR. We are responding paragraph-by-paragraph, as numbered on the attached copy of your letter.

**Paragraphs 1 through 5** require no response.

**Paragraph 6.** The 2011 Regional Transportation Plan (RTP) is a program level document, which is reflected in the level of analysis provided in its SEIR. Hence, project-level analysis and discussion are not provided and project life cycle analysis would not be appropriate. The document does provide annual numbers for climate change emissions, and cumulative analysis has been prepared. The transportation modeling undertaken for this programmatic plan combines projects using a cumulative analysis for the year 2035. This cumulative analysis looks at some of the life cycle variables, including congestion. Many of the projects planned to be built more than 10 years out are not well defined, making a detail lifecycle analysis not possible. In addition, many of the lifecycle issue that you suggest we review are one time episodic releases of CO<sub>2</sub> and account for a relatively small fraction of the overall CO<sub>2</sub> emissions accounted for in the cumulative analysis. While project life cycle analysis can be done for individual projects, it is not suitable for this programmatic-level plan, which includes a wide variety of multi modal projects. It is also likely that some of the listed projects in Table 4-1 will have a life cycle horizon year beyond the horizon year of this plan (2035). In order to determine a lane mile of roadway, analysis of individual projects would be necessary. This will occur as individual projects are funded and individual agencies move forward to construction subsequent to preparation of the appropriate level of environmental analysis.

In response to this comment Kern COG has added the following mitigation to Chapter 3 of this Final SEIR (Changes to the Draft SEIR):

“Project level environmental documents shall analyze construction and maintenance GHG emissions.”

**Paragraph 7.** The Draft SEIR includes baseline emissions for greenhouse gas (GHG) and criteria pollutants in tables 3-3 to 3-5, and 3-11. The Draft SEIR incorporates the conformity analysis by reference. The budgets included in the conformity analysis are from the seven State Implementation Plans developed for criteria pollutants in Kern and are based on observed emissions inventories and air quality monitoring data. There is currently no monitoring data network for GHG. The air basin for GHG is global, so a global monitoring network and emissions inventory would be required to accurately assess the impacts of GHG.

**Paragraph 8.** While analysis of per capita GHG emissions is a CARB Regional Targets Advisory Committee recommendation for passenger vehicle emission, no other regulatory agency requires this analysis at this time, nor is it available. In addition, the GHG analysis includes emissions from heavy duty trucks which are not a part of the SB 375 per capita requirement. Kern COG will comply with SB 375 targets when they become available; this discussion will be included in 2014 RTP in keeping with the established timeframe for SB 375.

**Paragraph 9.** The GHG analysis was prepared as part of the cumulative analysis, as provided in Table 3-12 of the Draft SEIR and reflected in the projects from Table 4-1 of the RTP. The air quality model used to predict emissions rates of the criteria pollutants (EMFAC) is capable of modeling the emissions of CO<sub>2</sub>, and Kern COG analyzed CO<sub>2</sub> emissions resulting from the 2011 RTP. Even though the total VMT increased, the 2011 RTP results in a reduction of CO<sub>2</sub> emissions and would represent an improvement over the No Project Alternative as shown in Table 3-12 of the Draft SEIR. The improvement in operations compared to the No Build Alternative, particularly higher speed and reduced vehicle hours traveled (VHT), has a beneficial cumulative impact on CO<sub>2</sub> emissions because of improved traffic flow, resulting in more efficient vehicle operation, which is consistent with the results for the analysis of the other criteria pollutants. The 2011 RTP would result in a positive cumulative effect on the reduction of CO<sub>2</sub> levels and would not require mitigation.

**Paragraph 10.** Significance threshold for passenger vehicle related GHG emissions are currently being established by CARB as part of the SB 375 process, and should be set by September 30, 2010 which is beyond the required date to update the Kern RTP. The significance threshold for GHG emissions will be discussed in Kern COG's 2014 document. The California Air Resources Board (CARB) Scoping Plan indicates the "possible" impacts of land use and transportation policies, referencing a 2008 U.C. Berkeley study that reviewed land use/transportation modeling studies from California, other states, and Europe. That study found a range of between 0.4 and 7.7 percent reduction in vehicle miles traveled (VMT) resulting from a combination of land use and enhanced transit policies compared to "business as usual". The Scoping Plan indicated that the range of VMT reductions resulted in a 4 percent median value. The Scoping Plan specifically states, "This value should not be interpreted as the final estimate of the benefits of this measure....The benefit will be determined as an outcome of SB 375". Kern COG is currently developing plans and policies to address SB 375 requirements, which will be incorporated as part of the 2014 RTP.

**Paragraph 11.** See discussion provided in response to Paragraph 9. Climate change impacts were discussed within the 2011 RTP and its Draft SEIR as well as the Conformity

determination. Currently, metropolitan Bakersfield's transit provider (Golden Empire Transit or GET) is preparing a Long Range Transit Study, which will be implemented over the next 5 to 20 years and will strongly influence where and how travel occurs. From a cumulative perspective, the impact of the RTP on where and how travel occurs is reflected in the difference between the Build and No Build Alternatives as provided in Table 3-12 of the Draft SEIR. Also in the Draft SEIR is a lengthy list of feasible mitigation measures, though individual measures will be determined on a project by project basis. Note, starting on page 3-91 of the Draft SEIR, the mitigation measures provided for Impacts 3.5.1 and 3.5.2. However, some mitigation measures cannot be quantified because the necessary tools to do so are not currently available. The California Air Resources Board (CARB) is in the process of identifying a qualitative methodology to assess beneficial impacts of the various listed mitigation measures as part of the SB 375 process. Still others require assessment at the individual project level. Kern COG cannot quantify what the individual impacts will be to the complete RTP Program of Projects because it contains a full array of alternative mode projects. The Transportation Control Measures action element beginning on p. 4-65 of the RTP includes a detailed discussion of control measures that have been considered or are under consideration in the region. Based on cumulative analysis, Kern County is meeting its required federal air quality standards. Climate change standards for passenger vehicles have yet to be set by CARB. Kern COG has analyzed Build and No Build alternatives. The Plan reduces GHG when compared to the No Build alternative. Additional mitigation measures, as they are implemented, will help the region exceed analyzed benefits.

**Paragraph 12.** Kern County must expand road capacity in order to provide for improved transit systems, as well as bicyclists, and other non-motorized modes, not just to provide capacity for single-occupant vehicles (SOVs). An update to the Kern County Bicycle Plan is currently under preparation. In addition, initial modeling conducted by Kern COG indicates that a dedicated bus lane for Bus Rapid Transit (BRT) would only carry 430 of the 600 daily boardings needed by 2035 to meet the 20 percent operating farebox subsidy requirements (not including right-of-way and equipment costs for the dedicated Bus/High Occupancy Vehicle (HOV) lane. Opportunities may arise to optimize the system and increase ridership in the future, possibly adding parking costs, alternative land uses, and other strategies as part of Kern COG's Metropolitan Bakersfield Long Range Transit Study scheduled for completion in 2012. For now, an enhanced transit option that reduces VMT and vehicle trips does not appear to be financially feasible without a new transit operating funding source.

**Paragraph 13.** See response provided for Paragraph 9. Kern COG has quantified GHG emissions for the region as provided on page 3-90 of the Draft SEIR. Kern COG does have experience in modeling sprawl impacts and along with the other seven San Joaquin Valley COGS is reviewing a wide variety of tools to estimate sprawl impacts. An appropriate tool will be selected for use in the 2014 RTP. Nevertheless, the 2011 RTP incorporates principles from the Kern Regional Blueprint that were developed based on the agency's modeling of sprawl impacts and extensive public input. Tools used included UPLAN and EMFAC and spreadsheet-based methodologies.

**Paragraph 14.** The Climate Change Section 3.5 of the Draft SEIR does identify feasible mitigation strategies, some of which include those listed in the California Clean Energy

Committee's comment letter. However, some strategies are not appropriate for the Kern region because of its unique mix of urban and rural forms.

**Paragraph 15.** See response provided for Paragraph 13.

**Paragraph 16.** As described in the response to Paragraph 9, the Build / No Build analysis is incorporated. The methodology used includes a transportation model with a feedback loop that includes the mode choice step to simulate induced traffic demand for each scenario analyzed. Page 4-69 of the RTP includes a list of TCMs considered by projects in the Metropolitan Bakersfield area. Some projects have considered increased parking cost for the central business district locations as an option. Other TCMs considered include carpooling, flextime, transit subsidies, park and rides, increased funding for transit and high occupancy vehicle lanes. At least one major transportation facility includes room to accommodate an HOV lane that could become part of a future congestion pricing study.

Page 4-110 of the RTP includes a new requirement for a Deficiency Plans or Corridor System Management Plan (CSMP) as part of the Congestion Management Program. The CSMP is required to look at: multimodal analysis, corridor analysis, multimodal circulation plans, funding mitigation, and congestion pricing in corridors that are currently worse than Level of Service E.

**Paragraph 17.** See previous comment. In 1997, Kern COG completed the Metropolitan Bakersfield Major Transportation Investment Strategy (MTIS). The MTIS was jointly conducted by the following agencies:

- City of Bakersfield
- County of Kern
- Golden Empire Transit
- Kern CO;
- Caltrans, District 6, and
- San Joaquin Valley Unified Air Pollution Control District.

The strategy developed by the participating agencies contained eight components, including land use. The land use planning component encourages mixed-use, infill, and other balanced land development to minimize concomitant vehicular traffic increases. Developer incentives for mixed-use and infill have been instituted. Large developments proposed as an amendment to the metropolitan Bakersfield General Plan trigger the requirement for a traffic impact analysis that uses the Kern COG regional transportation model. Developments with a balanced mix of residential income housing and commercial/industrial will show less of an impact than strictly residential development, thereby reducing the traffic impact fee that a development must pay.

To encourage infill development, the City of Bakersfield and the County of Kern have jointly adopted a two-tiered traffic impact fee for metropolitan Bakersfield. The fee is half of the \$12,000 per house fee in the "core area" of Bakersfield. The core area is primarily the older "built out" portions of the community that have the infrastructure in place. The logic behind the lower core area fee is that housing in these areas should not have to pay as high a fee because the transportation infrastructure is already in place. The result is a

fee structure that promotes infill and increased densities in areas with readily available bus transit and pedestrian access.

The MTIS also looked at light and heavy rail. The study indicated that even with an optimistic growth rate, light rail would not be viable in metropolitan Bakersfield before 2014. However, as the land use program is implemented, densities could eventually provide enough infill to support such a system. In addition, the MTIS developed a sketch plan for a heavy commuter rail network connecting Metro Bakersfield to outlying communities. The development of a feeder rail network using existing spur lines in support of a high-speed rail connection to Los Angeles and San Francisco is being studied now that funding has been approved for the proposed high-speed rail system. The viability of either system is dependent on a pattern of development that is much denser than is being implemented currently. Land use development patterns should include dense, pedestrian-oriented future transit hubs that could support viable alternatives to single occupancy vehicle travel. The MTIS concluded that, for the near term, multimodal transportation investment should focus on increasing and expanding the existing bus service. This strategy has the added potential of one day providing a feeder network that would increase the viability of other modes such as pedestrian, bike and rail service.

In 2009 as part of the RTP update Kern COG analyzed an updated version of the MTIS light rail scenario substituting the rail corridor with a Bus Rapid Transit (BRT) System. Section 4.2.3 of the Draft SEIR summarizes the analysis. The corridor still lacked the ridership necessary to recover the required farebox ratio to viably operate the system. GET is working on a Long Range Transit Study update to the MTIS and will look at alternatives to improve the viability of BRT and Light Rail.

**Paragraph 18.** The 2011 RTP provides for multimodal projects, rather than simply a road improvement program. Kern COG's transportation modeling process uses all of Kern communities' general plans. Such strategies as parking pricing or shifting funding to other modes such as transit, bicycling and walking will be considered. Kern COG has modeled parking pricing along with a mix of transit. See the response to paragraphs 16 and 17 related to congestion pricing and multimodal analysis. In 2008 Kern COG adopted the Kern Regional Blueprint. The final report included a residential energy consumption analysis in the year 2050. The 2011 RTP now includes two rail goods movement infrastructure projects. Shipping goods by rail is 10 times more energy efficient than shipping by truck. Over the next few years Kern COG will be assessing all relevant strategies for reducing energy consumption and GHG emissions; these will be modeled and results will be incorporated as part of the 2014 RTP. However, it seems likely that congestion pricing would need to be implemented on a national level because of our high percentage of through-County trips (over 30% of our trips are pass-through).

**Paragraph 19.** While the 2011 SEIR Notice of Preparation did not indicate expected Energy and Energy Conservation impacts that would result from the 2011 RTP, potential impacts and mitigation measures to fully address such impacts will be incorporated in the Final SEIR to ensure compliance with Appendix F of CEQA Guidelines. Mitigation measures are already included in the Climate Change sector of the Draft SEIR that would also address energy conservation impacts. Energy impacts associated with the 2011 RTP are not expected to be greater than other project alternatives analyzed in the Draft

SEIR. Remaining significant effects are not expected and overriding considerations and findings will not be required.

Kern COG's Environmental Justice (EJ) analysis looked at the impact of urban transit service expenditures on EJ neighborhoods. The result was an indication that the current transit expenditure distribution aided EJ neighborhoods.

**Paragraph 20.** See response to Paragraph 4. The transportation model analysis for GHG emissions incorporates speeds that are input to EMFAC, which factors into estimates of projected GHG emissions. The majority of 55+ mph highway lane miles are under jurisdiction of the State of California, which would require statewide legislation to change. The majority of major arterials in Kern County under local jurisdiction is set at 45 mph or lower. For conformity purposes, 45 mph is the optimum speed. If speeds were to be lowered, problems with conformity would be encountered, impacting both CO and CO<sub>2</sub>. In addition, Kern COG has dedicated funding to speed limit enforcement and traffic calming features.

**Paragraph 21.** The 2011 RTP provides a multimodal Program of Projects as identified in Table 4-1. Follow up analysis will occur with individual projects as local agencies move forward, and environmentally assess individual projects on a project by project basis. Many of the RTP's capacity increasing projects in rural areas are safety-related projects, rather than congestion-relieving. The same is true with maintenance and rehabilitation projects.

