SOUTH COAST WATER DISTRICT

GEOGRAPHIC INFORMATION SYSTEM ANALYST

DEFINITION

Under general direction, coordinates, updates and maintains the District-wide Geographic Information System (GIS) program; evaluates and participates in the functions necessary to implement and sustain the creation, maintenance and use of the GIS databases and applications; oversees all aspects of the program’s structure and design for effective use, both within the District and in coordination with outside public, regulatory, and public safety agencies, and business organizations; ensures the expansion and maximization of GIS technology throughout many District departments; performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Director of Engineering. No direct supervision of staff is exercised. May exercise technical and functional direction over assigned staff and contract consultants on an as-needed, program or project basis.

CLASS CHARACTERISTICS

This single-position professional journey level class maintains all Geographic Information Systems for the District within general policy and procedural guidelines and, under direction from a supervisor, has the ability to adapt specific program procedures and activities to meet the needs of the District, other agencies and technological advances. The work requires public contact, the frequent use of tact and judgment, good knowledge of departmental operations and the ability to conduct independent projects and programs. This class is distinguished from other information technology and technical engineering classes by the level of technical knowledge of and emphasis on GIS hardware and software applications.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS

Duties may include, but are not limited to, the following:

- Coordinates and maintains the development and implementation of policies and procedures related to the District’s Geographic Information System (GIS) program.
- Consults with various District departments regarding department GIS needs and requirements, including identifying, designing and developing GIS applications and procedures for integrating the GIS program with existing District databases.
- Serves as a technical resource to all District departments, including providing assistance and training in the proper use of GIS data and systems, and recommending, troubleshooting and providing support for GIS software, databases and other related applications.
- Coordinates the collection, integration, storage, manipulation and retrieval of data generated through various systems used within the District, including document management, customer service consumption history, CMMS, sewer CCTV inspection and valve turning.
- Monitors GIS system utilization and recommends appropriate revisions to processes and procedures.
- Creates and maintains a variety of maps and tabular data from a variety of sources; explains technical information to non-technical system users, including assisting them in accessing and interpreting GIS information; develops quality control procedures.
- Provides a variety of support for specialized applications throughout the District; establishes polices, procedures and standards to ensure District-wide consistency and carry-over of applications for multiple users.
- Performs a variety of professional-level work, including creating maps, databases, graphic and related materials.
- Prepares a variety of written correspondence, reports, procedures and other materials.
Maintains accurate records and files related to the GIS function.

Monitors changes in GIS technology and applications, recommends improvements and upgrades and implements changes after approval.

Represents the District in inter-agency coordination activities relating to GIS.

Attends meetings, conferences, workshops, and training sessions and reviews publications and audio-visual materials to become and remain current on principles, practices, and new developments pertinent to GIS and the District.

Monitors and manages departmental software and landbase licensing and updates.

Provides technical support to the emergency planning and operations staff.

Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- GIS concepts, principles, practices and techniques, including computer mapping and attribute data conversion, manipulation and analysis.
- Technology, hardware and software and current applications related to GIS systems, including database management, mapping and report generation and desktop publishing systems.
- Cartographic, surveying and engineering principles and practices as related to GIS issues.
- Basic understanding of the various major software application used within the District as related to GIS.
- Principles and practices of identifying technology needs and issues, researching and evaluating technology, applications and the most effective courses of action and implementing solutions.
- Methods and techniques used in the collection and analysis of data obtained from Global Positioning System (GPS).
- Report writing methods and record keeping principles and procedures.
- Modern office practices, methods and computer equipment.
- Computer applications related to the work.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for dealing effectively with the public, vendors, contractors and District staff, in person and over the telephone.
- Techniques for effectively representing the District in contacts with governmental agencies, community groups and various business, professional, educational, regulatory and legislative organizations.
- Techniques for providing a high level of customer service to public and District staff, in person and over the telephone.

Ability to:

- Provide input to assist in developing and implementing goals, objectives, policies and procedures related to the District’s Geographic Information System (GIS) program.
- Develop and administer a broad-based GIS program that includes effective database development and management for a variety of District departments and public and private clients.
- Read and accurately interpret water, recycled water and sewer improvement plans (design drawings).
- Assess user needs and recommend appropriate hardware, software and systems to meet these needs.
- Perform complex mapping, analysis, database maintenance and other GIS professional level tasks.
- Understand, use and apply relational database systems, tools and techniques.
- Develop documentation and informational materials and train users in GIS applications.
- Interpret, apply and explain technical materials to non-technical users.
- Prepare clear and effective reports, correspondence, policies, procedures and other written material.
- Make accurate arithmetic, financial and statistical computations.
- Analyze situations and identify pertinent problems/issues; collect relevant information; evaluate realistic options; and recommend appropriate course of action.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize
own work, set priorities and meet critical time deadlines.

- Operate modern office equipment including computer equipment and specialized software applications programs.
- Use English effectively to communicate in person, over the telephone and in writing.
- Use tact, initiative, prudence and independent judgment within general policy, procedural and legal guidelines.
- Establish and maintain effective working relationships with those contacted in the course of the work.

**EXPERIENCE AND TRAINING GUIDELINES**

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

**Experience:**

Five (5) years of experience in the development of geographic information systems. Experience and/or specialized training in ArcGIS, ArcIMS and Arc Server programs is required. Experience and/or specialized training in ArcSDE and/or SQL Server 2005 programs is preferred.

**Training:**

College-level courses in geographic information systems, computer science, geography, or a related field is required. A Bachelor’s Degree in geographic information systems, computer science, geography, or a related field is desirable.

**License or Certificate:**

- Valid California class C driver’s license with satisfactory driving record.

**PHYSICAL DEMANDS**

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to operate a motor vehicle and to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification although standing in work areas and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push and pull drawers open and closed to retrieve information. Employees must possess the ability to lift, carry, push and pull materials and objects weighing up to 50 pounds.

**ENVIRONMENTAL ELEMENTS**

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

*The specific statements shown in each section of this classification description are not intended to be all-inclusive. They represent the essential functions and minimum qualifications necessary to successfully perform the assigned functions. 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 essential functions of the job.*