



SENIOR GEOGRAPHIC INFORMATION SYSTEMS ANALYST

Bargaining Unit: Professional Unit

COUNTY OF SAN DIEGO

SALARY RANGE

\$44.22 - \$54.36 Hourly
\$3,537.60 - \$4,348.80 Biweekly
\$7,664.80 - \$9,422.40 Monthly
\$91,977.60 - \$113,068.80 Annually

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CLASSIFICATION PURPOSE AND DISTINGUISHING CHARACTERISTICS

To perform the design, operation, and administration functions related to the development and analysis of various Geographic Information Systems (GIS) data pertaining to the County of San Diego; and to perform related work as required.

The GIS class series is responsible for the creation and analysis of spatial data layers in a large spatial relational database system. This includes, but is not limited to, the maintenance and complex analysis of digital spatial data to support decision-making. This series differs from the Cadastral and Drafting Technician series in that they are primarily responsible for updating and maintaining maps in CAD and official records related to the identification of roads, boundaries, ownership, and property parcels.

This is the lead/supervisory level class. Under direction, this class provides technical guidance and leadership to professional staff and may supervise GIS staff within a department. The Senior GIS Analyst may assist in the budget preparation, planning, and the development and implementation of highly complex GIS projects within the department.

The complete Geographic Information Systems series includes the following:

Geographic Information Systems Technician (Class No. 003501)
Geographic Information Systems Analyst Trainee (T) (Class No. 003503)

Geographic Information Systems Analyst (Class No. 003509)
Senior Geographic Information Systems Analyst (Class No. 003506)

EXAMPLES OF DUTIES

The examples of functions listed in this class specification are representative but not necessarily exhaustive or descriptive of any one position in the class. Management is not precluded from assigning other related functions not listed herein if such functions are a logical assignment for the position. Reasonable accommodations may be made to enable qualified individuals with disabilities to perform the essential functions of a job, on a case-by-case basis.

Essential Functions:

1. May assign, lead/supervise and/or train subordinate staff, and provide technical guidance to staff on GIS application uses.
2. Establishes standards and quality control for data entry procedures.
3. Coordinates and budgets for the purchasing of GIS software, hardware, and related equipment by researching item specifications, costs, and delivery requirements, and preparing budget estimates for agency and vendor purchases of GIS equipment.
4. Assists in the preparation of a department's GIS budget and work plans for customers.
5. Updates GIS programming, analytical functions, and related technologies (Internet/Intranet mapping, Databases/SDE).
6. Prepares and evaluates plans for procuring professional services as needed.
7. Evaluates departmental RFPs and other contracts requiring GIS support to ensure consistency with County and SanGIS data use policies and quality of contracted GIS products and services proposed for the department.
8. Provides technical guidance to staff involved in interpreting satellite photos, cartography, data analysis, experimental design and capturing data for conversion into GIS usable formats.
9. Coordinates data acquisition and exchanges, project scheduling, and software training with outside agencies
10. Attends Board of Supervisors and Chief Administrative Officer briefings upon request.
11. Provides scientific and technical information to staff.
12. Constructs or develops scientific/statistical experiments and analytical computer models to support decision-making.
13. Manages the preparation of reports detailing the results of these experiments or model outputs.
14. May be required to perform the functions of the lower level classes in this series.

KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of:

- Principles and practices of GIS system administration using ArcGIS Server applications and spatial database
- Principles of hardware and software installation, testing, and operation for GIS applications
- Research methods and techniques related to collecting, analyzing, and scientifically evaluating spatial data
- Environmental issues related to biology, geology, geography, land use, and environmental management
- Demographic issues of economics, culture, societal trends, crime, public health and human movements
- County customer service objectives and strategies
- Principles of computer programming logic, math, and computer science concepts related to GIS desktop and GIS Server software
- Methods and techniques used for interpreting maps of various media such as hard and soft copy maps, graphics, aerial photos, and multi-spectral satellite imagery, and the process for converting them to GIS usable formats
- Lead work and training principles and practices
- Budget preparation methods and techniques
- Grant and RFP writing and editorial review methods
- Project management techniques
- Scientific report writing protocol
- Purchasing principles and practices and cost factor and depreciation analysis
- Staff management and discipline techniques, including supervision and training principles and practices
- Telephone, office, and online etiquette
- Current technology and trends in the profession