**Paragraph 22.** See response to Paragraph 4. Currently, CEQA does not require that the impacts of climate change on the transportation infrastructure be considered. However, mitigation measures for maintenance and rehabilitation projects will be implemented by local agencies and Caltrans as those projects are undertaken. Roadbeds will be improved to current standards, which are intended to address the flooding and erosion potential over the life of a project. Typically, projects have a 20 – 30 year life cycle.

**Paragraph 23.** Regarding the diversion of funds to alternative transportations creating unacceptable delays, congestion and air quality impacts, the analysis mentioned in paragraph 17 above shows that Metropolitan Bakersfield lacks the density to affordably run a Bus Rapid Transit or Light Rail System. Kern COG is instituting with this revision to the RTP, new requirements for looking at congestion pricing in currently congested areas as part of the Congestion Management Program, and a Long Range Transit Study is underway to develop a more viable alternative transportation system that could include parking pricing and other strategies including managed lanes. Kern COG has performed extensive system level analysis of Environmental Justice areas using the Caltrans Smart Mobility Framework. The current analysis demonstrates that transportation expenditures are benefitting environmental justice areas for both highway and transit expenditures. Increased energy costs are not localized and there for not included in the Environmental Justice analysis stratified by place type.

**FROM:** Bob Wren, Deputy Director of Public Works, City of Wasco

**DATED:** June 2, 2010

**RESPONSE #5:** There are two proposed sites for the Heavy Maintenance Facility. One is in Wasco and the other in Shafter. You can review the proposals on Kern COGs website at <http://kerncog.org/cms/transportation/hsr>. As for the status, both sites have been selected for the short-list. Final selection is scheduled for July 2011.



ARNOLD SCHWARZENEGGER  
GOVERNOR

June 16, 2010

Ms. Marilyn Beardslee  
Kern Council of Governments  
1401 19th Street, Suite 300  
Bakersfield, CA 93301

Subject: 2011 Kern COG Regional Transportation Plan  
SCH#: 2006111119

Dear Ms. Marilyn Beardslee:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on June 14, 2010, and no state agencies submitted comments by that date. 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 call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan  
Acting Director, State Clearinghouse

STATE OF CALIFORNIA

GOVERNOR'S OFFICE of PLANNING AND RESEARCH  
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT  
DIRECTOR

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**Document Details Report  
 State Clearinghouse Data Base**

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**Project Title** 2011 Kern COG Regional Transportation Plan  
**Lead Agency** Kern Council of Governments

**Type** EIR Draft EIR

**Description** Preparation and approval of the 2011 Kern COG Regional Transportation Plan (RTP).

**Lead Agency Contact**

**Name** Ms. Marilyn Beardslee  
**Agency** Kern Council of Governments  
**Phone** (861) 861-2191 **Fax**  
**email**  
**Address** 1401 19th Street, Suite 300  
**City** Bakersfield **State** CA **Zip** 93301

**Project Location**

**County** Kern  
**City** Bakersfield  
**Region**  
**Lat / Long**  
**Cross Streets**  
**Parcel No.**  
**Township**

**Range** **Section** **Base**

**Proximity to:**

**Highways**  
**Airports**  
**Railways**  
**Waterways**  
**Schools**  
**Land Use** Various

**Project Issues** Agricultural Land; Air Quality; Archaeologic-Historic; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects; Aesthetic/Visual

**Reviewing Agencies** Resources Agency; Department of Conservation; Department of Fish and Game, Region 4; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 6; Air Resources Board, Transportation Projects; Regional Water Quality Control Bd., Region 5 (Fresno); Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; Caltrans, District 3

**Date Received** 04/30/2010 **Start of Review** 04/30/2010 **End of Review** 06/14/2010



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

RECEIVED  
JUN 21 2010  
KERN COUNCIL  
OF GOVERNMENTS

Marilyn Beardslee  
Kern Council of Governments  
1401 19th Street, Suite 300  
Bakersfield, California 93301

Subject: U.S. EPA Comments on the Kern Council of Governments (KCOG) Regional  
Transportation Plan and Draft Environmental Impact Report

2 –  
Entire  
Letter

Dear Ms. Beardslee:

The U.S. Environmental Protection Agency (EPA) appreciates the opportunity to provide comments on the Kern Council of Governments (KCOG) 2011 Draft Regional Transportation Plan (RTP) and Draft Environmental Impact Report (DEIR). EPA is committed to the goal of incorporating environmental considerations early in the transportation planning process. Early coordination results in greater opportunities to avoid sensitive resources and minimize impacts associated with future transportation projects.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) directs metropolitan planning organizations (MPOs) to consult with resource agencies while developing long-range transportation plans. It also requires such plans to discuss potential environmental mitigation activities and potential locations for these activities to restore and maintain environmental functions that could be affected by the plan. While EPA did not complete a comprehensive review of the KCOG RTP, we provide the following comments in support of compliance with these requirements. While we understand some of the provided recommendations below may not be able to be incorporated into this RTP revision, we hope that the concepts and principles identified can be incorporated into the next RTP revision.

### **Delineate Robust Measures to Improve Air Quality through Travel Efficiency**

Air quality in the San Joaquin Valley is among the poorest in the country, causing health and environmental impacts for its residents and costs to its economy totaling approximately \$1600 per capita annually. The valley's geography and meteorology traps pollutants, so special attention must be given to reducing the amount of pollutants emitted. Transportation within the valley contributes a significant portion of these pollutants, and conversely reduction of vehicle travel can provide reductions for all pollutants. Reducing emissions from transportation is necessary to improving the valley's air quality. While improvements in fuel efficiency and

vehicle technology will contribute to a reduction in emissions, substantial focus on and investment in travel efficiency measures (e.g. smart growth and transportation demand management (TDM)) is also needed to further reduce emissions in the San Joaquin Valley.

### **Use the RTP Process to Spur Transportation Efficient Growth That Accomplishes Multiple Objectives**

A regional transportation planning process provides an opportunity to focus growth and activity where it most benefits the region. Compact development built in infill locations shortens trip distances; transit-oriented development leads to a greater share of transit use; mixing of uses accomplishes both and also creates opportunities for active transportation modes. Such development patterns, and the transportation patterns they help create, in turn can create environmental and livability benefits. These concepts and others are included in Caltrans' recently completed *Smart Mobility 2010: A Call to Action for the New Decade*. In particular, EPA would like to call attention to its discussion of performance measures aimed at quantifying the benefits of integrated planning:

Transportation performance measures forecast, evaluate, and monitor the degree to which the transportation system accomplishes adopted public goals and mobility objectives. Smart Mobility Performance Measures demonstrate the relationship between integrated transportation and land use decisions and the consequent effects on the full range of economic, social, and environmental conditions. (p. 50)

As detailed in the document, EPA recommends incorporation of carefully chosen performance measures to inform and guide planning efforts.

EPA, the US Department of Housing and Urban Development (HUD) and the US Department of Transportation (DOT) recently joined in a partnership to support measures to improve livability and sustainability. We encourage you to consider the principles identified through this partnership when working to integrate the regional blueprint concept into regional planning. More information on this partnership, including grant opportunities, can be found at <http://www.epa.gov/smartgrowth/partnership/>. Programs offered by the partnership, including funding opportunities, can be found at [http://www.epa.gov/smartgrowth/pdf/2010\\_0506\\_leveraging\\_partnership.pdf](http://www.epa.gov/smartgrowth/pdf/2010_0506_leveraging_partnership.pdf).

### **Clarify in the RTP How the Ongoing Regional Blueprint Effort Influenced Any Current Design and Route Network Location Decisions.**

EPA recognizes that San Joaquin Valley MPOs intend to apply the ongoing regional blueprint process to identify preferred growth scenarios for the future which will serve as the foundation for determining a Sustainable Community Strategy. EPA recommends that, from a regional perspective, the RTP identify how proposed transportation projects have been planned to (1) more efficiently use existing infrastructure, for example by incorporating intelligent transportation systems or improving transit service, rather than adding new infrastructure; (2) satisfy regional residents' need for efficient access to goods and services in the way that causes the least environmental and social harm; and (3) avoid and minimize harm to high quality resources and habitat. The RTP should also identify what design and route network location

A significant fraction of the built environment that will exist in the area affected by this RTP has yet to be built. Thus, significant opportunity exists to make substantial changes to land use development patterns. Because land use has significant direct influence on factors such as mode choice and average trip distance, and therefore indirect influence on factors such as air quality and greenhouse gas emissions, opportunity exists for significant change from current trends. EPA recommends including a discussion of estimates of the range of possibility with respect to these factors, and a discussion of the factors limiting these possibilities (e.g. funding, institutions).

EPA recognizes that MPOs do not have direct land use control. They can, however, facilitate local jurisdictions in the region, coordinating and building consensus through blueprint planning. A number of incentive programs are available to help fund such coordination (see attachment). Further, an MPO can use its role in transportation network planning to influence growth.

EPA recommends including discussion of both near-term transportation demand management strategies and more aggressive potential future solutions. While we recognize there may not be an opportunity to include a comprehensive discussion and analysis of these measures in this RTP update, we recommend expanding this discussion as feasible in this RTP with an eye toward the next RTP cycle. We recommend such a discussion focus primarily on opportunities and secondarily on constraints.

#### **Discuss Impacts to Critical Habitat Areas and Connect It to a Broader Regional Mitigation Strategy in the RTP.**

EPA strongly recommends avoiding biologically sensitive habitats when planning a regional transportation network. Where applicable open space plans, conservation areas, mitigation banks, conservation plans (such as Habitat Conservation Plans (HCPs) and Natural Community Conservation Planning programs), and high value resource areas should be identified and avoided at the regional transportation planning phase, rather than waiting until project implementation. Choices involving both roadway network placement and land use are decided or highly influenced by the regional transportation planning process and can have large implications for biologically sensitive areas.

The following are EPA's recommendations for biological and sensitive habitat mitigation:

- Use resource data to inform transportation decision-making.
- Use watershed, conservation, and recovery plans to identify important environmental considerations for the region, such as critical wildlife corridors, the most important areas to protect for sensitive species, and areas with a high concentration of resources.
- Give conservation plans as much weight as General Plans when planning transportation investments.

- Incorporate concepts such as 100 to 200 foot buffers for stream corridors, and identification and improvement of priority culverts that currently restrict wildlife corridors and natural processes of stream and river systems.
- Use parcel maps to identify larger, undivided parcels for ease of acquisition and preservation, and designate areas as potential future mitigation sites.
- Consider the resource, “Eco-logical: An Ecosystem Approach to Developing Infrastructure Projects” (2006)<sup>1</sup> which encourages Federal, State, Tribal and Local partners involved in infrastructure planning, design, review, and construction to use flexibility in regulatory processes. Specifically, Eco-Logical puts forth the conceptual groundwork for integrating plans across agency boundaries, and endorses ecosystem-based mitigation - an innovative method of mitigating infrastructure impacts that cannot be avoided.

The Regional Mitigation Strategy contained in the RTP should also establish the foundation for innovative regional mitigation solutions:

- Identify financial mechanisms to fund mitigation, such as development fees, sales tax, or the use of funds from alternative methods to identify and protect critical resource areas.
- Establish conservation easements that connect to and expand existing conservation areas.
- Describe locally-developed measures such as county/city designation of open-space, measures requiring development set-backs near streams, etc.

#### **Describe the Use of Available Data to Inform Regional Transportation Planning Decisions.**

SAFETEA-LU directs MPOs to compare transportation plans with other plans, maps, and data of inventories of natural or historic resources, if available. The RTP should therefore include a discussion of other data, plans, or maps that may be useful to inform long-range transportation planning. EPA recommends that the RTP specifically describe how the proposed transportation network has been designed to avoid resources identified in data sources such as those identified below:

- U.S. Fish & Wildlife Service species recovery plans
- USDA Natural Resources Conservation Service wetland data
- Nature Conservancy data and regional planning documents
- California Department of Fish and Game Natural Diversity Database
- Local non-profit and land trust group information

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<sup>1</sup> Eco-logical is available on-line at: [http://www.environment.fhwa.dot.gov/ecological/eco\\_index.asp](http://www.environment.fhwa.dot.gov/ecological/eco_index.asp). Information on pilots using Eco-logical principals is available on-line at: [http://www.trb.org/StrategicHighwayResearchProgram2SHRP2/Public/Pages/capacitypilottests\\_334.aspx](http://www.trb.org/StrategicHighwayResearchProgram2SHRP2/Public/Pages/capacitypilottests_334.aspx).

EPA values the opportunity to be involved in the regional transportation planning process. When the final RTP and EIR are available, please send a copy of each to the address above (mail code CED-2). If you have any questions about our comments, please contact me at 415-947-4121 or [ganson.chris@epa.gov](mailto:ganson.chris@epa.gov).

Sincerely,



Chris Ganson  
Environmental Review Office

Enclosure: Leveraging the Partnership: DOT, HUD, and EPA Programs for Sustainable Communities

cc: Garth Hopkins, Caltrans Headquarters  
Christine Cox-Kovacevich, Caltrans Central Region  
Aimee Kratovil, Federal Highway Administration  
Eric Eidlin, Federal Transit Administration  
Roberta Gerson, US Fish and Wildlife Service

CALIFORNIA ENERGY COMMISSION  
1516 NINTH STREET  
SACRAMENTO, CA 95814-5512  
www.energy.ca.gov



**RECEIVED**  
MAY 19 2010  
KERN COUNCIL  
OF GOVERNMENTS

May 13, 2010

Ms. Marilyn Beardslee  
Kern Council of Governments  
1401 19th Street, Suite 300  
Bakersfield, CA 93301

Dear Ms. Beardslee:

The California Energy Commission has received the Kern Council of Governments' Supplemental/Subsequent EIR titled 2011 Kern COG Regional Transportation Plan, SCH 2006111110 that was submitted on 4/30/2010 for comments due by 6/14/2010. After careful review, the Energy Commission has found the following:

We would like to assist in reducing the energy usage involved in your project. Please refer to the enclosed Appendix F of the California Environmental Quality Act for how to achieve energy conservation.

In addition, the Energy Commission's *Energy Aware Planning Guide* is also available as a tool to assist in your land use planning. For further information on how to utilize this guide, please visit [www.energy.ca.gov/energy\\_aware\\_guide/index.html](http://www.energy.ca.gov/energy_aware_guide/index.html).

Thank you for providing us the opportunity to review/comment on your project. We hope that our comments will be helpful in your environmental review process.

If you have any further questions, please call Gigi Tien at (916) 651-0566.

