

**SOUTHERN CALIFORNIA ASSOCIATION OF
GOVERNMENTS**

invites applications for the position of:

**Transportation
Modeler I/II****SALARY:** \$63,835.20 - \$98,113.60 Annually**OPENING DATE:** 06/06/19**CLOSING DATE:** 07/05/19 11:59 PM**DESCRIPTION:****THE POSITION:**

The Southern California Association of Governments (SCAG) is seeking a skilled, energetic, and team-oriented professional for the position of Transportation Modeler I/II. The Modeling & Forecasting Department is responsible for developing, updating, and applying SCAG's various state-of-the-art models, including transportation, air quality, growth forecast, and scenario planning models. This position will work closely with Senior department staff to support various tasks on model enhancement and applications for SCAG's Scenario Planning Model (SPM).

The Transportation Modeler will also support transportation and land use data collection and analysis, local outreach for technical assistance, and perform other duties assigned. This position provides the opportunity to develop and expand professional capacities through involvement with innovative projects of the Department, such as the activity-based model update, small area forecasting model development, household travel survey, big data analysis, and many other land use and transportation modeling projects.

Modeling and Forecasting Department Overview:

The Modeling and Forecasting department is responsible for model software development and enhancement, model input setting and quality control, model run operation and monitoring, model output process and analysis, and model result summary. One of the tools developed and utilized in the Modeling and Forecasting department is the SCAG Scenario Planning Model (SPM). The SPM is a comprehensive web-based land use sketch planning tool used for scenario development, modeling, and data organization developed to support a collaborative and seamless local and regional plan development process. The primary purpose of SPM is to enhance the Region's ability to address complex issues and evolving challenges by providing better information about alternative future scenarios and by building an improved linkage between local and regional planning. For more information on SPM, please visit <http://sp.scag.ca.gov>.

OUR LOCATION

SCAG headquarters is located in the hub of busy downtown Los Angeles, at Figueroa and 7th streets. Located in the 900 Wilshire Building, a new, multi-use hotel and office complex that features state of the art architecture and technology and LEED Gold Certification. The downtown location is vibrant and exciting with LA Live, new restaurants, music, sports, shopping, libraries, museums, theaters and residential opportunities. SCAG is in a culturally diverse area near excellent public transit access and Koreatown, Little Tokyo, Chinatown, Olvera Street and Grand Central Market. Southern California boasts near-perfect weather and close proximity to mountains, beaches and deserts, which encourages physical fitness and year-round activities.

The office is located across the street from the 7th Street/ Metro Center Station and is easily accessible by LA Metro's Blue, Expo, Purple, and Red lines, commuter trains, and bus service. Metro light rail and the subway connect downtown LA to Hollywood, Universal City, Santa Monica, Pasadena, Azusa, Long Beach and many vibrant and up-and-coming neighborhoods.

WHO WE ARE:

Founded in 1965, the Southern California Association of Governments (SCAG) is a Joint Powers Authority under California state law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 191 cities in an area covering more than 38,000 square miles. The agency develops long-range regional transportation plans including sustainable communities' strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and a portion of the South Coast Air Quality management plans. Currently, the Regional Council consists of 86 members.

WHAT WE BELIEVE***MISSION***

To foster innovative regional solutions that improve the lives of Southern Californians through inclusive collaboration, visionary planning, regional advocacy, information sharing, and promoting best practices.

VISION

Southern California's Catalyst for a Brighter Future.

SCAG CORE VALUES

1. **Be Open:** Be accessible, candid, collaborative and transparent in the work we do.
2. **Lead by Example:** Commit to integrity and equity in working to meet the diverse needs of all people and communities in our region.
3. **Make an Impact:** In all endeavors, effect positive and sustained outcomes that make our region thrive.
4. **Be Courageous:** Have confidence that taking deliberate, bold and purposeful risks can yield new and valuable benefits.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Perform Scenario Planning Model operation for transportation/land use plans and strategies, including model runs, model output data process and summaries, and conduct various analysis using model results.
- Perform model calibration and update of Scenario Planning Model's analytic modules.
- Assist in the enhancement, maintenance and monitoring of Scenario Planning Model, including development and maintenance of front-end user interface, system software and hardware and database.
- Compile, collect and organize input data related to the Scenario Planning Model.
- Provide technical support to internal staff and external stakeholders.
- Assist in transportation and land use data collection and statistical analysis.
- Perform transportation related data research and analysis, including "Big Data".
- Develop and provide presentations for the technical committees.
- Coordinate with outside agencies and other SCAG departments to maintain consistency, reliability and validity of the regional travel forecasting process.

