The San Diego Association of Governments invites applications for the position of:

**senior economic and demographic modeler**

A job at SANDAG is guaranteed to stimulate your mind, expand your skills, and accelerate your professional development. We are committed to recruiting highly talented individuals who are dedicated to working on important issues and passionate about making significant contributions that impact the lives of people all around the region. We look for people that have extraordinary leadership and vision; people that drive change and produce results; people who take ownership of projects and never settle for "good enough!"

SANDAG values and rewards continuous improvement. We offer a fulfilling work environment that will challenge your capabilities. And it is a place where you can take ownership for the next steps in your career while being supported with opportunities, tools, and resources that will allow you to be successful.

This position is Open Until Filled.
The first review of applications will begin on August 9, 2019
Expected start date: October 2019
**Economic and Demographic Analysis and Modeling Program**

The Data, Analytics, and Modeling Department provides SANDAG member agencies, elected officials, other organizations, and the public with information and technical resources for regional planning, funding, and policymaking efforts. The department represents a broad range of expertise from land use and transportation modeling, programming and website development, applied social research, public safety, demographics, and economics. The common theme is data. The information the department gathers, analyzes, produces, delivers, and maintains is essential to the success of SANDAG.

The Economic and Demographic Analysis and Modeling (EDAM) team develops socioeconomic forecasts of population, housing, employment, income, and land use for the San Diego Region. This includes analyses at the regional level as well as jurisdictions, community planning areas, ZIP Codes, and to the parcel level. The group also conducts analyses to support research, economic, and planning studies as well as policy development initiatives. In the near future, SANDAG will play a central role in facilitating the collection, storage, and access to big data for the region, and the EDAM group will be relied on to analyze and work with this data.

**Senior Economic and Demographic Modeler Role**

The Senior Modeler will be responsible for the development of the SANDAG regional and sub-regional demographic, economic, and land use modeling and forecasting system. This role includes planning and implementing projects, managing project teams, and coordinating modeling functions with other divisions and departments, committees, and outside agencies. This position also performs and delivers ad-hoc statistical analyses as needed.

**Job Responsibilities**

This position is ideal for an analyst with current, technical knowledge of modeling methods, software development, big data, and emerging transportation technologies. We anticipate significant career development will occur while working on the duties and responsibilities described below and through mentoring and close collaboration with senior staff and consultants. Examples of primary responsibilities may include:

- Coordinate and collaborate on inter-departmental and inter-agency project teams assembled for land use, demographic, and econometric modeling, analyses, and planning; foster collaborative working relationships with local jurisdictions and various transit and transportation agencies.
- Examine and recommend innovative modeling and forecasting techniques to ensure SANDAG remains at the leading edge of forecasting and regional planning.
- Coordinate the compilation of various types of small area or parcel level demographic, economic, social, geographic, and other quantitative data from local, state, and federal agencies, the Internet, surveys, government publications, and other sources; review data for quality and accuracy and resolve data inconsistencies.
- Prepare and present reports to policy and stakeholder committees, member agencies, community groups, private organizations, and members of the public; explain and interpret complex modeling projects, and activities.
- Coordinate regional econometric model development to support activities in the Regional Transportation Plan, Regional Comprehensive Plan, Smart Growth Incentive Program, Transit Oriented Development Strategies, and other major highway, transit, and infrastructure investment studies.
- Prepare Requests for Proposals (RFPs) including scopes of work and project budgets; evaluate competitive project proposals and participate in the selection of consultants; manage consultant performance and ensure projects are completed on schedule, within the prescribed budget, and with a high-level of effectiveness.
Experience and Qualifications

Numerous factors contribute to an individual’s ability to be successful in any given role. For this position, we are searching for a candidate who has an aptitude for analytical thinking and problem solving who is organized, flexible, and can be relied upon to meet deadlines while working on multiple projects. Excellent communication skills, the ability to work collaboratively, dynamic and strong interpersonal skills, and the use of sound judgment are important.

The minimum education, training, and experience qualifications include a bachelor’s degree with major coursework in urban economics, regional economics, urban planning, demography, social science, mathematics, statistics, or a related field and five years of recent professional research experience developing complex predictive modeling systems. An advanced degree is desirable.

The following information describes the specific types of career experiences that are most relevant to this position.