Sincerely,

**BILL PFANNER**  
Supervisor, Local Energy & Land Use Assistance Unit  
Special Projects Office  
Fuels and Transportation Division  
California Energy Commission  
1516 Ninth Street, MS 23  
Sacramento, CA 95814

Enclosure

3

## Appendix F ENERGY CONSERVATION

### I. Introduction

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

- (1) decreasing overall per capita energy consumption,
- (2) decreasing reliance on natural gas and oil, and
- (3) increasing reliance on renewable energy sources.

In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

Energy conservation implies that a project's cost effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, lifetime costs may be determined more by energy efficiency than by initial dollar costs.

### II. EIR Contents

Potentially significant energy implications of a project should be considered in an EIR. The following list of energy impact possibilities and potential conservation measures is designed to assist in the preparation of an EIR. In many instances, specific items may not apply or additional items may be needed.

#### A. Project Description may include the following items:

1. Energy consuming equipment and processes which will be used during construction, operation, and/or removal of the project. If appropriate, this discussion should consider the energy intensiveness of materials and equipment required for the project.
2. Total energy requirements of the project by fuel type and end use.
3. Energy conservation equipment and design features.
4. Initial and life-cycle energy costs or supplies.
5. Total estimated daily trips to be generated by the project and the additional energy consumed per trip by mode.

#### B. Environmental Setting may include existing energy supplies and energy use patterns in the region and locality.

#### C. Environmental Impacts may include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, opera-

tion, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

#### D. Mitigation Measures may include:

1. Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the project and why other measures were dismissed.
2. The potential of siting, orientation, and design to minimize energy consumption, including transportation energy.
3. The potential for reducing peak energy demand.
4. Alternate fuels (particularly renewable ones) or energy systems.
5. Energy conservation which could result from recycling efforts.

#### E. Alternatives should be compared in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy.

#### F. Unavoidable Adverse Effects may include wasteful, inefficient and unnecessary consumption of energy during the project construction, operation, maintenance and/or removal that cannot be feasibly mitigated.

#### G. Irreversible Commitment of Resources may include a discussion of how the project preempts future energy development or future energy conservation.

#### H. Short-Term Gains versus Long-Term Impacts can be compared by calculating the energy costs over the lifetime of the project.

#### I. Growth Inducing Effects may include the estimated energy consumption of growth induced by the project.

# California Clean Energy Committee

June 10, 2010

Ms. Marilyn Beardslee, Project Administrator  
Kern Council of Governments  
1401 – 19<sup>th</sup> Street, Suite 300  
Bakersfield, California 93301

Re: Comments on the Draft Environmental Impact Report  
Kern COG 2011 Regional Transportation Plan

4 –  
Entire  
Letter

Dear Ms. Beardslee:

This letter will constitute comments by the California Clean Energy Committee regarding the Kern COG 2011 Regional Transportation Plan draft programmatic environmental impact report (EIR).

P1

The Committee is a California non-profit corporation headquartered in Santa Barbara which seeks to promote energy conservation, greenhouse gas reduction, and the development of clean-energy resources in California. It actively supports the application of the California Environmental Quality Act (CEQA) to energy conservation and to related impacts.

P2

Seventy-six percent of participants in the Kern COG Blueprint agreed or strongly agreed that alternative transportation should be expanded. Thirty-nine percent favored major policy changes to protect the environment and natural resources.

P3

Over 40 individuals in Kern County have joined the California Clean Energy Committee's campaigns. Eighteen individuals have joined the campaign to request that the environmental impact report on the Kern COG regional transportation plan include increased energy conservation and sustainable transportation.

P4

All notices regarding this project are requested to be sent to 1224 North Ontare Rd., Santa Barbara, California 93105-1940. Please feel free to contact the undersigned for additional information.

P5

With respect to GHG impacts, the EIR should analyze the environmental loads emitted from the project life cycle. The life cycle includes manufacturing of construction materials, project construction, maintenance, and repair. Building a lane-mile of roadway can release as much as 2300 tons of CO<sub>2</sub>, and long-term maintenance and reconstruction activities can release as much as 5200 tons of CO<sub>2</sub> per lane mile. In addition, mainten-

P6

California Clean Energy Committee | 1224 North Ontare Road, Santa Barbara, CA 93105-1940

Voice: 805-683-4648 | Facsimile: 805-845-5426

Ms. Marilyn Beardslee  
June 11, 2010  
Page 2

ance and construction activities also create substantial congestion which can last for years resulting reduced fuel efficiency and increased emissions of CO<sub>2</sub> and criteria pollutants.

The impacts of the project on air quality and GHG emissions should be compared to current emissions of CO<sub>2</sub> and criteria pollutants including ROG, NO<sub>x</sub>, CO, PM<sub>2.5</sub>, and PM<sub>10</sub>. However, current emissions have not been quantified. The budget thresholds do not constitute the baseline.

P7

Population should be factored out of GHG data by calculating per capita emissions. The comparison of two 2035 scenarios obscures the fact that increased per capita emissions are a significant impact. Per capita emissions should be disclosed in the document and quantified for each alternative.

P8

The GHG analysis also should be a cumulative analysis including either a list of projects creating related impacts or a summary of impacts from an adopted planning document.

P9

A significance threshold for GHG emissions should be adopted, and the threshold should be consistent with the Scoping Plan adopted by the California Air Resources Board (CARB). The CARB Scoping Plan calls for a 4% per year reduction in VMT per capita.

P10

Impact 3.5.1 in the EIR concludes that the 2011 RTP may cause climate change due to its influence on where and how travel occurs. The impact of the RTP on where and how travel occurs should be quantified based on scientific evidence. The proposed mitigation of the impact should also be quantified.

P11

Making additional road capacity available to commuters can result in the over-use of roadways and can diminish the use of more environmentally-sustainable modes such as transit, cycling, and walking. The negative impact on transit ridership of providing increased roadway capacity should be analyzed.

P12

The existing greenhouse gas emissions of the regional system should be quantified using an appropriate model which should be evaluated and justified. Kern COG has experience for modeling sprawl impacts based on the Kern Blueprint process. There are a variety of projection tools available. INDEX is a current and endorsed GHG emissions modeling technology which allows for the computation of greenhouse gas emissions under a variety of transportation system designs and population scenarios and is able to quantify how proposed policies affect GHG emissions. INDEX allows for modeling of GHG mitigation.

P13

The EIR should adopt feasible mitigation for the impact on climate change that is within its power to adopt or promote in the region. Mitigation can include the purchase of carbon credits, increased funding for transit service, congestion pricing, increased funding for Amtrak, biking and pedestrian infrastructure, subsidies for sustainable energy

P14

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projects, employee transit incentives, parking pricing, cordon pricing, gas taxes, registration fees, public education, growth boundaries, transit-oriented development opportunities, incentives for local agencies, complete streets, lower transit fares, new transit service, car-sharing, SOV reduction programs, monthly transit passes, public support for electric vehicles, on-line ride matching, eco-driving training, freeway management, modal diversion, etc.

The EIR concludes that the RTP will have a cumulatively considerable impact on land use. The EIR should model the impact on sprawl and evaluate mitigation through mode shifts and similar smart growth tools.

P15

The EIR should evaluate induced traffic. Roadway capacity expansion can impact individual decisions about when, where and how to travel. Increasing roadway capacity can reduce automobile travel times and thus enhance the attractiveness of highway use. Reducing travel times can lead individuals to travel to more remote destinations thus increasing VMT and related impacts.

P16

Induced traffic does not include traffic increases that result from population increases or economic growth. However, reducing the cost of travel in terms of the time required can lead to an increase in the number of trips individuals take. Induced traffic connected with capacity expansion can be mitigated by using tolls or congestion pricing. These impacts should be evaluated and mitigated.

P17

The RTP would also encourage driving by providing a subsidy to individuals who elect to travel by SOV since individuals pay only part of the cost of travel by SOV through user fees such as gas taxes, vehicle costs, private insurance, and registration fees. The impacts on the physical environment of subsidies for SOV travel could be mitigated by congestion pricing or by shifting funding to more sustainable modes such as transit, cycling, and walking.

P18

Energy consumption and energy efficiency should be quantified and evaluated. The environmental setting should discuss the energy setting of the project including the uncertainties of crude oil supplies, price volatility, and the related impacts on transit ridership and on low income populations. Focusing public transportation funding on SOVs will not provide a cost-effective transportation mode for low income populations during periods of volatile oil prices. Overall use of energy and energy efficient alternatives should be evaluated scientifically. Direct and indirect project energy consumption should be considered.

P19

The EIR should consider the increased emissions that result from high speed vehicle operation where traffic congestion is reduced. NOx emissions, VOC emissions, CO2 emissions and energy consumption per vehicle mile increase considerably at speeds over

P20

Ms. Marilyn Beardslee  
June 11, 2010  
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45 mph. For example, the purpose of the now-repealed 55 mile-per-hour speed limit was energy conservation. Where freeway capacity is increased and congestion is reduced, vehicle speeds can rise considerably. At higher speeds fuel economy degrades rapidly. This is a potentially significant adverse impact that should be modeled as a part of the air quality, GHG and energy impact sections. Mitigation could include funding devoted to strict enforcement of speed limits, traffic calming measures, and programs to encourage local agencies to adopted lower speed limits.

Transportation decisions have considerable implications for public health including fatalities, injuries, and concentrated ground-level exhaust emissions particularly from diesel vehicles. Over 33,000 people died in traffic crashes in 2009 and many more suffered injury. Transportation planning decisions have an impact on physical inactivity and rising asthma and obesity rates in both adults and children. By focusing transportation funding on roadway capacity as opposed to sustainable transportation policies, the RTP would have an adverse impact on public health that should be evaluated in the EIR. Sustainable transportation alternatives such as walking, bicycling and transit use are convenient and cost-effective ways to introduce more physical activity into daily life. The EIR should quantify the project impacts on human health.

P21

The EIR should consider the impacts of climate change on the transportation infrastructure in Kern County.

P22

With respect to the agency's alternatives analysis, the VMT Reduction Alternative concludes that the alternative is not feasible because the diversion of the limited funds available to alternative transportation would lead to unacceptable delay, congestion and air quality impacts. There are cost-effective tools that both reduce congestion and provide personal mobility. The impacts of allowing an unlimited increase overall VMT are equally unacceptable for many reasons including the economic impacts on low income populations. The reduced VMT alternative should consider the policies discussed herein such as congestion pricing which can generate revenues for transportation services.

P23

Respectfully submitted,

Eugene S. Wilson

California Clean Energy Committee | 1224 North Ontare Road, Santa Barbara, CA 93105-1940

Voice: 805-683-4648 | Facsimile: 805-845-5426

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June 11, 2010  
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## APPENDICES

- Appendix 1: San Joaquin Valley Air Pollution Control District. Air Quality Guidelines for General Plans (June, 2005)
- Appendix 2: San Joaquin Valley Air Pollution Control District. Final Staff Report: Addressing Greenhouse Gas Emissions Impacts Under the California Environmental Quality Act (December, 2009).
- Appendix 3: California Air Pollution Control Officers Association. CEQA and Climate Change (January 2008).
- Appendix 4: City of Redwood City, New General Plan Draft Environmental Impact Report (May, 2010).
- Appendix 5: Caltrans. Energy and Transportation Systems (July, 1983).
- Appendix 6: Kwnggho Park et al. Quantitative Assessment of Environmental Impacts on Life Cycle of Highways, Journal of Construction Engineering and Management (January, 2003).
- Appendix 7: Williams-Derry, Clark. Increases in Greenhouse-Gas Emissions from Highway Widening Projects. (October, 2007).
- Appendix 8: Litman, R. Generated Traffic and Induced Travel: Implications for Transport Planning (March, 2010).
- Appendix 9: U.S. EPA. URBAN Sprawl Modeling, Air Quality Monitoring and Risk Communication; the Northeast Ohio Project (November, 2002).
- Appendix 10: Parsons Brinckerhoff Quade & Douglas. Land Use Impacts of Transportation: A Guidebook (October 1998).
- Appendix 11: R. Ewing, R. Pendall, D. Chen, Measuring Sprawl and Its Impact.
- Appendix 12: Centers for Disease Control and Prevention. CDC Recommendations for Improving Health through Transportation Policy
- Appendix 13: American Public Health Association, The Hidden Health Cost of Transportation (May, 2010).

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- Appendix 14: U.S. Congress, Office of Technology Assessment, Saving Energy in U.S. Transportation, (Washington, DC: U.S. Government Printing Office, July 1994).
- Appendix 15: California Air Resources Board, Climate Change Scoping Plan (December 2008).
- Appendix 16: California Natural Resources Agency, 2009 California Climate Adaptation Strategy (December 2009).
- Appendix 17: Kern Council of Governments, Kern Regional Blueprint Program; Final Report (December 2008).
- Appendix 18: Urban Land Institute, Moving Cooler (July 2009).
- Appendix 19: National Research Council, Transportation Research Board, Expanding Metropolitan Highways: Implications for Air Quality and Energy Use (1995).
- Appendix 20: TRB, Potential Impacts of Climate change on U.S. Transportation
- Appendix 21: Subsidyscope, Analysis Finds Shifting Trends in Highway Funding: User Fees Make Up Decrease Share

City of Wasco

**Bob Wren, Deputy Director of Public Works – email dated 6/2/10**

Item 3. 2011 RTP SEIR – Page 2-8 – Question – This page includes the Shafter/Wasco High Speed Rail Heavy Maintenance Facility for \$450,000,000. Has a determination been made on the site location and if not do you know when a decision might be made?

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### 3.0 CHANGES, ADDITIONS AND CORRECTIONS TO THE DRAFT SEIR

The following changes, additions and corrections to the Draft SEIR are recommended. Such changes, additions and corrections have been identified to address written comments received on the Draft SEIR.

