



## *Improved Data and Tools for Integrated Land Use-Transportation Planning in California*

**Background:** A number of regional and local agencies in California use software “planning tools” to develop and analyze “integrated” land use and transportation plans and programs. Various GIS and spreadsheet “sketch” scenario-planning software tools are used during workshops and meetings to obtain input from participants and provide them feedback regarding potential impacts and benefits of various land use and transportation planning options. After a set of possible “scenarios” has been identified and described, a travel demand forecasting (TDF) model – preferably that has customized locally-based land use/transportation capabilities – is used to analyze and compare the various scenarios regarding selected performance metrics. The use of planning tools such as these can significantly enhance public participation and decision-making processes by providing quantitative information to stakeholders and decision-makers regarding the potential benefits and impacts of land use and transportation choices. *However, it is has been difficult to use such planning tools due to the lack of accurate, regionally-specific data on land use/transportation relationships in most parts of California.*

**Objectives:** This project has advanced the state-of-practice for planning in California by providing locally-derived quantitative data on land use-travel relationships for most of California’s urban and urbanizing areas, as well as several exurban and rural locations. It provided these results for practical use within “sketch”-planning tools that assist in developing scenarios; and with travel demand forecasting models that are typically used to analyze scenarios regarding selected performance measures and objectives.

**Products:** Specifically, this project provided: 1) **Scenario/”sketch”-planning Tools:** a) Improvements to two GIS-based scenario-planning tools: UCD’s “UPlan” and SACOG’s “iPLACE3S”; b) Regionally-specific “python” modules for use in available GIS sketch/scenario planning tools; and c) A spreadsheet VMT estimator tool for large land use projects; and 2) **Tools for use with travel demand forecasting models:** a) Customized travel demand model “post-processors” for eight selected MPOs; and b) A travel model post-processor calibration spreadsheet tool to help agencies test their travel demand models’ existing sensitivities to land use/travel variables and to develop needed calibration adjustments. In addition, the study team conducted evaluations of these results; provided users’ guides and instructions for each tool; and produced a final project report with seven technical appendices. **The study was completed in October 2012; all of its products are posted for free download via this website:**

<http://ultrans.its.ucdavis.edu/projects/improved-data-and-tools-integrated-land-use-transportation-planning-california>

**Outcomes:** Regional agencies (MPOs and RTPAs) - as well as cities and counties - throughout California can use the data and tools provided by this project in their integrated land use-transportation planning processes, including RTPs, General and Specific Plans, etc. Doing so will contribute to more informed planning and more efficient land use and transportation systems with fewer impacts and greater benefits. These products can also assist regional and local agencies to effectively comply with various State and Federal requirements – including California’s climate change law (SB375); CEQA, NEPA, etc.

**Who benefits?** Transportation and land use stakeholders, regional planning agencies, counties, cities, transit agencies, air quality districts, environmental groups, developers, elected officials, and the public. This project also supports Caltrans programs and policies, such as: Multi-modal corridor planning, Smart Mobility Framework, Complete Streets, Regional Blueprint and regional transportation planning, Local Development-Intergovernmental Review (LD-IGR), Mass Transportation, Environmental, and others.

**Who implemented this project?** SACOG was the “prime contractor” with Fehr & Peers Consultants and UC Davis ULTRANS. Caltrans’ project manager, Ms. Terry Parker, coordinated the overall effort. Planning and modeling staff of 21 regional agencies also participated. And, selected academic experts provided important technical input regarding the statistical analyses of data collected for this project.

**Cost/timeframe:** Caltrans provided \$1.152 million over a three-year period, starting in September 2009.

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