

GEOGRAPHIC INFORMATION SYSTEM (GIS) SPECIALIST III

DEFINITION

Under direction, plans, leads, and performs technical duties in developing, implementing, and supporting, the District's GIS database; generates maps, tables, reports, and related graphic materials; creates GIS applications; and performs related duties as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from assigned supervisory or management personnel. Exercises technical and functional direction over and provides training to less experienced staff.

CLASS CHARACTERISTICS

This is the advanced journey-level classification in the GIS Specialist series. Incumbents work under direction and exercise discretion and independent judgment in performing the full range of routine to complex work associated with the District's GIS database, infrastructure, and applications. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to deliver work products or services. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the typical functions of the job.

- Participates in developing long-term plans, goals, and objectives to achieve District and GIS technology and business priorities.
- Plans, leads, and reviews the work of staff responsible for performing technical duties in developing, implementing, and supporting the District's GIS database, infrastructure, and applications; ensures maximum performance and efficiency in work performed; assists subordinate staff as appropriate.
- Coordinates with other departments to ensure the prompt and accurate capture of attributes and facility data in the GIS database.
- Evaluates and consults with other District staff regarding GIS system needs and requirements, including identifying and developing web applications to allow staff across multiple departments/divisions to work more efficiently.
- Leads and provides technical support in maintaining, supporting, troubleshooting, and configuring the GIS server, field laptops, and personal computers; troubleshoots system problems; performs storage backups, software installations, network troubleshooting, and administration of GIS-related infrastructure; responds to and resolves inquiries and complaints and escalates problems or issues as needed.
- Supports GIS functionality and integration with other systems such as the enterprise asset management system and mobile work order management system.
- Leads and participates in the testing of new and upgraded GIS applications, software packages, and utilities.

- Directs and provides cartographic support for District divisions, departments, and projects by gathering, reviewing, and integrating spatial data to create and design a variety of maps, charts, displays, presentations, graphics, drawings, and other graphic materials.
- Gathers, verifies, edits, integrates, and interprets geospatial data from internal and external sources in support of District projects and programs; performs quality assurance checks on gathered data.
- Provides training and assistance on GIS functions and applications to GIS software users; directs the preparation and maintenance of documentation and training guides for staff.
- Receives and responds to user requests and evaluates and defines data needs; generates custom GIS data queries and analyses as requested by staff; writes custom scripts to automate geoprocessing and geospatial analysis.
- Attends and participates in professional group meetings; stays abreast of new trends and innovations in technology related to GIS operations and administration; researches, recommends, and evaluates vendor solutions and technologies; implements improvements; works with staff to maintain, revise, or improve operations and systems.
- Assists information technology staff with technology-related support for the District as needed.
- Reads, understands, and ensures compliance with the District's Safety Manual; attends safety meetings as required; reports all accidents, violations, or infractions to supervisors.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles of providing functional direction and training.
- Applicable federal, state, and local laws, codes, and ordinances relevant to the area(s) of responsibility.
- Technology, hardware and software, tools, and applications related to GIS systems, including database management, geodatabase design, cloud computing, mapping and report generation, and desktop publishing systems.
- Principles and practices of digitization, data conversion, data management, and cartography.
- GIS and cartography concepts, including topological relationships, data set structures, and map projections.
- Data management theory, principles, and practices and their application to GIS services and programs.
- Principles and understanding of GIS open data sources.
- Computer programming techniques and languages to generate tools or scripts to automate repetitive tasks.
- Principles and practices of identifying user and technology needs and issues, researching and evaluating technology, applications, and the most effective courses of action, and implementing solutions.
- Principles of mathematics and statistics and their application to GIS support work.
- Principles and practices of developing and maintaining technical documentation.
- Record keeping and filing system methods, principles, and practices.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition and grammar.

- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Plan, organize, and coordinate the work of assigned staff.
- Effectively provide staff leadership and work direction.
- Understand, interpret, explain, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Lead and perform technical support functions in the evaluation, configuration, troubleshooting, and maintenance of the GIS infrastructure and related equipment.
- Read and understand various maps, documents, schematics, and drawings relating to the District's water and wastewater system; transpose the information into the GIS database using tools, utilities, and data capture rules.
- Direct the preparation of accurate, purposeful, and visually appealing GIS cartographic products; troubleshoot data quality issues; provide custom maps; create data queries and reports.
- Perform mathematical, geometrical, spatial, and statistical computations and analyses.
- Research GIS problems, review technical materials, and interpret and explain solutions to users.
- Develop and maintain technical operating instructions and documentation.
- Understand the organization and operation of the District as necessary to assume assigned responsibilities.
- Maintain a variety of filing, record keeping, and tracking systems.
- Independently organize work, set priorities, meet critical deadlines and follow-up on assignments.
- Meet deadlines in a fast paced and changing environment; handle multiple assignments simultaneously.
- Use tact, initiative, prudence and independent judgment within general policy and procedural guidelines.
- Effectively use computer systems, software applications relevant to work performed and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Education:

Equivalent to a bachelor's degree from an accredited college or university with major coursework in information systems, geography, or a related field.

Experience:

- Five (5) years of increasingly responsible experience providing creating maps and performing spatial analysis using GIS software and/or database management technical support.

Licenses and Certifications:

- Possession of a valid California Class C driver's license, to be maintained throughout employment.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

ENVIRONMENT

Standard office setting.

PHYSICAL

- Level Two

Incumbents require sufficient mobility to work in an office and field setting; push, pull, lift, and/or carry moderate amounts of weights up to 50 lbs.; stand, stoop, reach, bend, kneel, squat, and walk on uneven terrain, loose soil and sloped surfaces; reach and twist; frequent use of small hand tools, mechanical and electrical parts; may be exposed to periods of ambient noise levels; operate assigned equipment and vehicles; requires a sense of touch, finger dexterity, and gripping with hands and fingers; ability to verbally communicate to exchange information.

VISION

See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to operate assigned equipment.

HEARING

Hear in the normal audio range with or without correction.

ADDITIONAL REQUIREMENTS

Performs work on weeknights, weekends, and holidays as needed for system upgrades, special projects, or in emergency situations as assigned.