- ◆ **Chapter 2, Page 2-2**, Section 2.3, Paragraph 1, 5<sup>th</sup> Sentence; replace the date “September 20, 2007” with “April 2010”.
- ◆ **Chapter 2, Page 2-7**, Table 2-2; remove the words “four lanes” at the end of the project description for the Route 119 project between Cherry Avenue and Elk Hills Road.
- ◆ **Chapter 2, Page 2-19**, under the section titled “Limited Transit Dollars”; replace the existing paragraphs with the following:

Financial resources for public transportation are limited while demand for those resources continues to increase. Traditional public transportation revenue sources do not support the increasing need for public mass transportation to help mitigate population increases, clean air mandates, and trip reduction programs. The expansion of public transportation services in Kern County is predicated on an aggressive financial plan. The Golden Empire Transit District’s (GET) budgets have increased annually as the system responds to increasing consumer demand for transit, in part caused by recessive economic times and shrinking disposable dollars. The financial core to subsidize public transit service is the Transportation Development Act (TDA) Local Transportation Fund (LTF). Funds for the LTF are derived from that portion of the local sales and use tax attributed to the County, or one quarter of 1% of the 8.25% sales and use tax rate. Kern Council of Governments (Kern COG) apportions these taxes to public transit throughout Kern County. In addition, the TDA authorized the State legislature to budget for State Transit Assistance (STA) funding, by means of allocating a portion of the sales and use tax on gasoline.

However, in an attempt to balance the State’s financial problems, the Governor suspended the State Transit Improvement Fund for five years. This action began in 2008-09 and will continue, unless alternate financial means become available. Lost funding reduces the opportunity to increase transit service or to acquire more buses. The action clearly demonstrates transit’s role in relation to all state-funded activities.

Currently, no local dedicated funding source is available for public transit. A one-half cent countywide sales tax ballot issue for highway as well as transit improvements failed in November 2006. Given the desire on the part of many policy makers and residents for public transit to play a meaningful role in improving air quality, promoting mobility among transit dependant populations, and supporting economic development in the community, the need to secure a dedicated and increasing source of funding becomes imperative.

- ◆ **Chapter 2, Page 2-20**, under the section titled “Population Residing More Than ¼ Mile From Transit Route”; replace the paragraph with the following:

GET District policy is for 90 percent of residents within metropolitan Bakersfield to be within one-quarter mile of an existing route; however, within the District, several populated areas are more than one-quarter mile from a transit route. Currently, GET serves about 75 percent, or 15 percent less than the District goal. Most of this population is on the periphery of metropolitan Bakersfield, with some areas that form “holes” in the one-quarter mile buffer around the routes. While some of the unserved areas may not have high transit potential, portions of the southwest do have high transit potential, but are currently under-served.

Continued development around the urban fringe presents many difficulties in meeting route coverage standards. Much of the new development is low density; middle and upper income housing that tends to generate little transit ridership. Furthermore, new development is not always contiguous to existing development causing transit services to cover unproductive miles in outlying areas that generate low ridership. However, urban fringe development may generate levels of transit ridership to justify express bus service, such as is offered by GET between Bakersfield College and California State University Bakersfield.

- ◆ **Chapter 2, Page 2-20**, under the section titled “Recent Transit Planning Activities”; add the following paragraphs before the Section titled “Eastern Sierra Public Transportation Study”:

**New Public Transportation Services Plan:** In 2005 GET submitted a joint application with Odyssey, a statewide transportation nonprofit organization, for a Caltrans Community-Based Transportation Planning grant to help plan improvements to transit service in Bakersfield. The purpose of this grant was to develop a service plan to provide more innovative and effective public transportation options for serving under-served and hard-to-serve neighborhoods and major destinations within Bakersfield. The primary goal of the project was to engage GET’s stakeholders in the planning process and develop plans that improve mobility and increase transportation choices and transit usage given available resources. The study was completed in 2008 and several service improvements recommended in this study have been implemented, including headway improvements and service extensions.

**Long Range Plan:** The Golden Empire Transit District in partnership with the Kern Council of Governments is initiating a metropolitan Bakersfield Transit System Long Range Plan. The Plan is expected to be completed in 2011. The Plan will provide public agency staff and elected officials with information documenting the relationship between population growth in metropolitan Bakersfield, transit ridership demand, funding, and the evaluation of current operations and efficiencies. The purpose of the Plan is to address emerging intra-city transit system needs. It will also address connectivity between rural areas and major regional transportation facilities such as the Amtrak train station and Bakersfield’s airports. The Plan includes public outreach to solicit public input on transit needs.

- ◆ **Chapter 3, Page 3-73**, Section 3.4.2, under the subsection titled “Mitigation Measures”; add the following to the end of the list of measures:

- Use resource data to inform transportation decision-making.
- Use watershed, conservation, and recovery plans to identify important environmental considerations for the Kern COG region, such as critical wildlife corridors, the most important areas to protect for sensitive species, and areas with a high concentration of resources.
- Give conservation plans as much weight as General Plans when planning transportation investments.
- Incorporate concepts such as 100 to 200 foot buffers for stream corridors, and identification and improvement of priority culverts that currently restrict wildlife corridors and natural processes of stream and river systems.
- Use parcel maps to identify larger, undivided parcels for ease of acquisition and preservation, and designate areas as potential future mitigation sites.
- Consider the resource, “Eco-logical: An Ecosystem Approach to Developing Infrastructure Projects” (2006) which encourages Federal, State, Tribal and Local partners involved in the infrastructure planning, design, review, and construction to use flexibility in regulatory processes.
- Identify financial mechanisms to fund mitigation, such as development fees, sales tax, or the use of funds from alternative methods to identify and protect critical resource areas.
- Establish conservation easements that connect to and expand existing conservation areas.

- Describe locally-developed measures such as designated open space, measures requiring development set-backs near streams, etc.
- The following list of data resources should be referenced during development of biotic plans and studies for transportation improvement projects:
  - U.S. Fish & Wildlife Service species recovery plans;
  - USDA Natural Resources Conservation Service wetland data;
  - Nature Conservancy data and regional planning documents;
  - California Department of Fish and Game Natural Diversity Database; and
  - Local non-profit and land trust group information.

- ◆ **Chapter 3, Page 3-96**, Section 3.5.2; add the following mitigation measure to the list of mitigation measures:

Project level environmental documents shall analyze construction and maintenance Greenhouse Gas (GHG) emissions.

- ◆ **Chapter 3, Page 3-200**, Section 3.14; replace the 3<sup>rd</sup> sentence in the 2<sup>nd</sup> paragraph with the following sentence:

Current GET annual ridership (under Bus System Improvements) is approximately 7.3 million.

- ◆ **Chapter 3, Page 3-200**, Section 3.12; replace the 4<sup>th</sup> paragraph with the following:

Golden Empire Transit (GET) has provided public transit service for the metropolitan Bakersfield area since 1973. Today, GET operates 20 routes with a maximum of 70 buses in service. GET's service area covers 160 square miles and serves approximately 459,000 residents. GET-A-Lift provides complementary paratransit service within metropolitan Bakersfield for those who are physically unable to use the fixed route service. Elderly and disabled services are also provided by the Consolidated Transportation Service Agency (CTSA).

GET has determined that within metropolitan Bakersfield, the east and southeast areas exhibit the highest service potential. This analysis is based on population density, income, auto ownership, and age. Other areas with high transit potential are portions of Oildale and central Bakersfield. The lowest potential rider areas include portions of the southwest and northwest.

Total transit ridership across Kern County showed a slight decline over the years FY2004-2007 as shown in Table 4-4 in the RTP. Ridership for GET and Kern Regional Transit (KRT), however, has increased in more recent years as a result of service expansion and rising gasoline prices. Ridership reflected in Table 4-4 for GET and GET-A-Lift for 2007-08 was 7,029,420 and for 2008-09 was 7,578,323. An all-time record for ridership was achieved in 2008-09.

For GET, the regular fare is \$1.00. For seniors & the disabled, the fare is \$.50. The fare for GET-A-Lift is \$2.00.

In 2008-09, GET's fixed route operation achieved its highest ridership level ever with 7,514,503 riders. Over the last several years, GET-A-Lift's ridership has increased almost every year. Changes since 2000 include: Sunday and evening service was initiated, Day Passes replaced transfers, headways were improved on several routes, and the first 40 ft.-length buses were placed into service. GET has made a commitment to improving Kern County's air quality by purchasing compressed natural gas (CNG) buses. By early 2006, GET's entire fleet, including those assigned to staff, was CNG-fueled. GET has installed bike racks on all of its buses to facilitate intermodal trips, which provides an ancillary improvement to air quality. In partnership with IKEA and Tejon Ranch, GET initiated a new express route between Downtown Bakersfield, Bakersfield Auto Mall, and

Tejon Industrial Complex in October 2008. A permanent park and ride lot for this service will be established in the Greenfield area.

- ◆ Include the following section on Energy and Energy Conservation in Chapter 3 of the Draft SEIR as Section 3.15:

### 3.15 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 2035 projects.

#### Regulatory

##### 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.

◆ **The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users**

SAFETEA-LU, enacted August 10, 2005, authorizes the federal surface transportation programs for highways, highway safety, and transit. SAFETEA-LU addresses the many challenges facing our transportation system today—challenges such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment—as well as laying the groundwork for addressing future challenges. SAFETEA-LU promotes more efficient and effective federal surface transportation programs by focusing on transportation issues of national significance, while giving state and local transportation decision makers more flexibility for solving transportation problems in their communities.

**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.

**Local**

**Kern Energy Watch Program**

Kern COG has developed the Kern Energy Watch Program to design and operate a local government partnership program for the purpose of increasing energy conservation and efficiency within the county, cities, special districts and other units of local government in the Kern region. Public utility partners include Pacific Gas & Electric, Southern California Edison and Southern California Gas (Sempra Energy).

The program is intended to:

- ◆ Organize and coordinate the activities of the Kern Energy Advisory Committee (KEAC), including preparation of meeting agendas, item supporting documentation and minutes;
- ◆ Compose and circulate a Request for Proposals for professional services in designing an comprehensive and integrated Kern Regional Energy Plan;
- ◆ Conduct an inventory and needs assessment of local resource, information and training activities of agencies in the Kern region;
- ◆ Design and implement a marketing program to provide program information to units of local government;

- ◆ Meet with each unit of local government and secure a formal commitment to join the Kern Energy Watch Program;
- ◆ Coordinate the conduct of energy assessments and audits;
- ◆ Conduct or coordinate the conduct of energy efficiency workshops & seminars; and
- ◆ Coordinate the provision of technical support and services for energy efficient retrofit Projects.

### **Kern Regional Energy Plan**

Kern COG will embark on the development of this plan during FY 2010-11. Kern COG will develop and coordinate the implementation of the Kern Regional Energy Plan as part of its Kern Energy Watch Program. The effort will also involve integrating transportation and energy planning efforts in the Kern region.

### **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 Kern 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 Kern 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). 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 5 percent of the world's population, accounts for just fewer than 25 percent of world oil consumption, roughly 21 million barrels per day (EIA 2007). U.S. oil production peaked around 1970 and has been declining ever since; it was about five million barrels per day in 2005. As a result, the U.S. imported about 76 percent of its oil in 2005. The U.S. transportation sector is heavily dependent on oil and represents about 69 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 60 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 (State of California 2007). Furthermore, transportation-related activities represent almost half (48 percent) of California's petroleum-based fuel consumption. According to a 2005 California Energy Commission (CEC) report, California's demand for transportation fuels has increased 53 percent in the last 20 years, and in the next 20 years gasoline and diesel demand will increase another 36 percent (CEC 2005). 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 2005, alternative fuels represented 6 percent of the state's transportation energy needs. 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 Kern 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 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 2011 RTP are provided in Chapter 3, Section 3.5 of the Draft SEIR. 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 contained within the RTP would result in a significant energy impact if it:

- ◆ Results in an increase in total consumption of nonrenewable energy or reduces the ability of the region to conserve energy resources.

### Impact Analysis

The proposed 2011 RTP plans improvements to the region's transportation network through the year 2035. Since the transportation sector accounts for a large portion of the energy consumed in the Kern region, implementation of transportation network improvements would affect the region's energy consumption through 2035. 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 Kern COG and outside the scope of the proposed 2011 RTP may influence future transportation-related energy consumption patterns under the proposed 2011 RTP. 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.

Although energy consumption would increase under the proposed 2011 RTP, the transportation improvements are designed to 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. See the Climate Change discussion in Section 3.5 of the Draft SEIR 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 2011 RTP 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 proposed 2011 RTP 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 2035 under the proposed 2011 RTP.

The 2011 RTP 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 1.4 to 3.4 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 identified in the proposed 2011 RTP 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 projects in the proposed 2011 RTP at this program level of analysis. Nevertheless, the large scale of construction activities that would be required to implement the proposed 2011 RTP would result in an additional amount of additional energy consumption associated with the proposed 2011 RTP.

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 2011 RTP. The energy consumption associated with these features would also increase under the proposed 2011 RTP.

### **Impact 3.15.1 - Energy Consumption & Conservation Impacts**

Construction of the transportation improvements programmed in the proposed 2011 RTP would increase energy consumption due to the operation of construction equipment and vehicles. Given the number of large-scale improvements programmed into the proposed 2011 RTP, 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 2011 RTP is considered a significant impact.

Operation of the transportation improvements identified in the proposed 2011 RTP would increase the total and per capita amount of gasoline and diesel fuel consumption associated with the regional transportation network. Since gasoline and diesel are nonrenewable, petroleum-based fuels, the increase in gasoline and diesel consumption under the proposed 2011 RTP 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 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 that would be implemented under the proposed 2011 RTP. Increased energy consumption levels associated with these ancillary project features are considered a significant impact.

The proposed 2011 RTP 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 Kern 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.

Since the 2011 RTP (2035 Planned scenario) would decrease highway congestion and enhance alternative modes relative to the No Project (2007 RTP) and No Build alternatives (2035 growth versus existing and programmed projects), it would result in potentially beneficial effects on the consumption and conservation of energy resources.

### **Mitigation Measures**

The following mitigation measures shall be implemented by project implementation agencies to reduce the significant energy impacts of the proposed 2011 RTP. In addition, climate change mitigation measures referenced in Chapter 3, Section 3.5 will also contribute to the mitigation of energy consumption and energy conservation impacts.

- ◆ Project implementation 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 implemented under the proposed 2011 RTP, the following energy efficiency measures shall be incorporated when applicable:
  - The design or purchase of any lighting fixtures including but not limited to lighting at transit stations, arterials or freeways, and parking structures/lots 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 features compatible with LED technology.
- ◆ Local 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
- ◆ Local 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. Kern COG recommends the use of Appendix F, Energy Conservation, of the *CEQA Guidelines*.
- ◆ Local agencies should streamline permitting and provide public information to facilitate accelerated construction of solar and wind power.
- ◆ Local 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.”