MINIMUM QUALIFICATIONS:**Education:**

Equivalent to a Bachelor's degree from an accredited college or university with major coursework in computer science, transportation engineering, civil engineering, urban planning, geography or a related field. A Master's degree can substitute for one year of the required experience. A PhD can substitute for two years of the required experience.

Experience:

Transportation Modeler I: One year of transportation/environmental or related data analysis experience.

Transportation Modeler II: Two years of professional experience in preparing modeling data, applying models, and/or interpreting modeling data for use in transportation planning, environmental

planning or related area.

IDEAL CANDIDATE QUALIFICATIONS

The ideal candidate has a strong background in model application and model operation on transportation and land use models. The ideal candidate has knowledge and experience in GIS and spatial analysis with the ability to compile and analyze technical information. The ideal candidate has a strong background in quantitative analysis, holds a strong proficiency level in programming languages (JavaScript, Python, R, SAS, PostgreSQL/PostGIS), and has the ability to process and analyze large datasets and provide meaningful recommendations. The candidate will have a high attention to detail and accuracy in addition to outstanding organization skills. The ideal candidate will consistently and successfully meet tight deadlines for various projects. The candidate has excellent communication skills both orally and written, with the ability to communicate complex/abstract model concepts and information effectively in oral and written format. The candidate will possess the ability to work independently, set priorities, and complete projects within specified timeframes. This person should have the ability to build and maintain relationships with stakeholders and city officials.

Knowledge of: Travel demand and travel behavior theory, transportation and land use modeling theory, theories, principles and practices of regional planning; computer programming (Python, JavaScript); database development and maintenance (SQL); advanced quantitative analysis and statistical methods (SAS, R); GIS programming/platforms (ESRI, QGIS) and spatial analysis (GDAL, GeoPandas); land use and built environment; demographics and economics; technical writing methods; familiarity with emerging web-based application development and applications (Django) is preferred.

Ability to: Compile and analyze transportation and land use related data and technical information; meet deadlines by creatively developing technical approaches and effectively utilizing available resources; ability to learn new model methodology, concept, and technical skill rapidly; independently plan and coordinate multiple assignments; analyze complex problems and identify logical solutions; independently investigate data collection and analysis problems; communicate clearly and concisely, both orally and in writing; prepare and produce clear, effective, and accurate reports and presentations; respond to public inquiries and data requests; perform professional work with a minimum of supervision; establish and maintain working relationships with co-workers to achieve common goals; and work effectively in a team environment.

EDUCATION: Any combination equivalent to a Bachelor's degree in transportation planning, urban planning, economics, geography or a related field. Master's degree desired.

EXPERIENCE: Six (6) years of progressively responsible planning experience with increasingly greater role in developing and managing federal transportation improvement programs or programs.

WHO YOU ARE:

The ideal candidate will have strong expertise in and knowledge of the Federal Transportation Improvement Program (FTIP) bi-annual report and amendment process. The candidate should have knowledge of both federal and state regional planning and programming laws and regulations. The successful candidate will have the ability to identify the nexuses between the FTIP and the related RTP/SCS. Knowledge of the Southern California region and local challenges is highly desirable. The successful candidate will possess excellent program management, collaboration, interpersonal skills, and the ability to manage both high-priority and large-scale projects.

