

GEOGRAPHIC INFORMATION SYSTEMS (GIS) ANALYST

Definition

Under general supervision, to design, compile, analyze and prepare geographic data; to investigate and analyze alternative methods of obtaining geographic data from a variety of sources, and to incorporate data into a GIS electronic base map and to deliver the results of geographic analysis to users.

Distinguishing Characteristics

Geographic Information Systems Analyst is the journey level classification. Incumbents are technically proficient to perform their assigned duties independently.

Geographic Information Systems Analyst is distinguished from the Geographic Information Systems Technician II in that incumbents in the GIS Technician II class perform technical GIS work, to update and maintain the quality of County's GIS data, producing a variety of maps and other processing output such as reports, and to resolve moderately complex computer operating system and network problems, while the GIS Analyst performs the analytical and research assignments and projects for a geographic information system.

Typical Tasks

- Performs complex analysis of GIS data to support homeland security, public safety, emergency preparedness, 911 dispatching, law and justice, planning and other groups by resolving their geo-spatial issues with GIS data and processes;
- Develops and prepares presentations and reports of GIS data and information, using spatial-statistical-data workflow models, to inform and update management of project status;
- Consults and gives advice to management and business partners on GIS project direction and feasibility; provides analysis and recommendations for modifying procedures, developing technical strategies and workable solutions for managing GIS data problems;
- Provides analysis and support of departments' GIS business needs, through staying abreast of the latest GIS technologies and innovations, researching, compiling and evaluating alternatives and making recommendations to management on the benefits on new products and trends;
- Investigates and analyzes GIS data sources to retrieve required data to utilize and potentially integrate into geographic data sets;
- Designs, creates and plots publication-quality maps, specifying coordinates, scale, size, line patterns, and colors; designs and positions map legends; executes system macros to produce maps according to specifications;
- Assists in the development of GIS policies, procedures, standards and operations;

- Develops, test and implements quality assurance (QA) and quality control (QC) processes to ensure GIS data accuracy and integrity;
- Participates in regional and County-wide enterprise GIS work groups to share and exchange information and discuss GIS issues to corroborate and formulate creative solutions;
- Provides education to address the implications of problems with cartography, automated mapping, map projections and coordinated geometry;
- May lead Geographic Information Systems Technicians and other related positions;
- Writes reports, and makes presentations to management and others on project status;
- Identifies and recommends enhancements to GIS base map;
- Creates and conducts County base map and other geographic information systems training;
- Performs related work as required.

Employment Standards

Sufficient experience and education to demonstrate the possession and direct application of the following knowledge and abilities:

Experience Note: The knowledge and abilities required to perform this function are typically acquired through training and experience equivalent to possession of a Bachelor's degree in Geographic Information Systems (GIS), Geography, Cartography or related field and three (3) years of progressively responsible experience operating, maintaining, and implementing automated mapping and/or geographic information systems.

Possession of a valid California Drivers license prior to appointment, and the ability to qualify for a County Drivers Permit.

Knowledge of:

- Geographic information and related computer systems, ARC/Info and related software;
- Principles and practices of geographic information systems, cartography, including graphic design, data management and analysis;
- Relational database management systems and principles;
- Complex GIS analysis and modeling techniques;
- Principles and techniques of software and systems related to programming and scripting languages;
- Principles and practices of technical problem solving;
- Principles and practices of project management and workflow analysis;
- Principles and practices of producing effective project and technical documentation;
- Pertinent local, County, State and Federal statutes, laws, ordinances and rules as they apply mapping requirements.

Ability to:

- Perform complex analytical tabular and spatial queries;
- Integrate complex disparate spatial and tabular databases;
- Design, create and print professional level graphic representations of the data as maps;
- Gather and document user requirements for projects;
- Plan, organize, coordinate, and prioritize work;
- Organize projects and manage time effectively applying considerable independent judgment and initiative;
- Establish and maintain effective working relationships with users, senior managers, members of other departments and agencies, and deal with the public in a courteous manner;
- Effectively communicate both orally and in writing;
- Work independently and in a team environment;
- Effectively manage multiple projects and priorities;
- Recognize problems and develop recommendations and solutions.

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