- ◆ 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. Creating walkable, transit oriented nodes would generally reduce energy use and greenhouse gas emissions. Residential energy use (electricity and natural gas) accounts for 14 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.
- ◆ Kern COG shall work with its member agencies to increase the number of AFVs (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in municipally owned vehicles, as well as those owned by franchisees of these cities, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers.
- ◆ Bid solicitations for construction of projects proposed in the 2011 RTP and subsequent RTP updates shall 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 shall also preference the recycling of construction waste and debris if market conditions permit.
- ◆ Kern 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 Kern region.
- ◆ All mitigation measures listed in Chapter 3, Section 3.5.1, are incorporated by reference and shall be implemented by implementing agencies to address energy conservation impacts.

### Significance After Mitigation

Implementation and monitoring of the above mitigation measures will provide the framework and direction for subsequent individual improvement project-specific mitigation designed to avoid or reduce the identified significant Project impacts to a less than significant level.

- ◆ **Chapter 4, Page 4-5**, under the section titled "Transportation/Circulation", Paragraph 1; add the following sentence to the end of the paragraph: Kern COG and Fresno COG both have the ability to conduct a mode split analysis.
- ◆ **Chapter 4, Page 4-5**, under the section titled "Transportation/Circulation", Paragraph 2, 2nd Sentence; replace the sentence with the following: Kern COG has completed the illustration, which can be found on Page 4-82 of the RTP.

## EXHIBIT A - STATEMENT OF OVERRIDING CONSIDERATIONS

### SUMMARY OF SIGNIFICANT, ADVERSE, UNAVOIDABLE IMPACTS

Kern COG has prepared a mitigation monitoring program for the Kern COG 2011 Regional Transportation Plan Draft and Final Subsequent Environmental Impact Report (SEIR) as required by the California Environmental Quality Act (CEQA), Public Resources Code 21000 et seq. Kern COG identified several significant, adverse, and unavoidable impacts in the Draft and Final SEIRs. As such, CEQA requires the Kern COG Board of Directors to balance the benefits of the Proposed Plan Option against its unavoidable environmental risks in determining whether to approve the Regional Transportation Plan. The SEIRs identify the following significant, adverse, and unavoidable environmental impacts:

- ◆ **Impact 3.1.1:** 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 3.1.2:** Construction and implementation of the projects could alter the appearance of scenic resources along or near designated scenic highways and vista points.
- ◆ **Impact 3.1.4:** 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 3.1.5:** Kern County will experience significant growth and development by 2035. The 2011 RTP influences the pattern of this development, by increasing mobility and including transportation measures. At the regional scale, the 2011 RTP's contribution to impacts on the overall visual character of the existing landscape setting would be cumulatively significant.
- ◆ **Impact 3.2.1:** Individual improvement 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 3.3.3:** 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. While TCMs have been identified in the Air Quality Conformity Findings, the TCMs will not result in attainment of all pollutants over time or by the year 2035.
- ◆ **Impact 3.4.1:** The Project includes individual improvement 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 3.4.2:** The Project includes improvements 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 3.4.3:** The Project includes improvements that 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 3.4.4:** The Project includes individual improvement projects that would result in temporary and permanent impacts to terrestrial and aquatic wildlife movement.
- ◆ **Impact 3.4.6:** The 2011 RTP would potentially increase siltation of streams and other water resources from exposures of erodible soils during construction activities.
- ◆ **Impact 3.4.7:** Growth and development in Kern County will increase substantially by 2035. The 2011 RTP, by increasing mobility and including transportation measures, influences the pattern of this growth and development.
- ◆ **Impact 3.5.1:** Increased Transportation GHG Emissions May Cause Climate Change
- ◆ **Impact 3.6.1:** Cultural resources may be encountered during development of projects proposed in the 2011 RTP. These resources may include, but are not limited to, prehistoric and historical archaeological sites, paleontological sites, historical buildings, and structures associated with agriculture, mining, and petroleum development. Properties important to Native American communities and other ethnic groups, including tangible properties possessing intangible traditional cultural values, also may be present. Such resources may exist individually, in groupings of modest size, or in districts covering substantial geographies.
- ◆ **Impact 3.6.2:** Construction activities may impact known paleontological resources.
- ◆ **Impact 3.6.3:** The 2011 RTP's influence on growth contributes to regional impacts to existing historic resources and previously undisturbed and undiscovered cultural resources, as described in Impacts 3.6.1 and 3.6.2 above.
- ◆ **Impact 3.7.2:** Some improvement projects require significant earthwork, increasing potential slope failure and long-term erosion. Earthwork can also alter unique geologic features. Project impacts would be considered significant in some cases.
- ◆ **Impact 3.7.5:** Although the scope of study performed for this EIR evaluation did not include a determination for project-specific liquefaction or seismic settlement potential, it is possible that liquefiable soils or soils susceptible to seismic compaction during ground shaking exist within areas of planned transportation improvement projects. This is a potentially significant impact, which will require analysis as part of subsequent project-specific environmental review.
- ◆ **Impact 3.7.6:** Some street and highway projects may be proposed along alignments that will affect State-owned and State mineral-reserved lands.
- ◆ **Impact 3.7.7:** Given the regional scale and growth-inducing nature of the projects and programs included in the 2011 RTP, the cumulative impacts of the 2011 RTP on geological units and soils as well as the potential exposure to substantial adverse effects to people and property would be significant.
- ◆ **Impact 3.8.2:** The implementation of the 2011 RTP 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 2011 RTP 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 2011 RTP.

- ◆ **Impact 3.9.5:** The 2011 RTP, by increasing mobility and by including transportation measures, influences the pattern of this development. The 2011 RTP'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, and wastewater treatment services, and water demand.
- ◆ **Impact 3.10.1:** 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 RTP 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 3.10.2:** Sensitive receptors could be impacted because of the proposed individual improvement projects. These possible impacts would depend on several factors such as the type of individual improvement project proposed for the area, projected land use designation of the area, and duration of proposed construction activities. For the most part, improvement projects involving new systems would pose the greatest potential impacts to sensitive receptors. Specifically, sensitive receptors located in the vicinities of such improvement projects could be significantly impacted by the construction and operation of the proposed projects. Additionally, modification projects would result in short-term construction and long-term impacts to sensitive receptors.
- ◆ **Impact 3.10.3:** 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 3.10.4:** Implementation of the projects and programs contained in the 2011 RTP could potentially result in the disturbance or loss of significant agricultural resources throughout the Kern region. This would be considered a potentially significant impact. The County contains areas designated by the state as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. These areas are interspersed throughout urban areas or are located in undeveloped portions of the region. Development of highway, arterial and transit projects proposed under the RTP could potentially result in the disturbance or loss of some of these designated areas. Specifically, new projects involving construction would be most likely to result in impacts to these areas.
- ◆ **Impact 3.10.6:** Growth and development in the County will increase substantially by 2035. The 2011 RTP, by increasing mobility and including transportation measures, influences the pattern of this development. The 2011 RTP's influence on growth contributes to regional cumulatively considerable impacts to land use and would change the intensity of land use in some areas.
- ◆ **Impact 3.11.1:** Grading and construction activities associated with the proposed highway, arterial, and transit 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.
- ◆ **Impact 3.12.1:** The individual improvement projects could affect overall population, housing and employment growth and dispersion 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 individual improvement projects are a specific set of transportation improvements together with the long-range transportation plan developed to meet, among other goals,

the long-term socio-economic conditions of the region. One of the strategic issues is growth. Between the years, 2005 and 2030, residential population is expected to increase by 58 percent. The recent growth trends in housing, population, and jobs within the region are expected to continue.

- ◆ **Impact 3.12.2:** 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.).
- ◆ **Impact 3.12.3:** 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 (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 3.13.1:** The Project could affect overall population, housing and employment growth and dispersion 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 developed to meet, among other goals, the long-term socio-economic conditions of the region. One of the strategic issues is growth. Between the years, 2010 and 2035, residential population is expected to increase by 56 percent. The recent growth trends in housing, population, and jobs within the region are expected to continue.
- ◆ **Impact 3.12.2:** The Project has the potential to disrupt or divide a community by separating community facilities, restricting community access and eliminating community amenities.
- ◆ **Impact 3.12.3:** Growth and development in the County will increase substantially by 2035. The 2011 RTP, by increasing mobility and including transportation measures, influences the pattern of this development. The 2011 RTP'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.
- ◆ **Impact 3.13.5:** Growth and development in the County will increase substantially by 2035. The 2011 RTP, by increasing mobility and including transportation measures, influences the pattern of this development. The 2011 RTP'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.
- ◆ **Impact 3.14.1:** The list 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 Kern region will significantly improve. Capacity increasing projects that would improve these deficient levels of service are not included in the Project; however even with mitigation, the 2035 levels of service would still include a number of segments that will operate at deficient levels or at LOS E and F.

## OVERRIDING CONSIDERATIONS

Kern COG is required to prepare this Statement of Overriding Considerations to explain the reasons for approving the 2011 RTP, despite the unavoidable impacts identified in the EIR and Findings of Fact (as per Section 15093 of the State CEQA Guidelines). In preparing this Statement, Kern COG has balanced the benefits of the Proposed Plan Option against its unavoidable environmental risks. Kern 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. Kern 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 2011 RTP 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 2011 RTP (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 2011 RTP 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 2011 RTP 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 2011 RTP (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 2011 RTP.

Based on substantial evidence in the public record, Kern 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 SEIRs. First, the individual improvement projects identified in the 2011 RTP are required to meet travel demand of residents and businesses through to the year 2035. 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 Kern COG's and its member agencies' jurisdiction to mitigate or avoid the significant environmental effects identified in the SEIRs.

## EXHIBIT B - MITIGATION MONITORING PROGRAM

### STATUTORY REQUIREMENT

This Mitigation Monitoring Program for the Kern COG 2011 Regional Transportation Plan Environmental Impact Report (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 an EIR 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. The Kern Council of Governments (Kern COG) is the Lead Agency that must adopt the mitigation monitoring program for the Kern COG 2011 Regional Transportation Plan if the Project is approved.

Section 21069 of the CEQA statutes defines Responsible Agency as a public agency, other than the Lead Agency, which has the responsibility for carrying out or approving a project. Kern COG finds that the implementation of some mitigation measures listed on the following pages of this Final SEIR are not within its jurisdiction, and can and should be implemented and monitored by agencies responsible for implementing individual improvement 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 (Kern COG) 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 SEIRs.

Regular review and update of the 2011 Regional Transportation Plan will be conducted by Kern COG, as appropriate. These updates involve a determination of regional transportation and air quality impacts and will 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 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:

- ◆ Mitigation measures contained in the Draft and Final SEIRs;
- ◆ Identification of Responsible Party;
- ◆ Description of mitigation measure timing; and
- ◆ Identification of monitoring agency.

This Mitigation Monitoring Program shall be maintained in the Kern COG's files for the Kern COG 2011 Regional Transportation Plan.

## MITIGATION MEASURES

### Aesthetics

#### 3.1 Mitigation

1. All mitigation measures will be included in individual improvement project-level analysis, as appropriate. The implementation agency or local jurisdiction will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with mitigation measures.
  - ◆ Implement design guidelines, local policies, and programs aimed at protecting views of scenic corridors and avoiding visual intrusions; and
  - ◆ 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.
2. All mitigation measures will be included in individual improvement project-level analysis, as appropriate. The implementation agency or local jurisdiction will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with mitigation measures.
  - ◆ Avoid construction of transportation facilities in state and locally designated scenic highways and vista points; and
  - ◆ If transportation facilities are constructed in state and locally designated scenic highways and/or vista points, design, construction, and operation of the transportation facility will be consistent with applicable guidelines and regulations for the preservation of scenic resources along the designated scenic highway.
3. All mitigation measures will be included in individual improvement project-level analysis, as appropriate. The implementation agency or local jurisdiction will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with mitigation measures.
  - ◆ Develop design guidelines for each type of transportation facility that make elements of proposed facilities 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 will be designed in a manner where the surrounding landscape dominates;
    - Transportation systems 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; and
    - Grading will blend with the adjacent landforms and topography.

- ◆ Project implementation agencies shall design projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Project implementation agencies shall 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 shall 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 shall use natural landscaping to minimize contrasts between the project and surrounding areas. Wherever possible, interchanges and transit lines shall 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 shall replace and renew landscaping to the greatest extent possible along corridors with road widenings, interchange projects, and related improvements. New corridor landscaping shall be designed to respect existing natural and man-made features and to complement the dominant landscaping of surrounding areas.
  - ◆ Project implementation agencies shall 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 shall 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.
4. All mitigation measures will be included in project-level analysis, as appropriate. The implementation agency or local jurisdiction will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with mitigation measures.
5. Cumulative Measures
- ◆ Mitigation measures identified above should also be implemented as applicable to development projects throughout the region.
  - ◆ In visually sensitive site areas and prior to project approval, local land use agencies shall 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 that make light elements of proposed facilities visually compatible with surrounding areas. The following methods will be employed whenever possible:
    - Transportation systems will be designed in a manner where the surrounding landscape dominates;
    - Transportation systems will be developed to be compatible with the surrounding environment; and
    - Lighting devices will be employed such as downward facing light, light shields, and amber lumens.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Agricultural Resources

### 3.2 Mitigation

1. The impact on significant agricultural resources will be evaluated as part of the appropriate improvement project-specific environmental review. Mitigation measures will be identified to minimize impacts. Implementation agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with all mitigation measures.
  - ◆ Individual projects will be consistent with local land use plans and policies that designate areas for urban land use and preserve agricultural lands that support the economic viability of agricultural activities; and
  - ◆ Prior to final approval of each individual improvement project, the implementing agency will conduct the appropriate project-specific environmental review, including consideration of potential land use impacts.
2. The impact on significant agricultural resources will be evaluated as part of the appropriate project-specific environmental review. Mitigation measures will be identified to minimize impacts. Implementation agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with all mitigation measures.
  - ◆ 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, implementation agencies will 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 will establish conservation easement programs to mitigate impacts to prime farmland;
  - ◆ Prior to final approval of each individual improvement project, the implementing agency will avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy; and
  - ◆ Prior to final approval of each individual improvement project, the implementing agency will encourage enrollments of agricultural lands for counties that have Williamson Act programs.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Air Quality

### 3.3 Mitigation

1. All mitigation measures will be included in project-level analysis, as appropriate. The individual improvement project proponent or local jurisdiction will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with mitigation measures.
  - ◆ Implementation agencies will ensure implementation of mitigation measures to reduce PM<sub>10</sub>, PM<sub>2.5</sub>, 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 five percent (5%) 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 fifteen (15) mph or less;
    - Pave all construction access roads at least 100 feet on to the site from permanent roadways; and
    - Cover all haul trucks.
  - ◆ Implementation agencies will avoid improvement project designs requiring significant amounts of material, such as excavated soil and construction debris, to be transported from the site to disposal facilities. Construction sites will employ a balanced cut/fill ratio to the extent possible, thus reducing haul-truck trip emissions.

