

# SCOPE OF WORK

Project Information	
Grant Category	Sustainable Communities Competitive
Grant Fiscal Year	2021-22
Project Title	San Joaquin Valley Household Travel Survey
Organization (legal name)	Fresno Council of Governments

## Introduction

San Joaquin Valley is the fifth largest region in the State of California. There are over 4.3 million people living in the agriculture-rich eight-county region. The eight counties are connected by SR 99 and share the same characteristics such as ag-based economies, mostly rural with spread-out land uses, poor air quality, high unemployment rate, and concentration of disadvantaged communities. The Valley is served by eight individual Metropolitan Planning Organizations (MPOs)/Regional Transportation Planning Agencies (RTPAs) that carry out federal and state mandated transportation planning responsibilities. The eight MPOs are: Fresno Council of Governments (Fresno COG), Kern Council of Governments (Kern COG), Kings County Association of Governments (KCAG), Madera County Transportation Commission (MCTC), Merced County Association of Governments (MCAG), San Joaquin Council of Governments (SJCOG), Stanislaus Council of Governments (StanCOG) and Tulare County Association of Governments (TCAG). The eight Valley MPOs have had a long history of collaboration in areas such as transportation conformity, travel demand modeling, housing planning, programming, lobbying efforts, grant application, RTP/SCS planning, etc.

The San Joaquin Valley Household Travel Survey (VHTS) is another joint effort by the eight Valley MPOs. According to the federal conformity requirement, the travel models used by MPOs to demonstrate air quality conformity cannot be more than 10 years old. Many models in the Valley are close to 10 years old and need an update in the next two to three years. The VHTS will collect travel data needed for the model update. Such data includes household demographic information, travel patterns and trip making characteristics. Week-day travel data will be collected with a targeted number of surveys for around 6,700 household in the Valley. A few housing questions will also be included in the survey as part of the outreach efforts of the Regional Early Action Plan (REAP) by Housing & Community Development (HCD), which is funded by the regional share of the REAP funding received by the Valley MPOs.

The survey will strive to achieve the goal of unbiased responses that mirror the demographic profile of the communities. Targeted outreach will be conducted to ensure that low-income and minority communities will be reached, and sufficient responses are received from residents of disadvantaged communities.

The household travel survey data will be used in the estimation, calibration, and validation of the travel demand models owned by the eight MPOs in the Valley. The travel demand models are a critical tool for numerous planning activities at local, regional, state, and federal levels. Such planning activities include RTP/SCS development, air quality conformity analysis, transportation corridor studies, environmental justice analysis, SB 743 VMT analysis, local and regional environmental planning, transportation impact fee nexus studies, and transit service planning.

The eight Valley MPOs will be the sponsors of the survey. Caltrans District 6 and 10 staff will be invited to participate as they use Valley MPOs models in the design and planning of state facilities. The California Department of Housing and Community Development (HCD) staff will also be involved in the survey planning activities as a funder of this important valleywide effort. Community-based organizations, local grass-root groups, the Housing Authority, public transit agencies, and other public agencies that provide social service such as the Economic Opportunities Commission (EOC) will be recruited to assist in the outreach efforts.

A final report with detailed travel characteristics summary for each county in the Valley will be developed at the conclusion of the project. All the survey data collected will also be delivered to the Valley MPOs for integration into their travel demand models.

## **Project Stakeholders**

The eight Valley MPOs will be the sponsors of the household travel survey. Caltrans District 6 and 10 planning and modeling staff will be invited to participate in the planning and implementation of the project. The California Department of Housing and Community Development (HCD) staff will be briefed and consulted on the housing portion of the survey. Community-based organizations, local grass-root groups, public transit agencies, social service providers, and more will be recruited as partners for the outreach efforts.

## **Overall Project Objectives**

The objective of this project is to collect household travel data that can provide the critical data input for the Valley MPOs to update their travel demand models in the next few years. The update of the travel models is to fulfil the planning responsibilities and obligations of the Valley MPOs in the areas of RTP/SCS development, SB 743 implementation, transportation conformity, corridor studies, and environmental documents for local land use plans and developments.

The travel demand models owned by the Valley MPOs are directly tied to multimodal transportation, housing, and land use planning that furthers each regions' RTP/SCS. The travel models are extensively used in the development of the land use, housing, and transportation strategies included in each MPO's SCS. Additionally, Senate Bill 375 (SB 375) requires that the land use development pattern of the SCS is consistent with RHNA, furthering each region's housing needs.