Skills and Abilities to:

- Operate and maintain computer equipment: terminals, printers, plotters, and other peripheral equipment or workstations
- Provide technical guidance to staff on GIS applications
- Research GIS technology and make recommendations for purchase
- Define customer needs and make recommendations

- Convert data from a variety of formats into GIS usable formats
- Analyze a variety of geographic and mapping data and develop logical conclusions and solutions
- Communicate effectively orally and in writing
- Work effectively to maintain productive relationships with management, employees, employee representative and the public representing diverse cultures and backgrounds
- Treat County employees, representatives of outside agencies, and members of the public with courtesy and respect
- Assess the customer's immediate needs and ensure customer's receipt of needed services through persona service or making appropriate referral
- Exercise appropriate judgment in answering questions and releasing information; analyze and project consequences of decisions and/or recommendations
- Serve on inter-governmental committees and task forces and provide GIS technical expertise
- Develop, implement, and effectively maintain a GIS system
- Plan and coordinate multi-disciplinary work efforts in order to meet timelines.
- Analyze complex problems and logically identify solutions
- Supervise, plan, and schedule technical staff to optimize efficiency

Desirable Traits

Leadership, Communicates Effectively, Knowledge Worker, Holds Self and Others Accountable, Problem Solving a Innovation, Demonstrates Ethical Behavior, Leverages Resources (Coaches and Develops), Drives to Excel, Maximizes Team Effectiveness, Supportive of Change

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Education and/or Experience

Education, training, and/or experience that demonstrate possession of the knowledge, skills, and abilities listed above. Qualifying education/experience:

A bachelor's degree from an accredited U.S. college or university, or a certified foreign studies equivalency, in geography, earth sciences, civil engineering, urban planning, information technology, biology with an emphasis in GIS, computer science, or closely related field, OR, successful completion of a college level GIS certificate program AND,

1. Three (3) years of full-time experience as a GIS Analyst with the County of San Diego administering and operating a GIS system using ArcGIS Desktop or Server or similar type software to develop GIS data, digital maps, or other digital displays for spatial analysis; OR
2. Four (4) years of full-time experience administering and operating a GIS system using ArcGIS Desktop or Server or similar type software to develop GIS data, digital maps, or other digital displays used for spatial analysis.

Note:

A master's degree from an accredited U.S. college or university, or a certified foreign studies equivalency in any of the fields described above may substitute for one (1) year of the required experience; OR, additional years of experience as described above may be substituted for the education/certification requirement on a year-for-year basis.

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REQUIRED LICENSES, CERTIFICATIONS OR REGISTRATIONS

License

A valid California Class C driver's license, which must be maintained throughout employment in this class, is required at time of appointment, or the ability to arrange necessary and timely transportation for field travel. Employees in th

class may be required to use their own vehicle.

Certification/Registration

None required.

SPECIAL NOTES**Working Conditions**

Office environment; exposure to computer screens and other basic office equipment.

Essential Physical Characteristics

The physical characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of this classification. Reasonable accommodations may be made to enable qualified individuals with disabilities to perform the essential functions of a job, on a case-by-case basis.

Continuous: upward and downward flexion of the neck. Frequent: sitting, repetitive use of hands to operate computers, printers, and copiers. Occasional: walking, standing, bending and twisting of neck, bending and twisting of waist, squatting, simple grasping, reaching above and below shoulder level, and lifting and carrying files weighing up to 10 pounds.

Background Investigation

Must have a reputation for honesty and trustworthiness. Misdemeanor and/or felony convictions may be disqualifying depending on type, number, severity, and recency. Prior to appointment, candidates will be subject to a background investigation.

PROBATIONARY PERIOD AND CLASS HISTORY

Incumbents appointed to permanent positions in this classification shall serve a probationary period of 12 months.

Senior Geographic Information Systems Analyst (Class No. 003506) Union Code: PR Variable Entry: Y