2. At those facilities or intersections near sensitive receptors where carbon monoxide concentrations may exist, the implementing agency will reduce or alleviate these concentrations by improving traffic flows through improved signalization, restriping, addition of traffic lanes, and other improvements identified as part of the environmental review of an individual improvement project.
3. The various TCMs that have been incorporated into the Air District AQAP, ROP Plans, and the SJVAPCD TCM Program, or have been identified as necessary to provide for positive air quality conformity findings, as referenced in the latest Air Quality Conformity Findings for the 2011 RTP and other plans and programs.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Biotic Resources

### 3.4 Mitigation

1. All mitigation measures will be included in subsequent individual improvement project-level environmental analysis as appropriate. The individual improvement project proponent or local jurisdiction will be responsible for compliance with the mitigation measures during all phases of construction as appropriate. Kern COG will be provided with documentation of compliance with mitigation measures.
  - ◆ Construction and operational Best Management Practices (BMPs) will be identified, installed and maintained 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 in those areas where onsite revegetation of the native habitat is planned;
  - ◆ Any disturbed natural areas will be replanted with appropriate native vegetation following the completion of construction activities;
  - ◆ During the individual improvement project design phase, impacts to jurisdictional waters and wetlands will be minimized to the greatest extent feasible and
  - ◆ Individual improvement project proponents will obtain and comply with appropriate regulatory requirements prior to construction.

2. All mitigation measures will be included in subsequent individual improvement project-level environmental analysis as appropriate. The individual improvement project proponent or local jurisdiction will be responsible for compliance with the mitigation measures during all phases of construction as appropriate. Kern COG will be provided with documentation of compliance with mitigation measures.
  - ◆ Each proposed individual improvement project will consider the displacement of sensitive habitat, sensitive species, and non-native habitat during the individual improvement project design phase.
  - ◆ When avoidance of native vegetation removal is not possible, each transportation project 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 the proposed transportation improvement project. 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 improvement project 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 projects 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 16 and February 14, 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 CDFG) 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.
- ◆ Use resource data to inform transportation decision-making.
- ◆ Use watershed, conservation, and recovery plans to identify important environmental considerations for the Kern COG region, such as critical wildlife corridors, the most important areas to protect for sensitive species, and areas with a high concentration of resources.
- ◆ Give conservation plans as much weight as General Plans when planning transportation investments.
- ◆ Incorporate concepts such as 100 to 200 foot buffers for stream corridors, and identification and improvement of priority culverts that currently restrict wildlife corridors and natural processes of stream and river systems.
- ◆ Use parcel maps to identify larger, undivided parcels for ease of acquisition and preservation, and designate areas as potential future mitigation sites.
- ◆ Consider the resource, "Eco-logical: An Ecosystem Approach to Developing Infrastructure Projects" (2006) which encourages Federal, State, Tribal and Local partners involved in the infrastructure planning, design, review, and construction to use flexibility in regulatory processes.

- ◆ Identify financial mechanisms to fund mitigation, such as development fees, sales tax, or the use of funds from alternative methods to identify and protect critical resource areas.
  - ◆ Establish conservation easements that connect to and expand existing conservation areas.
  - ◆ Describe locally-developed measures such as designated open space, measures requiring development set-backs near streams, etc.
  - ◆ The following list of data resources should be referenced during development of biotic plans and studies for transportation improvement projects:
    - U.S. Fish & Wildlife Service species recovery plans;
    - USDA Natural Resources Conservation Service wetland data;
    - Nature Conservancy data and regional planning documents;
    - California Department of Fish and Game Natural Diversity Database; and
    - Local non-profit and land trust group information.
3. All mitigation measures will be included in subsequent individual improvement project-level environmental analysis as appropriate. The individual improvement project proponent or local jurisdiction will be responsible for compliance with the mitigation measures during all phases of construction as appropriate. Kern COG will be provided with documentation of compliance with mitigation measures.
- 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 or will be incorporated where feasible.
4. All mitigation measures will be included in subsequent individual improvement project-level environmental analysis as appropriate. The individual improvement project proponent or local jurisdiction will be responsible for compliance with the mitigation measures during all phases of construction as appropriate. Kern COG will be provided with documentation of compliance with mitigation measures.
- ◆ During final design, implementing agencies, will design, construct, and maintain terrestrial wildlife crossings in order to minimize barrier effects and habitat fragmentation created by the transportation improvement project.
  - ◆ 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.
5. All mitigation measures will be included in subsequent individual improvement project-level environmental analysis as appropriate. The individual improvement project proponent or local jurisdiction will be responsible for compliance with the mitigation measures during all phases of construction as appropriate. Kern COG will be provided with documentation of compliance with mitigation measures.

- ◆ Construction and operation of the proposed transportation individual improvement project will comply with the requirements of all adopted HCPs and other preserved areas.
6. Siltation Measures:
- ◆ Individual projects near water resources shall 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 projects shall 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.
7. The cumulative impacts to biological resources, due to the forecast urban development associated with the 2011 RTP, would be mitigated using the same measures detailed for Impacts 3.4.1 through 3.4.6, in addition to the following measure:
- ◆ Future impacts to biotic resources shall be minimized through cooperation and information sharing between the implementation agency and affected resource agencies.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Climate Change

### 3.5 Mitigation

- 1, 2 The ultimate sources of increased transportation emissions in Kern County are population and employment growth, which will increase with or without projects referenced in the 2011 RTP. Kern COG does not implement land use policy in Kern 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 2011 RTP is designed to complement, rather than change, the plans adopted by the local agencies. Thus, the ultimate effect of the 2011 RTP 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.

As of the writing of this Draft Subsequent EIR, the agencies with jurisdiction over air quality regulation and GHG emissions (CARB and the San Joaquin Valley Air Pollution Control District) have not established regulations, guidance, methodologies, significance thresholds, standards, CEQA protocols or mitigation measures that specify the type of analysis, or mitigation measures, that can be included in a program EIR, or other CEQA document. In addition, no emission inventories or emission baselines have been established that would allow for an appropriate analysis to evaluate an existing setting and impact analysis for the proposed implementation of the Kern County RTP because of climate change. Kern COG adheres to the rules and guidelines currently in place at the local, State and federal level, and will adhere to any future regulations regarding global warming resulting from the legislative approval of AB 32 and AB 1493, when available.

A number of mitigation measures are included in Section 3.3 of the Draft EIR to address criteria emissions. Public transit has been enhanced in the 2011 RTP compared to the current RTP (adopted in 2007). Such improvements will help mitigate expected increases in emissions resulting from increased population and employment and the impact of planned growth and development on the regional transportation system. The RTP also includes references to a number of studies. The Plan contains a number of projects and significant funding for various forms of transportation in addition to streets and highways. Kern COG is in the process of developing a Regional Blueprint for the year 2050. Kern COG is coordinating development of the Blueprint with the other seven counties within the San Joaquin Valley. 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 Regional Blueprint will identify a preferred land use scenario and transportation system for Kern County considering the application of alternative growth strategies. The Plan identifies a vision, values, goals, objectives, and implementing strategies that can be planned by Kern 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.

Further, public transit over the next 20 years has been enhanced in the 2011 RTP over existing conditions and even when compared to the current RTP (adopted in 2007). Such improvements will help mitigate expected increases in emissions resulting from increased population and employment and the impact of planned growth and development on the regional transportation system. Furthermore, the RTP includes references to a number of studies (some of which are described above). The Project improvements are expected to reduce VMT and vehicle trips and as a result, GHG emissions.

Kern COG cannot require that local agencies, Caltrans, the Air District or other agencies that use diesel-powered vehicles and equipment apply retrofit emission control devices, such as diesel oxidation catalysts and diesel particulate filters verified by CARB. Kern COG also cannot require that the same agencies use alternative forms of cement and asphalt that have lower GHG emissions. It is recommended however, that responsible agencies (local agencies, the Air District, Caltrans, and others) consider the implementation of such measures during individual project development and construction.

Both Kern COG and responsible agencies implementing projects outlined in the 2011 RTP will be required to adhere to any future applicable mandatory regulations regarding global warming resulting from the passage of AB 32 and AB 1493, but the exact character of such future implementing strategies is not known at this time. Kern COG and the local agencies will quantify GHG emissions consistent with Guidelines and requirements developed by CARB. Once the Guidelines are available, Kern COG will address GHG emissions and global warming impacts of projects contained in the 2011 RTP.

The following mitigation measures are intended to address regional and project-level impacts, as appropriate. For project-level impacts, the individual improvement project proponent or local jurisdiction will be responsible for ensuring adherence to the mitigation measures.

◆ **Transportation**

- Work with member agencies to increase the number of Alternative Fuel Vehicles (AFV) in municipally owned vehicles;
- Funding retrofit, repower or replacement of diesel vehicles with funding from applicable federal, state and local sources;
- Encouragement of technology, such as electrification, to provide alternatives to operating the heating and air conditioning, refrigeration units while idling at distribution centers, warehouses, truck shops and other facilities where diesel trucks may reside overnight or for periods of several hours;
- Subsidize carpool and vanpool programs that originate in Kern County;
- Support efforts that further analyze GHG emission contributions from goods movement through transportation corridors, trucking and other relevant freight movement practices;
- Support the use of grants, loans and incentives to assist local governments with the implementation of climate change response activities and GHG reduction strategies;
- Support state legislation to provide incentive funds to local governments to develop and implement GHG reduction programs; and
- Support efforts that will enable cities and counties to purchase new vehicles for local fleets that conform to state purchasing standards, are fuel efficient, low emission or use alternative fuels.

◆ **Land Use (Blueprint)**

- Develop land use patterns, which encourage people to walk, bicycle, or use public transit for a significant number of their daily trips;
  - Use circulation elements of general plans to ensure that development is consistent and well connected by alternative transportation modes (as required by AB 1358 effective January 1, 2011);
  - 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, such as transit centers;
  - Promote a balance of housing, shopping, and other amenities on the urban fringe and outlying communities that service strategic rural employment areas such as military bases, prisons, wind/alternative energy areas, oil production/mining, agriculture/ranching, food processing, warehouse distribution/intermodal centers, travel centers, recreation areas, etc.;
  - Promote affordable housing affordable relative to average wages in the community to reduce commute distances;
  - Promote reduced travel by providing electric vehicles, bike, pedestrian and equestrian paths and park-and-ride lots;
  - Promote phasing of new housing developments that reduce the need for long distance commutes to work and retail centers while construction is underway;
  - Provide subsidies for alternative transportation such as vanpools and transit until such time as ridership is at a level that supports the minimum transit fare box subsidy requirements;
  - In transit-oriented areas, provide for express transit or bus rapid transit service and circulator feeder systems. Service should plan for direct access to the Bakersfield High Speed Rail station;
  - In transit-oriented areas, reduce parking requirements and provide car/vanpool parking areas;

- In transit oriented areas include a transit pass/subsidy as part of the housing rental agreement, commercial rent agreement, employer benefit package, or monthly housing payment of new developments to ensure that express transit service has sufficient ridership to meet the minimum fare box requirement. and
- Space walkable/bikeable transit centers a minimum of 1 – 3 miles apart to ensure that travel times compete with passenger vehicle travel times.
- In urban areas, develop in a compact, efficient form to reduce vehicle miles traveled and to improve the efficiency of alternatives to the automobile:
  - Use the control of public services to direct development to the most appropriate locations; and
  - 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; and
  - Require certain sites to be created to allow convenient access by transit, bicycle, and walking.
- Accommodate projected population growth by identifying appropriate areas for urban and rural growth, economic development, and multi-modal transportation corridors that support smart growth principles;
- Promote 'downtowns' or 'urban centers' as the commercial, financial and social centers of communities. Promote higher density housing located adjacent to and within convenient walking distance to downtown, urban mixed use centers and/or transit corridors;
- Support and encourage policies and plans which direct growth to well planned neighborhoods and communities;
- Encourage the design and development of an effective transportation system that integrates all modes into a seamless, reliable, cost-efficient system, including intelligent transportation solutions and high tech communication options;
- Support intermodal travel including park-and-ride, rideshare, bicycle, rail and transit programs;
- Support increased mass transit connectivity and accessibility;
- Promote reduction of vehicle miles traveled;
- Promote the achievement and maintenance of State and Federal standards for air quality;
- Encourage General Plan, Community Plan and Specific Plan updates to include air quality elements, Greenhouse Gas Emission Reduction Plans and mitigation measures that reduce air pollution and vehicle miles traveled from existing and new development;
- Encourage the reduction of air pollution impacts from new developments;
- Help establish baseline GHG emission rates for municipalities; and
- Promote landscaping strategies that will reduce GHG.

◆ **Energy**

- Promote the use of LED technology or comparable energy-efficient technology for traffic lights, rail signals and other features compatible with LED or comparable energy-efficient technologies;
- Support the use of procurement practices that promote the use of energy efficient products and equipment;
- Support and coordinate efforts that address strategies to reduce greenhouse gases into planning efforts; and
- Promote energy efficiency, solar energy production and other methods of reducing GHG production.

◆ **Emission Reduction Plan**

- Prior to or in conjunction with the adoption of the proposed 2014 RTP, Kern COG and/or its member agencies will develop a GHG Emissions Reduction Plan that includes the following:
  - General discussion of the potential impacts that GCC poses to the Kern County region, with particular focus on potential impacts related to RTP facilities, to the extent that such information is available;
  - A baseline inventory of total GHG emissions directly and indirectly from transportation in the County that currently exist, and review of potential targets and timelines for achieving GHG reductions;
  - Development of feasible GHG emissions reduction measures and strategies to achieve reductions in RTP GHG emissions. Such reduction measures may include construction of new transportation projects, modification of existing facilities or services, incentive or funding programs, pricing strategies, regulations or any other actions that reduce GHG emissions associated with RTP activities; and
  - State protocols and GHG emissions inventory mechanisms are necessary tools to track and monitor GHG emissions at the local level. Kern COG and member agencies must determine, in cooperation with the state, the solutions that will best minimize its potential risks and maximize its potential benefits.

