

## **GEOGRAPHIC INFORMATION SYSTEM (GIS) SPECIALIST I/II**

### **DEFINITION**

Under immediate (GIS Specialist I) to general supervision (GIS Specialist II), 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 immediate (GIS Specialist I) to general (GIS Specialist II) supervision from assigned supervisory or management personnel. Exercises no direct supervision over staff.

### **CLASS CHARACTERISTICS**

**GIS Specialist I:** This is the entry-level classification in the GIS Specialist series. Initially under close supervision, incumbents learn and perform routine technical duties including utilizing GIS software and applications to create maps, tables, and reports and to ensure accuracy of GIS data with existing source data and field observations. As experience is gained, assignments become more varied, complex, and difficult; close supervision and frequent review of work lessen as an incumbent demonstrates skill to perform the work independently. Positions at this level usually perform most of the duties required of the positions at the II-level but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

**GIS Specialist II:** This is the fully qualified journey-level classification in the GIS Specialist series. Positions at this level are distinguished from the I-level by the performance of the full range of duties as assigned, working independently, and exercising judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. This class distinguished from the GIS Specialist III in that the latter provides technical and functional direction to lower-level support staff and is responsible for the more complex work.

Positions in the GIS Specialist I-II class series are flexibly staffed; positions at the II-level are normally filled by advancement from the I-level. Progression to the II-level is dependent on satisfactory work performance, the incumbent meeting the minimum qualifications for the classification including any licenses and certifications, and management approval for progression to the II-level.

### **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.*

*Positions at the GIS Specialist I level may perform some of these duties and responsibilities in a learning capacity.*

- 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.
- 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.
- Coordinates with other departments to ensure the prompt and accurate capture of attributes and facility data in the GIS database.
- Provides training and assistance on GIS functions and applications to GIS software users; prepares and maintains 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.
- 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.
- 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 other GIS staff with testing new applications and system upgrades; 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**

*Positions at the GIS Specialist I-level may exercise some of these knowledge and abilities statements in a learning capacity.*

### **Knowledge of:**

- 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.
- Basic 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:**

- 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.
- Prepare 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.
- Perform technical support functions in the evaluation, configuration, troubleshooting, and maintenance of the GIS infrastructure and related equipment.
- Research GIS problems, review technical materials, and interpret and explain solutions to users.
- Develop and maintain technical operating instructions and documentation.
- Train staff on GIS usage.
- Learn and understand the organization and operation of the District as necessary to assume assigned responsibilities.
- Learn, understand, interpret, explain, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Maintain a variety of filing, record keeping, and tracking systems.
- 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 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 completion of the twelfth (12th) grade.

**Experience:**

**GIS Specialist I**

- One (1) year of experience creating maps and performing spatial analysis using GIS software and/or database management technical support.

**GIS Specialist II**

- Three (3) years of increasingly responsible experience creating maps and performing spatial analysis using GIS software or equivalent and related responsibilities to experience as a GIS Specialist I.

**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 One

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.