

CARMICHAEL WATER DISTRICT
Classification Specification

Job Class: GIS Specialist
FLSA Status: Non-Exempt
Supervisor: Engineering Manager
Effective Date: July 2023

Description

Under supervision, the GIS Specialist performs a variety of technical drafting and computation work related to the location, design and construction of District infrastructure and facilities including: development and maintenance of the District's base map and GIS database.

Distinguishing Characteristics

This is the journey level class. Employees at this level are required to be fully trained in all procedures related to assigned areas of responsibility and work independently utilizing problem solving skills and customer service skills.

Supervision Received and Exercised

Receive immediate supervision from the Engineering Manager or District Designated Representative.

Essential Duties and Responsibilities

The following duties are typical for this classification series. Depending upon the assignment, the employee may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices. Management retains the right to add, remove, or change duties at any time.

- Perform a variety of duties associated with the development and maintenance of the District's base map and GIS database. Duties include but are not limited to:
 - Locate and inspect properties for existing facilities (field checks).
 - Maintain District's record drawings, plans and easement files.
 - Update and correct existing map and District water facilities.
 - Upload/download GIS data.
 - Evaluate and make recommendations on improvements.
 - Produce various maps, drawings, and reports to satisfy end-user requirements.
 - Work with other District staff to ensure pertinent data is shared in a timely fashion.
 - Respond to customer service (staff, customers, developers, contractors, vendors, etc.) inquiries.
 - Train and assist other staff in use of GIS database as necessary.
- Perform a variety of duties associated with gathering GPS data. Duties include but are not limited to:
 - Operate GPS equipment.
 - Upload/download GPS data of District appurtenances into database.
 - Test and validate accuracy of data collection.
 - Verify power reserves and charge equipment as necessary.
 - Train and assist other staff in use of GPS equipment as necessary.
- Maintain GIS/GPS equipment and software (including: work with IT and vendors for upgrades, repairs, warranty, etc.).
- Assist with new construction activities.
- Ensure that all service orders and associated paperwork are completed accurately and returned each day.
- Develop and maintain current/updated Procedures Manual for position.
- Perform excellent timely customer service which includes but is not limited to:
 - Inform customers of scheduled work and work in progress.

- Investigate complaints, claims, reports of encroachment and vandalism.
 - Take necessary action to correct situations.
- Perform general maintenance activities, and general housekeeping of computers, monitors, and other hardware which include but are not limited to:
 - Data backup.
 - Physical cleaning.
 - Data organization.
 - Paper needs.
- Attend, support and participate in training and may provide training to other employees.
- Participate and comply with safety programs and procedures for employees.
- Comply with all District policies and procedures (i.e. Policy Manual, Rules and Regulations Manual, Emergency Response Plan, IIPP, etc.).
- Ensure all work performed is completed to District standards.

Qualifications

Operators in this class must possess ***knowledge and abilities*** identified below:

Knowledge of:

- Automated drafting and mapping tools and programs including AutoCAD software, ESRI-based GIS software and its applications.
- Principles and practices of distribution system operations and maintenance processes.
- Principles and practices of GIS, cartography and engineering drafting including map projections and scales.
- Methods, tools, and equipment used in GPS.
- Read and interpret piping and distribution diagrams, blue prints and maps.
- Principles of mathematics.
- Principles of data processing.
- Principles and practices of recordkeeping.
- Personal computer systems.
- Standard safety practices and programs.
- Regulatory compliance requirements.
- Principles and practices of effective oral and written communication.
- Customer service.
- Conflict resolution.