◆ **Intelligent Transportation Systems**

- Develop an Intelligent Transportation Systems strategy to implement the Integrated Performance Management Systems 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; and
  - Involve new equipment to improve on-time transit performance and provide real-time transit information at stops and stations.

◆ **Alternative Fuel Vehicle and Infrastructure Toolkit for Local Governments**

- Kern COG will develop an Alternative Fuel Vehicle (AFV) and Infrastructure Toolkit for member agencies that will contain best practices related to ordinances, analytical tools, financing opportunities, codes, and standards related to reducing GHG emissions. Kern COG will identify the alternative fuel vehicle(s) (e.g. neighborhood electric vehicles) and alternative fuel infrastructure with the potential to result in the greatest GHG emission reductions. Kern COG will conduct a public education program for local governments and other public agencies, as appropriate to encourage the use of alternative fuel vehicles and infrastructure; and
- Kern COG will work with its member agencies to increase the number of AFVs (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in municipally owned vehicles, as well as those owned by franchisees of these cities, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers. Such AFVs shall have GHG emissions at least 10 percent lower than comparable gasoline- or diesel-powered vehicles. The Alternative Fuel Vehicle and Infrastructure Toolkit described above will include best practices strategies to aid in the transformation of municipally owned or contracted fleets, including vehicle fleets operated and/or funded, at least in part by Kern COG.

◆ **Transportation Pricing Policy (GET Long Range Transit Study)**

Kern COG will prepare an analysis on the impacts and the viability of using pricing policies with the transit system and selected portions of the road network to encourage people to drive less and use transit, walking, and bicycling modes more. This study will identify strategies to reduce GHG emissions that will include, but are not limited to, free or reduced transit fares during “spare the air” days; fare-free zones on the transit system; transit vouchers; days on which transit is free; congestion pricing options for portions of the road system, such as tolls on freeways and highways; and congestion-pricing to enter certain high-traffic areas served by public transit (e.g. downtown areas). Kern COG shall adopt a transportation pricing policy based upon these strategies, and shall conduct seminars with local government staff, planning commissioners and elected officials and members of the private development, planning, engineering and design communities to disseminate these strategies.

◆ **Public Education Program on Individual Transportation Behavior and Climate Change**

In conjunction with key partners such as local air districts, public utility providers, area chambers of commerce and others, Kern COG will create a 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. Kern COG shall include information on its website that is focused on global climate change. The website shall 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, telecommuting) and other travel demand management strategies.

◆ **Workshop on Global Climate Change for Local Government Officials and Create GHG Emissions Reduction Strategies Toolkit**

- Kern 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 Kern 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; and
  - Actions being taken in the Kern County area to advance and support innovative “green” business.
- Kern Cog in conjunction with other key partners, shall produce a toolkit for local governments to use to take effective actions to reduce greenhouse gas emissions over time. The toolkit will 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 .

◆ **Establish a Baseline for Kern’s Own GHG Impacts**

- Starting in calendar year 2011, Kern COG shall measure and record the GHG emissions associated with its own operations in an accurate manner and in a format consistent with the California Climate Action Registry’s own reporting protocol in order to establish a baseline against which any future GHG reductions may be applied. The report shall be independently audited by a State and Registry approved certifier. The report shall include the following elements:

- Indirect emissions from electricity and natural gas use;
  - Direct emissions from mobile source combustion (agency vehicles);
  - Indirect emissions from business-related employee air travel;
  - Direct and Indirect emissions from employee commuting; and
  - Indirect emissions associated with Kern COG purchasing practices.
- Kern COG shall continue to report on its own GHG emissions consistent with this format in subsequent years and track its progress in reducing emissions.
- ◆ Project level environmental documents shall analyze construction and maintenance Greenhouse Gas (GHG) emissions.

#### Responsibility for Implementation of Mitigation Measures:

Implementing Agencies. (Caltrans and local agencies).

#### When Mitigation Measures are to be Implemented:

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

#### Responsibility for Monitoring Implementation:

Caltrans and local agencies.

## Cultural Resources

### 3.6 Mitigation

1. Individual improvement project-specific impacts on cultural resources will be identified at the earliest planning stages of the individual improvement project. Since avoidance is the preferred means for mitigating impacts on cultural resources, cultural resource specialists should be included on the individual improvement project planning teams and records searches, background research, Native American consultations, field inventories, and other investigations should be performed during initial routing studies or other comparable planning activities. To comply with state and federal laws and regulations governing cultural resources, the following specific activities will be completed prior to certification of the subsequent or individual improvement project EIR/EIS or other CEQA/NEPA documents.

#### ◆ Records Searches

For each individual improvement project, a records search will be performed at the Southern San Joaquin Valley Information Center of the California Historical Resources Information System, housed at California State University, Bakersfield. Resources to be examined at the Information Center include site location and survey coverage base maps, listings on the National Register of Historic Places and California Register of Historic Resources, State Historic Property Data Files, National Register of Determined Eligible Properties, California Historical Landmarks, California Points of Historic Interest, and California Office of Historic Preservation Archaeological Determinations of Eligibility. As appropriate for each individual improvement project, background research will also be conducted at city and county historical societies, libraries,

museums, and other institutions that may have relevant information on the nature and location of cultural resources within the individual improvement project area.

◆ **Native American Consultation**

For each individual improvement project, contact the Native American Heritage Commission (NAHC) in Sacramento and request a search of their Sacred Lands File for information on the individual improvement project area. The NAHC will also supply a list of Native American representatives whose traditional lands encompassed the individual improvement project area. Those included on the NAHC consultant list will be contacted by letter and follow-up telephone calls to request information about the study area, and to provide them the opportunity to articulate their views on possible impacts of the individual improvement project and appropriate mitigation measures.

◆ **Paleontological Research**

Conduct a records and literature search at the appropriate institutions, review geological maps for potential fossiliferous formations, and prepare an initial assessment of paleontological resource sensitivity in the individual improvement project area. Compile a list of relevant sites and known fossiliferous formations, and assess each individual improvement project's potential to impact paleontologically significant resources.

◆ **Archaeological Survey**

For each individual improvement project, systematically traverse unsurveyed areas on foot using transects spaced 15-20 meters apart. Previously surveyed areas, as indicated by the Information Center survey coverage base maps, will be resurveyed if prior surveys were completed more than ten years previously or if survey coverage was insufficient due to conditions at the time. Historical or prehistoric archaeological sites discovered within or immediately adjacent to the survey area will be documented according to current professional standards on the appropriate Department of Parks and Recreation forms (DPR-523). Previously recorded sites will be revisited, and their documentation will be updated to the current formats and standards. All sites, features, and isolates will be photographed using 35-millimeter and/or digital pictures, and their locations plotted on the appropriate USGS topographic 7.5' quadrangle. Planimetric site sketch maps will be prepared for each archaeological site, depicting site boundaries, concentrations, features, diagnostic artifacts, and areas of disturbance. Site locations will also be plotted using a Global Positioning System.

◆ **Architectural Survey**

Buildings, structures, objects, linear cultural features, and other non-archaeological properties will be inventoried to current professional standards and recorded on the appropriate Department of Parks and Recreation forms (DPR-523). Documentation on previously recorded sites will be updated to the current formats and standards. All resources will be photographed using 35-millimeter and/or digital pictures, and their locations plotted on the appropriate USGS topographic 7.5' quadrangle.

◆ **Significance Evaluation and Impact Assessment**

Any cultural resources that will be directly impacted by a proposed individual improvement project will be evaluated for significance according to the criteria of the National Register and/or California Register, as appropriate. If the boundaries of the resource or its spatial relationship to the impact area are unclear, then boundary definition using more detailed surface and subsurface investigations may be required.

Significance evaluations may require additional archival and background research, additional field documentation, or other studies. Evaluation of archaeological properties may require test excavations, backhoe trenching, or other forms of subsurface investigation; laboratory processing and analysis of recovered remains; and a variety of special technical studies. These evaluations will define the qualities of the resource that make it significant and assess site integrity as a means for judging the nature and extent of individual improvement project impacts. Significance evaluations and impact assessments will be performed by appropriately qualified specialists meeting the Secretary of Interior's Professional Qualifications Standards (FR 190: 44740–44741). Artifacts and other remains collected from the field, along with field records and other documentation, will be curated at the Museum of Anthropology, California State University, Bakersfield, or another institution capable of providing secure, long-term storage, care, and access to the public.

◆ **Technical Report/EIR Sections**

Prepare a technical report documenting the results of the records search, background research, Native American consultation, paleontological research, field surveys, resource evaluations, and other studies. Because these reports may detail locations within the individual improvement project areas known to be culturally and paleontologically sensitive, they will be confidential technical appendices to each EIR/EIS. Summary sections included in the body of the EIR/EIS will not disclose sensitive site location information. The confidential technical report and EIR/EIS sections will discuss the importance of historical, archaeological, and paleontological resources identified during the study, identify the potential for significant impacts, and discuss adequate and feasible mitigation measures. The reports will adhere to professional standards outlined by the State Office of Historic Preservation in *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (Jackson 1990).

◆ **Agency Consultation**

For federally entailed projects, the lead federal agency must consult with the State Historic Preservation Officer (SHPO) regarding the identification, evaluation, and subsequent mitigative treatment of cultural resources. The SHPO does not play a role in the CEQA process unless state lands, state-owned properties, or unusually important resources are involved. For federal projects, the SHPO is asked to review and concur with the federal agency's findings regarding the significance of resources and the appropriate treatment. Initial consultation with the SHPO should occur early in the planning process, with follow-on consultation and review at each stage.

If the studies described above determine that significant cultural resources will be affected by the proposed individual improvement project, then additional impact mitigation may be required if the individual improvement project cannot be redesigned to avoid the resource. Impact mitigation may take a variety of forms depending on the nature of the site and the nature and extent impacts. As noted above, site avoidance is the preferred mitigation measure. If resources cannot be avoided entirely, portions of the resources outside the impact area may be preserved in an exclusion zone—a fenced area where construction equipment and personnel are not permitted. Together, avoidance and use of exclusion zones ensures the maximum *in-situ* preservation of significant cultural resources.

Where avoidance is infeasible and significant cultural resources are jeopardized by a individual improvement project, one or a combination of the following measures will be implemented:

- Data recovery excavation;
- Additional analysis of existing collections;

- Additional archival/historical research;
- Photographic documentation; and
- Archaeological monitoring during construction, followed by data recovery excavation or other appropriate measures if significant archaeological remains are exposed.

Final decisions regarding impact mitigation will be made in consultation among the individual improvement project proponent, regulatory agencies, technical specialists, and other interested parties. If data recovery excavation is the recommended mitigation, then the EIR/EIS must include a data recovery plan. Data recovery will be supervised by appropriately qualified specialists meeting the Secretary of Interior's Professional Qualifications Standards (FR 190: 44740–44741). Artifacts and other remains collected from the field, along with field records and other documentation, will be curated at the Museum of Anthropology, California State University, Bakersfield, or another institution capable of providing secure, long-term storage, care, and access to the public.

It should be noted that photographic documentation or other records of historical buildings or structures prepared to the standards of the Historic American Building Survey or Historic American Engineering Record (commonly referred to as HABS/HAER standards) may constitute appropriate treatment of effects according to federal regulations, but may not mitigate individual improvement project impacts to a level of less than significant according to CEQA standards and its defining case law.

2. When a construction activity could significantly disturb soils or geologic formations in areas identified as having a moderate to high potential to support paleontological resources, a qualified researcher must be stationed on-site to observe during excavation operations and recover scientifically valuable specimens. As part of this mitigation, the following actions should be taken:
  - ◆ A certified paleontologist shall be retained (or required to be retained) by the project implementing agency prior to construction to establish procedures for surveillance and the preconstruction salvage of exposed resources if fossil bearing sediments have the potential to be impacted.
  - ◆ The monitor shall provide preconstruction coordination with contractors, oversee original cutting in previously undisturbed areas of sensitive formations, halt or redirect construction activities as appropriate to allow recovery of newly discovered fossil remains, and oversee fossil salvage operations and reporting.
  - ◆ This measure shall be placed as a condition on all plans where excavation and earthmoving activity is proposed in a geologic unit having a moderate or high potential for containing fossils.
  - ◆ Excavations of paleontological resources should be overseen by the qualified paleontologist and the paleontological resources given to a local agency, or other applicable institution, where they could be displayed or used for research.

Where practicable, routes and project designs that would permanently alter unique geologic features shall be avoided.

3. The cumulative impacts to cultural resources, due to the forecast growth and development associated with the 2011 RTP, would be mitigated using the same measures detailed for Impacts 3.6.1 and 3.6.2, in addition to the following measure.
  - ◆ Future impacts to cultural resources shall be minimized through cooperation and information sharing between the implementation agency and affected resource agencies.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Geology/Soils

### 3.7 Mitigation

#### 1. Seismic Mitigation

- ◆ Individual improvement project structures will be built by responsible agencies to the seismic standards contained in the most recent edition of the Uniform Building Code (UBC).
- ◆ Implementing agencies will ensure that improvement 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.

The implementing agencies will guarantee that geotechnical analysis is conducted within construction areas to establish soil types and local faulting prior to individual improvement project design preparation.

#### 2. Slope failure, long-term erosion, and unique geologic features mitigation:

- ◆ The implementing agencies will ensure that individual improvement project designs provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion.
- ◆ 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 projects avoid landslide areas and potentially unstable slopes wherever feasible.
- ◆ Where practicable, routes and individual improvement project designs that would permanently alter unique geologic features will be avoided.

3. Subsidence mitigation:

- ◆ Implementing agencies will ensure that geotechnical investigations are conducted by a qualified geologist to identify the potential for subsidence and expansive soils.
- ◆ Recommended corrective measures, such as structural reinforcement and replacing soil with engineered fill, will be implemented in individual improvement project designs.
- ◆ Implementing agencies will ensure that, prior to preparing individual improvement project designs, new and abandoned wells are identified within construction areas to ensure the stability of nearby soils.