The ideal candidate will have experience managing successful teams and implementing highly visible programs involving multiple stakeholder groups. The candidate should be politically astute and hold experience in dealing with local elected officials and knowledge of regional challenges and opportunities related to FTIP. The candidate will need to have analytical and data management skills and the ability to be a strategic and creative thinker with the capability to interpret technical data. This role will require the ideal candidate to have effective verbal and written communication skills, have the ability to develop public policy, and have excellent presentation and public speaking skills.

KNOWLEDGE OF: Federal and State regional planning and programming laws and regulations in the areas of transportation and air quality. The prospective applicant should be familiar with the fundamental principles of FTIP development and processing, as well as the links between the FTIP and

the related RTP/SCS. Principles of transportation finance, transit, land use and environmental planning; operational characteristics, requirements and activities of Connect SoCal and its relationship to the FTIP; organizational and management practices as applied to the analysis and evaluation of contracts, policies, and operational needs; project management principles and concepts; principles and practices of budget development and administration; modeling principles and processes. Prospective applicants should possess a fundamental understanding of all pertinent legislation and laws that pertain to the FTIP and its requirements, including but not limited to the federal act "Moving Ahead for Progress in the 21st Century" (Map-21). The prospective applicant must have familiarity with and working knowledge of transportation modeling dynamics and air quality conformity requirements as they relate to the development of the FTIP.

ABILITY TO: Provide administrative and professional leadership and direction for the FTIP program; ability to analyze problems; identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals; research, analyze, and evaluate new service delivery methods, procedures, and techniques; interpret and apply the policies, procedures, laws, codes, and regulations pertaining to programs and function; establish, maintain, and foster positive and harmonious working relationships and collaboration with those contacted in the course of work.

Important Applicant Information: SCAG provides equal employment opportunities (EEO) to all employees and applicants for employment without regard to race, color, religion, sex, national origin, age, disability or genetics. In addition to federal law requirements, SCAG complies with applicable state and local laws governing nondiscrimination in employment. This policy applies to all terms and conditions of employment, including recruiting, hiring, placement, promotion, termination, layoff, recall, transfer, leaves of absence, compensation and training.

SCAG expressly prohibits any form of workplace harassment based on race, color, religion, gender, sexual orientation, gender identity or expression, national origin, age, genetic information, disability, or veteran status. Improper interference with the ability of SCAG's employees to perform their job duties may result in discipline up to and including termination.

SCAG RESERVES THE RIGHT TO MODIFY OR REVOKE, WITHOUT NOTICE, ANY OR ALL OF THE PROVISIONS OF THIS BULLETIN PRIOR TO THE TIME OF APPOINTMENT, AND TO WAIVE ANY NON SUBSTANTIVE JOB REQUIREMENT AND MAKE SUBJECTIVE DECISIONS INTERPRETING AND ASSESSING THE SKILLS AND QUALIFICATIONS OF ANY CANDIDATE, INCLUDING THE DETERMINATION THAT NONE OF THE CANDIDATES, EVEN THOSE WHO MEET THE MINIMUM QUALIFICATIONS, ARE APPROPRIATE FOR THE POSITION.

APPLICATIONS MAY BE FILED ONLINE AT:
<http://www.scag.ca.gov>

Position #00183
 TRANSPORTATION MODELER I/II
 NA

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Transportation Modeler I/II Supplemental Questionnaire

- * 1. Which of the following best describes your highest level of education?
- Bachelor's Degree
 - Master's Degree
 - PhD
 - None of the Above
- * 2. How many years of experience do you have in preparing modeling data or interpreting modeling data for use in transportation or land use planning?

- No experience
- Less than 2 years experience
- More than 2 years experience

- * 3. Please describe a project where you analyzed modeling data, utilizing statistical tools, to interpret the data and provide recommendations. Please describe what tools you used to ensure the information was received and understood by nontechnical stakeholders. Please be clear and concise in your response and provide relevant examples of your work.

- * 4. Please describe a project which required you to use programming software (i.e. JavaScript, Python, R, SAS, PostgreSQL/PostGIS).

- * 5. Please describe a project which required you to use transportation, land use or scenario planning model software (i.e. TransCAD, Cube, PECAS, UrbanSim, UrbanFootprint).

- * Required Question