Ability to:

- Use computer-aided drafting hardware and software.
- Perform mathematical computations and estimates.
- Visualize spatial relationships.
- Read and interpret surveys, legal descriptions, maps, and aerial photographs.
- Interpret, apply and explain applicable laws and regulations.
- Maintain accurate records of work performed.
- Skillfully use necessary equipment (i.e.: GPS, meter reading equipment).
- Perform light to moderate physical labor requiring strength, dexterity and agility.
- Diagnose mapping operational problems and correct or provide recommendations.
- Communicate needed follow-up and schedule.
- Work independently, demonstrating initiative and independent thinking.
- Effectively train less qualified personnel.
- Follow both oral and written instructions.
- Perform assigned duties.
- Operate a motor vehicle.
- Adhere to safe work practices.
- Communicate clearly and concisely both orally and in writing.

- Exercise good judgment.
- Effectively manage time and workload to maximize productivity.
- Effectively represent the District with the public, community groups, contractors, and other organizations.
- Establish and maintain cooperative working relationships.
- Operate a variety of standard office equipment, telephone, electronic devices (i.e. laptop, smart phones, tablet, etc.), personal computer and software applications for GPS/GIS, word processing, graphic presentations, spreadsheets, and other job-related software.

Physical Requirements

The physical requirements 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.*

- Travel occasionally by airplane conducting District business.
- Travel regularly by vehicle for District related duties and activities.
- Communicate orally and in writing with District management, co-workers, and the public in one-to-one and group settings.
- Vision and hearing within normal ranges with or without correction.
- Regularly use telephone for communications.
- Regularly use electronic devices.
- Work in a field environment doing the following physical activities:
 - Regularly: sit, fine manipulation, and ride in a vehicle.
 - Frequently: walk, stand, squat, climb, bend, stoop, twist, repetitive use of hands, grasp, push, pull, reach above and below shoulder level, lift and carry up to 60 lbs., operate equipment and hand tools, and operate vehicle.
 - Differentiate between and perceive color, sound, smell, taste, texture and form.
- Work in an office environment: at a desk for an extended period of time, sit or stand for extended time periods, ability to stoop, kneel, push, pull, grasp, reach, lift and move objects up to 25 pounds such as storage boxes, large binders, books, and small office equipment.

Environmental and Working Conditions

The environmental and working conditions herein are representative of those an employee encounters while performing the essential functions of this job. *Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

- The performance of this position regularly requires exposure to job site, distribution and production areas with:
 - Field visits requiring the operation of a motor vehicle.
 - Exposure to environmental conditions:
 - Chemicals/Caustics, confined space, heights, allergenic plants/materials.
 - Dusts/mists/fumes/smoke/gases, wet damp surfaces, extreme heat/cold, inclement weather, noise.
 - Work on various types of terrain and footing which may be slippery or uneven.
 - Work around moving objects or vehicles.
- Certain areas require the use of personal protective and safety equipment (i.e. hard hats, steel toed boots, safety glasses and hearing protection).
- Frequently work indoors in ambient room temperatures and lighting and be around office equipment as found in a typical office environment.

Education, Experience, and Certification

Required:

- A high school diploma or equivalent.
- Two years of increasingly responsible experience as a GIS Specialist, preferably for a water utility, with specific experience in CAD, GIS and GPS.

- Three years total education and experience which would likely provide the necessary knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be any combination of:
 - An Associate's Degree from an accredited college or university in drafting, engineering, geographical information science, or closely related field; or
 - Successful completion of 30 semester units or 45 quarter units from an accredited college or university in drafting, geographic information systems, cartography, engineering, surveying, CAD, GIS, computer science or other closely related field; and
 - Additional years of experience referenced above.

Licenses

Required:

- Possess and maintain a valid State of California Class C driver's license.
- Proof of good driving record as evidenced by freedom from multiple or serious traffic violations or accidents for at least two years duration.

License and Certification Maintenance: Employee is responsible to complete the designated number of contact hours (i.e.: continuing education and/or training requirements) and licensing requirements to maintain all required licenses and certifications as a condition of continued employment.

NOTE: The specific statements shown in each section of this job description are not intended to be all-inclusive. They represent typical elements and criteria that are performed by most incumbents, but other related duties may be performed. Not all duties listed are necessarily performed by each individual.