- Demonstrated experience developing and applying integrated demographic-economic models; a strong understanding of regional demographic and economic interaction; demonstrated knowledge of the principles and practices of econometric, real estate, and demographic forecasting.
- Experience developing various types of land use models that use historical trends, land use inventories, zoning policies, highway networks, and employment and household data at various levels of geography.
- Demonstrated experience using advanced statistical techniques and concepts in analyses and problem-solving including Bayesian analysis, judging conditional probability, data classification, linear regression, resampling, shrinkage, and tree-based analysis; experience using these techniques within a demographic or economic framework is preferred.
- Knowledge of a variety of machine learning techniques and experience with their practical application including supervised learning such as multi-variate linear regression, various classification techniques, unsupervised learning, and use of dimension reduction algorithms.
- Experience analyzing the allocation of socio-economic data and travel networks and the interactions between the transportation system and land use development; experience working with various land use and transportation modeling systems is preferred.
- Experience using Python, or R, SAS, SQL and ArcGIS.
- Experience providing administrative and professional leadership and direction for assigned programs and projects; experience keeping complex projects on track, managing competing demands, and effectively communicating impact of changes to schedule.
- Experience preparing reports that document research procedures; effectively present, analyze, and interpret research findings; and make conclusions and recommendations for consideration by elected officials and other decision makers.
- Ability to communicate highly technical information effectively, both orally and in writing; ability to prepare and deliver public presentations and recommendations regarding various program elements to upper management, community groups, and other audiences.
- Demonstrated ability to establish and maintain effective working relationships with those contacted in the course of work including local, state, and federal agencies, other government officials, community groups, and the public; ability to gain cooperation and consensus through discussion and persuasion.
- The selected candidate can anticipate a driving record check upon hire, and approximately annually thereafter. The results of the check may determine whether the selected candidate will be permitted to drive for SANDAG business.
About SANDAG

SANDAG is one of the most recognized regional agencies in the nation with responsibilities that cover a broad range of complex, interrelated program areas connected by a quality of life theme. We are best known for our efforts related to transportation and this role continues to expand as we push beyond traditional boundaries to deliver a state-of-the-art transportation system for the region. In recent years, leadership in areas such as comprehensive land use and environmental planning, public safety, and modeling and data systems also have earned SANDAG much acclaim. With an employee group about 375 strong, we work for our Board of Directors - mayors, city council members, county supervisors, and other leaders representing the jurisdictions within the San Diego region and neighboring areas. They play the important role of making policy decisions that shape the future of the region. Our collaboration with stakeholders, partners, and the community, the precision of our data, the completeness of our reports and studies, and our sound recommendations are essential components of the regional decision-making process.

Salary and Benefits

SANDAG rewards the efforts of its employees with a comprehensive compensation package. Competitive salaries are supplemented with a flexible offering of health, financial security, and time-off benefits to meet the work and life needs of employees and their families.

This position has an annual salary range of $85,676 to $132,798; the starting salary will depend on the qualifications and experience of the selected candidate.

Our benefits include traditional health, dental, and vision insurance as well as employee assistance, wellness, and work/life balance programs. Retirement and financial security benefits are provided through a pension plan and deferred compensation program. To support the need to rest and rejuvenate, SANDAG offers flexible work schedules and employees are provided with a bank of paid time off in addition to paid holidays.

How to Apply

We encourage all interested candidates to apply for this position by completing a SANDAG Employment Application form. Resumes, cover letters, and work samples may be submitted in addition to the Employment Application but are not a substitute for this document.

The Employment Application can be downloaded in PDF format from the SANDAG website. Alternatively, a copy can be requested by calling (619) 699-1900 or emailing hr@sandag.org. Completed applications and related materials can be submitted via email, fax, regular mail, courier, or delivered by hand. See our Careers / How to Apply webpage for additional information.

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In compliance with the Americans with Disabilities Act (ADA), SANDAG will accommodate persons who require assistance in order to apply for a position at SANDAG. Applicants requiring an accommodation due to a disability during any stage of the recruitment and selection process, including requesting this document and related application materials in an alternative format, should make their needs known by contacting Human Resources at (619) 699-1900, (619) 699-1904 (TTY), fax (619) 699-6905, or hr@sandag.org.

Candidate Selection and Notification

All candidates will receive written confirmation that their application was received. The hiring manager will begin reviewing and evaluating applications within a few days of the first review date. The best qualified candidates will be invited to continue in the selection process. All candidates will receive written notification as to the final outcome of their application.

Further Information

The SANDAG website contains a wealth of information about our various project and program areas. The Careers section of the site lists all of our current Job Openings as well as information on how to apply for positions and Frequently Asked Questions about our recruitment process.

In compliance with the Immigration Reform and Control Act of 1986, applicants hired by SANDAG must show acceptable proof of identity and evidence of authorization to work in the United States.

SANDAG is an Equal Opportunity Employer