The State planning priorities are to promote infill development and equity, protect environmental and agricultural resources, and encourage efficient land use. Travel models are used by MPOs to develop Sustainable Communities Strategies, which address all three of those priorities. The models are also used for VMT analysis under CEQA, which encourages more efficient development and conserves natural resources. Additionally, the VHTS will increase stakeholder engagement in communities that may not have been represented in previous household travel surveys. Appendix K of the 2017 RTP Guidelines encourages MPOs to address public health and health equity in the RTP. The travel models are part of the air quality modeling process to measure emissions of criteria pollutants and greenhouse gases from autos and trucks to ensure that communities are not at increased risk of exposure. The models also provide critical input to public health models such as the Integrated Transport and Health Impact Model, which measures the public health impact from transportation investments. Additionally, the models are used to conduct the environmental justice analysis of the projects included in each MPO's RTP, which helps to determine that transportation projects do not disproportionately increase air pollution burden in disadvantaged communities, and that disadvantaged communities benefit from active transportation projects that help contribute to positive public health outcomes. Appendix K states "models capturing the impacts of public health are oftentimes only as good as the inputs provided by regional travel demand models."

## Summary of Project Tasks

### Task 01: Project Administration -by Fresno COG staff

Conduct a kick-off meeting with Caltrans staff to initial the project and provide invoicing and quarterly reports to Caltrans as the project is being implemented.

Task Deliverables
Kick-off meeting with Caltrans - Meeting Notes. Quarterly invoices and progress reports.

### Task 02: Consultant Procurement – by Fresno COG staff

Fresno COG, in partnership with the other seven Valley MPOs, will develop a Request for Proposal (RFP) to solicit the service of a professional household travel survey team for the project. A scoring committee that comprises the eight Valley MPOs and a Caltrans representative will review the proposals and conduct interviews. Consultant selection recommendation from the scoring committee will be presented to the Valley COG Directors and the Fresno COG Policy Board for final approval. A contract will be signed between Fresno COG and the selected consulting firm.

Task Deliverables
Request for Proposal. Proposal from the consultant selected for the project. Scoring summary from the scoring committee. Contract between Fresno COG and the consulting firm.

### Task 1: Forming of Technical Advisory Committee and kick-off meeting with the consultant team

The Technical Advisory Committee (TAC) will comprise modeling staff from the eight Valley MPOs, HCD, and representatives from Caltrans District 6 and 10. The TAC will review the work of the consultant team and provide feedback and direction. The TAC will meet regularly as determined by the project need. The consultant will have a kick-off meeting with the TAC within two weeks of receiving the notice to proceed.

Task Deliverables
Meeting notes of the kick-off meeting with the TAC.

### Task 2: Survey methodology and instrument design

The consultant team will develop a survey methodology and propose instrument designs. The survey methodology and instrument should be designed to achieve the maximum response rate with

consideration of responsiveness from various demographic groups. A mix of technology may be used in the instrument design. Multilingual interviews should be considered. 24-hour weekday counts will be collected by the survey. The travel survey should include a minimum of the following in the questionnaire:

1. Initial recruitment
2. Household characteristics
3. Person characteristics
4. Vehicle ownership
5. Travel diary
6. Additional housing questions – to be provided by the Valley MPOs in consultation with HCD

<b>Task Deliverables</b>
Draft survey methodology and instrument design report.
Draft survey questionnaire.

### Task 3: Sample Design

The valleywide household survey will collect the number of surveys that are equivalent to 0.5% of each county’s total household number. The survey numbers desired for each county are as follows:

<b>County</b>	<b>Number of Surveys</b>
<b>Fresno</b>	1,599
<b>Kern</b>	1,425
<b>Kings</b>	248
<b>Madera</b>	242
<b>Merced</b>	419
<b>Stanislaus</b>	880
<b>San Joaquin</b>	1,198
<b>Tulare</b>	710
<b>Total</b>	6,720

The consultant team will develop a survey sample design, which will describe the methodology for a stratified random sampling from the valley households, propose the number of samples needed to achieve the desired survey numbers for each of the counties and discuss the need of oversampling for certain demographic groups and the stratification of samples across the five weekdays and the days of the year. The sampling design should take into consideration the response rate in order to achieve an unbiased result that represent the demographic characteristics of the eight counties, which will be addressed in the outreach efforts in Task 5.

<b>Task Deliverables</b>
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Draft sampling design report.

#### **Task 4: Interviewer Training, Survey Pre-Test, & Design of Final Survey Instrument and Procedure**

The consultant team will develop interviewer training procedures; conduct and evaluate pilot/pretests and design the final survey instruments and procedures. The consultant team will outline the approximate number of households proposed for the pilot/pretest, as well as any other pilot/pretest procedures. Based on the issues identified in the pilot/pretests, the consultant team will work with the TAC to revise and finalize the survey instrument and procedure.

<b>Task Deliverables</b>
Written report about interviewer training.
Survey pilot/pretest procedure and evaluation.
Final instrument design and procedures.