4. Seismic mitigation:

- ◆ Implementing agencies shall ensure that projects are designed in accordance with county and city code requirements for seismic ground shaking. The design of projects shall consider seismicity of the site, soil response at the site, and dynamic characteristics of the structure, in compliance with the appropriate California Building Code and State of California design standards for construction in or near fault zones, as well as all standard design, grading, and construction practices in order to avoid or reduce geologic hazards.
- ◆ Implementing agencies shall ensure that projects located within or across Alquist- Priolo Zones comply with design requirements provided in Special Publication 117, published by the California Geological Survey, as well as relevant local, regional, state, and federal design criteria for construction in seismic areas.
- ◆ The project implementing agencies shall ensure that geotechnical analyses from qualified geotechnical experts are conducted within construction areas to ascertain soil types and local faulting prior to preparation of project designs. These investigations would identify areas of potential failure and recommend remedial geotechnical measures to eliminate any problems.

5. Adverse soil mitigation:

- ◆ Improvement projects with significant cuts or fill will include a geotechnical investigation to identify adverse soil conditions and develop recommendations for design and construction that would limit the effects of adverse soil and bedrock conditions.
- ◆ Cut and fill plans will be prepared for all improvement projects where cut and fill will be reburied, so that all fill materials are properly designed, placed, and compacted.
- ◆ Preparation of a detailed erosion control plan will be prepared to limit the effects of soil erosion and water degradation during improvement project construction, in accordance with permit conditions and requirements of the State Water Resources Control Board's Best Management Practices (BMPs), or equally effective measures will be employed.

6. State-owned and State mineral-reserved land mitigation:

- ◆ Where possible, improvement projects will be designed by responsible agencies to limit potential impacts on State-owned or State mineral-reserved lands.

7. Cumulative mitigation:

Mitigation measures 3.7.1 through 3.7.6 would be applied to this impact in addition to the following measure:

- ◆ Future impacts to geologic resources shall be minimized through cooperation and information sharing between the implementation agency and affected resource agencies.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Hazards & Hazardous Materials

### 3.8 Mitigation

1. The following mitigation measure is included to ensure compliance with applicable regulations.

- ◆ The implementation agency 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.

2. Release of hazardous materials mitigation:

- ◆ 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.

3. Contaminated sites mitigation:

- ◆ Prior to approval of any RTP 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 2011 RTP. 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 project may be in the vicinity of the Tidewater Oil Company or Standard Oil Company historical pipeline alignments. A map of the alignments is provided in Appendix B of this SEIR.

4. Cumulative mitigation:

- ◆ Mitigation Measures 3.8.1 through 3.8.3 as implemented by responsible agencies and private developers would address this impact.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Hydrology/Water Quality

### 3.9 Mitigation

1. Water quality mitigation::

- ◆ Improvement projects along existing facilities 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.

2. Groundwater mitigation:

- ◆ Transportation network improvements will comply with local, state and federal floodplain regulations. Proposed transportation improvements 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 will provide monitoring systems including long-term administrative procedures to ensure proper operations for the life of the improvement project.

3. Flood hazards mitigation:

- ◆ Prior to construction, and when a potential drainage issue is known, a drainage study will be conducted by responsible agencies for new capacity-increasing projects. Drainage systems will be designed to maximize the use of detention basins, vegetated areas, and velocity dissipaters to reduce peak flows where possible. Transportation 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 will 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.

4. Urban and construction runoff mitigation:

- ◆ Improvement projects along existing facilities 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.

5. Water quality, stormwater infiltration, groundwater recharge, flood hazards, wastewater treatment services, and water demand mitigation: Mitigation Measures 3.9.1 through 3.9.4 shall be applied to all development projects, as feasible, in addition to the following measures:

- ◆ Local governments should encourage Low Impact Development and natural spaces that reduce, treat, infiltrate and manage stormwater runoff flows in all new developments.
- ◆ Local governments 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 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, 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 shall be avoided through cooperative planning, information sharing, and comprehensive pollution control measure development.
- ◆ Local jurisdictions and water agencies are encouraged to continue regional-scale planning for improved stormwater management and groundwater recharge. Future adverse impacts shall be avoided through cooperative planning, information sharing, and comprehensive implementation efforts.

- ◆ Local governments should prevent 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 shall be minimized through cooperation, information sharing, and program development.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Land Use/Planning

### 3.10 Mitigation

1. The impact on significant agricultural resources will be evaluated as part of the appropriate improvement project-specific environmental review. Mitigation measures will be identified to minimize impacts. Implementation agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with all mitigation measures.
  - ◆ Individual projects will be consistent with local land use plans and policies that designate areas for urban land use and preserve agricultural lands that support the economic viability of agricultural activities.
  - ◆ Prior to final approval of each individual improvement project, the implementing agency will conduct the appropriate project-specific environmental review, including consideration of potential land use impacts.
  
1. Impacts to sensitive receptors will be evaluated as part of the appropriate project-specific environmental review, and mitigation measures will be identified to minimize impacts. Implementation agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with all mitigation measures.
  - ◆ Prior to commencing construction activities on individual projects, project implementation agencies will comply with applicable federal, state and applicable city and county land use plans, policies, and regulations.
  - ◆ Prior to commencing construction activities with individual projects, implementation agencies will obtain necessary local permits and meet conditions for approval from applicable cities and counties.
  - ◆ Prior to final approval of each individual improvement project, the implementing agency will conduct the appropriate project-specific environmental review, including consideration of potential land use impacts.
  - ◆ Potential significant impacts to land uses will be mitigated.
  
2. The impact on open space and community recreation areas will be evaluated as part of the appropriate individual improvement project-specific environmental review and mitigation measures will be identified to minimize impacts. Implementation agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with all mitigation measures.
  - ◆ Implementation agencies will ensure that projects are consistent with federal, state, and local plans that preserve open space and recreation.
  - ◆ Implementation agencies will 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 project, the implementing agency will conduct the appropriate project-specific environmental review, including consideration of loss of open space and recreation.

- ◆ Potential significant impacts to open space will be mitigated.
  - ◆ For projects that require approval or funding by the U.S. Department of Transportation, implementation agencies will comply with Section 4(f) of the U.S. Department of Transportation Act.
3. The impact on significant agricultural resources will be evaluated as part of the appropriate individual improvement project-specific environmental review, and mitigation measures will be identified to minimize impacts. Implementation agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with all mitigation measures.
- ◆ 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, individual improvement project implementation agencies will contact the California Department of Conservation and the County 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 will establish conservation easement programs to mitigate impacts to prime farmland.
  - ◆ Prior to final approval of each individual improvement project, the implementing agency will avoid impacts to prime farmlands or farmlands that support crops considered valuable to the local or regional economy.
  - ◆ Prior to final approval of each individual improvement project, the implementing agency will encourage enrollments of agricultural lands in the Williamson Act.
4. The mitigation measures listed above for Impacts 3.10.1 through 3.10.5 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.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Noise

### 3.11 Mitigation

1. As part of project-specific environmental review, a detailed evaluation of noise impacts will be undertaken. Project-specific mitigation measures will be identified, as necessary. All mitigation measures will be included in project-level analysis, as appropriate. The implementing agency or local jurisdiction will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with mitigation measures.
  - ◆ Implementing agencies will comply with all local sound control and noise level rules, procedures, 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 individual improvement project 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 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 will 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 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.

## 2. Noise-sensitive land use mitigation

- ◆ As part of the appropriate environmental review of each project, a project specific noise evaluation shall be conducted and appropriate mitigation identified and implemented.
- ◆ Project implementation 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.
- ◆ Project implementation 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 new noise generating facilities.
- ◆ Project implementation agencies shall 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.
- ◆ Project implementation 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.
- ◆ The project implementation 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. Mitigation measures intended to reduce the noise impacts on sensitive receptors are part of the 2011 RTP. These include: site design, buffers, soundwalls, etc.

Further reduction in noise impacts would be obtained through the implementation of the measures described in 3.11.1 and 3.11.2.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Population/Housing

### 3.12 Mitigation

1. As part of the appropriate project-specific environmental review, population and job displacement impacts will be evaluated. Mitigation measures will be identified to minimize impacts. Implementation agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with all mitigation measures.
  - ◆ For projects with the potential to displace homes or businesses, project 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. If possible, existing rights-of-way should be used.
  - ◆ Implementation agencies will 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.
  - ◆ Implementation agencies will develop a construction schedule that minimizes potential neighborhood deterioration from protracted waiting periods between right-of-way acquisition and construction.
2. As part of the appropriate project-specific environmental review, community disruption or division will be evaluated. Mitigation measures will be identified to minimize impacts. Implementation agencies will be responsible for ensuring adherence to the mitigation measures prior to construction. Kern COG will be provided with documentation indicating compliance with all mitigation measures.

- ◆ 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.
  - ◆ 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.
4. The mitigation measures listed above for Impacts 3.12.1 and 3.12.2 in the Draft SEIR 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.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Public Utilities, Other Utilities & Services Systems

### 3.13 Mitigation

1. As part of individual improvement project-specific environmental review, implementation agencies will evaluate the impacts on police, fire, and medical services in the County. Appropriate mitigation measures should be identified for all impacts. The implementation of projects by agencies or local jurisdiction will be responsible for ensuring adherence to the mitigation measures. Kern COG will be provided with documentation indicating compliance with mitigation measures.
  - ◆ Prior to construction, the implementation agency will ensure that all necessary local and state road and railroad encroachment permits are obtained. The implementation agency also will comply with all applicable conditions of approval. 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:
    - 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 California Department of Transportation 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; and
  - Coordinate with local transit agencies for temporary relocation of routes or bus stops in work zones, as necessary.
- ◆ 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 will be able to handle the increase in demand for their services. If the current levels of service at the individual improvement project 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 projects will be carefully evaluated so that the full implications of the individual improvement project 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.
2. As part of individual improvement project-specific environmental review, implementation agencies will evaluate the impacts on demand for solid waste, wastewater, and potable water services in the County. Appropriate mitigation measures should be identified for all impacts. The implementation agencies or local jurisdiction will be responsible for ensuring adherence to the mitigation measures. Kern COG will be provided with documentation indicating compliance to mitigation measures.
- ◆ Projects requiring wastewater service, solid waste collection, or potable water service will coordinate with the local public works department to ensure that the existing public services and utilities would be able to handle the increase. If the current infrastructure servicing the individual improvement project site is found to be inadequate, infrastructure improvements for the appropriate public service utility will be identified in each individual improvement project's CEQA documentation.
  - ◆ Reclaimed water will be used for landscaping purposes instead of potable water wherever feasible.
  - ◆ Each of the proposed projects will comply with applicable regulations related to solid waste disposal.
  - ◆ The construction contractor will work with the County Recycling Coordinator to ensure that source reduction techniques and recycling measures are incorporated into individual improvement 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.

3. As part of individual improvement project environmental review, individual agencies will evaluate the impacts resulting from soil accumulation during construction of the projects. Appropriate mitigation measures will be identified for all impacts. The implementation agencies or local jurisdiction will be responsible for ensuring adherence to the mitigation measures. Kern COG will be provided with documentation indicating compliance with mitigation measures.

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.

4. Underground utility mitigation:

- ◆ As part of individual improvement project environmental review, implementation agencies will evaluate the impacts resulting from the potential for severing underground utility lines during construction of the projects. Appropriate mitigation measures will be identified for all impacts. The implementation agencies or local jurisdiction will be responsible for ensuring adherence to mitigation measures. Kern 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.

5. Cumulative mitigation:

- ◆ The growth inducing potential of individual projects shall be carefully evaluated so that the full implications of the projects are understood. Individual environmental documents shall 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 shall continue to enforce solid waste diversion mandates that are enacted by the Legislature.
- ◆ Local jurisdictions shall continue to adopt programs to comply with state solid waste diversion rate mandates and, where possible, shall encourage further recycling to exceed these rates.
- ◆ Local jurisdictions shall 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 shall coordinate regional approaches and strategic siting of waste management facilities.
- ◆ Project implementation agencies shall 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 shall 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.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.

## Transportation/Traffic

### 3.14 Mitigation

1. Measures intended to reduce vehicle miles traveled and reduce congestion are part of the 2011 RTP. These include: increasing rideshare and work-at-home opportunities to reduce demand on the transportation system, investments in non-motorized transportation and maximizing the benefits of the land use/transportation connection, other Travel Demand Management measures described in the 2011 RTP and in local agency General Plans, and key transportation investments targeted to reduce congestion levels and improve LOS.
2. As part of individual improvement project environmental review, individual agencies will consider impacts and plan for grade separations along major thoroughfares, identify to the extent feasible, improvements to existing at-grade highway-rail crossings caused by increases in traffic volumes, and provide, to the extent possible, appropriate fencing to limit the access of trespassers onto the railroad right-of-way. The implementation agencies or local jurisdiction will be responsible for ensuring adherence to the mitigation measure. Kern COG will be provided with documentation indicating compliance with the mitigation measure.

## Energy & Energy Conservation

### 3.15 Mitigation

1. Project implementation 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.
2. During the design and approval of transportation improvements implemented under the proposed 2011 RTP, the following energy efficiency measures shall be incorporated when applicable:
  - ◆ The design or purchase of any lighting fixtures including but not limited to lighting at transit stations, arterials or freeways, and parking structures/lots 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 features compatible with LED technology.

3. Local 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
4. Local 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. Kern COG recommends the use of Appendix F, Energy Conservation, of the *CEQA Guidelines*.
5. Local agencies should streamline permitting and provide public information to facilitate accelerated construction of solar and wind power.
6. Local 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."

7. 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. Creating walkable, transit oriented nodes would generally reduce energy use and greenhouse gas emissions. Residential energy use (electricity and natural gas) accounts for 14 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.
8. Kern COG shall work with its member agencies to increase the number of AFVs (i.e., vehicles not powered strictly by gasoline or diesel fuel) both in municipally owned vehicles, as well as those owned by franchisees of these cities, such as trash haulers, green waste haulers, street sweepers, and curbside recyclable haulers.
9. Bid solicitations for construction of projects proposed in the 2011 RTP and subsequent RTP updates shall 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 shall also preference the recycling of construction waste and debris if market conditions permit.
10. Kern 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 Kern region.
11. All mitigation measures listed in Chapter 3, Section 3.5.1, are incorporated by reference and shall be implemented by implementing agencies to address energy conservation impacts.

**Responsibility for Implementation of Mitigation Measures:**

Implementing Agencies. (Caltrans and local agencies).

**When Mitigation Measures are to be Implemented:**

During project review by Caltrans and local agencies. Inspection during construction. At Sign-off by Caltrans and local agencies.

**Responsibility for Monitoring Implementation:**

Caltrans and local agencies.