#### **Task 5: Public Outreach**

The consultant will develop an outreach plan that describe the efforts to reach people and ensure high response rate. Outreach should be conducted through a variety of platforms such as social media, traditional post card mailers, eblasts, project website, distribution of flyers at events, and more. In order to achieve unbiased responses that represent the demographic characteristics of the communities, special targeted outreach for the traditionally hard-to-reach low-income and minority populations will be conducted. Such efforts may include, but not limited to, bilingual outreach materials, awareness campaign through transit operators, social service providers, community-based organizations, or other local grass-root groups.

A special outreach subcommittee may be set up to advise the outreach efforts. The outreach subcommittee may consist of the MPOs, community-based organizations, local grass-root groups, transit agencies, and social service providers.

<b>Task Deliverables</b>
Public outreach plan.
Outreach materials, such as social media ads, bilingual flyers, website announcements, eblasts, etc.

#### **Task 6: Survey Implementation**

The consultant will conduct the survey, code all survey responses, check the resulting database for errors, share the data with the Valley MPOs for review through agreed upon periodic delivery throughout the project, and correct any errors the Valley MPO find in the database. Completed household surveys should include, but are not limited to the following:

- a. Completed activity logs for all household members.
- b. Complete data for all household members above a pre-specified age.
- c. Valid household income responses for at least 90 percent of households.

- d. Logical time, activity, mode, other household member participation, and location sequences.
- e. Data capturing if vehicle travel was associated with a specific household vehicle or a non-household vehicle.
- f. Complete information regarding age, household size, employment status, and information on relationships among household members.
- g. Full agreement among the household, person, and diary files (e.g. follow-up phone calls inquire about and resolve inconsistencies such as unlicensed drivers making driving trips and non-workers making work trips).
- h. If a household has any employed members reporting no outside-the-home weekday activities, that household will receive follow-up communications.

In addition, the consultant will implement the following as part of this task:

- Provide a memo documenting in detail how the survey will be conducted. The memo should include, but are not limited to:
  - The overall flow of the survey process
  - Number of interviews, supervisors, coders, and other personnel
  - Interviewer monitoring and quality control
  - Days of the week and hours of the day surveys will be conducted
  - Criteria for determining if a household is or has become non-responsive and method for its replacement
  - Procedures for tracking all data from a household until complete
  - Methods for identifying illogical data or trip-making
  - Methods for probing for missing trips; and
  - Overall data validation plan
- Develop a system for timely validation of the address data during data retrieval to ensure quick error correction through follow-up communication
- Provide weekly reports to the project manager during the survey fielding on the progress of the survey, issues encountered, and actions to address the issues.
- At certain milestones (to be determined by the project team and the consultant team), provide preliminary analysis of the quality of the data collected and response rate of the various sectors/demographic groups (determined in Task 3) and recommend areas/groups for oversampling.

<b>Task Deliverables</b>
Memo detailing the procedure for administering the survey.
A system to validate address
Notes from weekly meetings with project manager.
Preliminary analysis of the quality of data and oversampling recommendation.

### **Task 7: Data Processing & Analysis**

The consultant team will clean the data to ensure the quality standards are met. Although extensive outreach and oversampling are conducted in the previous tasks to achieve unbiased responses that represent the characteristics of the eight counties in the Valley, efforts will be taken during this task to ensure each segment of the population in the eight counties is appropriately represented. The consultant team will recommend and apply a methodology for weighting and expansion of the data based on the responses received.

Each MPO in the Valley has its own model. Fresno COG has developed an activity-based model (ABM), and TCAG is in the process of developing one. The other six MPOs have the traditional 4-step models that are relatively similar to each other. The consultant team will provide the processed data in a format that can feed directly into the models for each MPO.

<b>Task Deliverables</b>
Memo documenting weighting and data expansion methodology. Processed data for each Valley COG.

### **Task 8: Draft Report, Final Report & Presentations**

The consultant team will develop a draft report detailing each element of the project, which will be reviewed by the TAC. The report will include individual chapters for each of the eight counties with details of survey findings. The report will be finalized after comments from the TAC are addressed.

The consultant team will present the survey findings and the final report to the COG Directors Committee, and Fresno COG’s Transportation Technical Committee (TTC), Policy Advisory Committee (PAC) and the Policy Board for acceptance. Once the survey findings and final report are accepted, each MPO will then begin the necessary steps to update their travel demand models.

<b>Task Deliverables</b>
Draft report with survey results for each of the eight counties in the Valley. Final report with survey results for each of the eight counties in the Valley. Data delivered to the MPOs in electronic format. Presentations to COG Directors Committee, Fresno COG’s TTC/PAC, and Policy Board.