Midpeninsula Regional Open Space District

GEOGRAPHIC INFORMATION SYSTEM (GIS) TECHNICIAN

DEFINITION

Under direct supervision, performs technical work in support of the District's Geographic Information System (GIS) administration, including meeting with department personnel to discuss GIS product requests, such as maps and reports, analyzing requests, generating requested products, and maintaining data regarding District land and facilities; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives direct supervision from the Geographic Information Systems (GIS) Program Administrator. May receive technical and functional direction from a Data Analyst on assigned projects. Exercises no direct supervision over staff. May provide technical and functional training and direction to interns.

CLASS CHARACTERISTICS

This position is responsible for technical GIS work which includes geospatial analysis, data management, and cartography. As experience is gained assignments may become more varied and completed with greater independence. The position requires knowledge and experience using industry related GIS software and data analysis tools. The position in under direct supervision of the GIS Program Administrator but may receive direction from more senior staff on projects or assignments. This classification is distinguished from the Data Analyst classification in that the latter is responsible for performing moderately complex technical assignments, projects, and analyses in support of District databases, managing complex data classification structures, and/or manipulating data layers and data sets for District-wide systems.

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 essential functions of the job.

- Provides cartographic support for District departments and programs including the development of maps, charts, displays, presentations, graphics, brochures, and drawings; prepares materials for grant applications.
- Prepares, modifies, and updates District base, property, acquisition, site maps, and brochures using GIS software and other digital media; prepares and updates District wall and patrol and trail maps to show current ownership and facilities.
- Maintains and updates GIS data on trails, facilities, and other District open spaces and sites; works with contractors and consultants on the development of GIS maps and graphics as needed.
- Develops and maintains a variety of maps from a variety of sources; explains technical information to non-technical end users, including assisting them in accessing and interpreting GIS information; trains end users on the use and functionality of the GIS system.
- Acts as point of contact for the day-to-day operations of the GIS program; troubleshoots system problems; responds to and resolves inquiries and complaints and escalates problems or issues to GIS Administrator as needed.
- Collects data using Global Positioning System (GPS) equipment and software; imports GPS data into existing database using GIS and GPS software.

- Maintains user and technical operating instructions and documentation; provides training to users and other technical staff and advises on best practices.
- Stays abreast of new trends and innovations in technology related to GIS operations; researches, recommends, and evaluates vendor solutions and technologies; implements improvements; works with staff to maintain, revise, or improve operations and systems.
- Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of open space and park planning and GIS administration.
- Collects infrastructure data using Global Positioning System (GPS) equipment and software; imports GPS data into existing GIS database.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Technology, hardware and software, and current applications related to GIS, including database management, mapping and report generation, and desktop publishing systems.
- Principles and practices of digitizing, data conversion, data management, and cartography.
- Principles of mathematics and statistics and their application to GIS support work.
- Modern office practices, methods, and computer equipment and applications related to the work, including ArcGIS and related GIS products.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Researching and reporting methods, techniques, and procedures.
- Record keeping principles and procedures.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Perform spatial analysis using GIS software.
- Digitize spatial data and maintain topology between geographic features.
- Modify topographic maps, improvement plans, and illustrative graphics using GIS software.
- Conduct routine research projects, evaluate alternatives, and make sound recommendations.
- Perform mathematical and statistical computations with precision.
- Establish and maintain a variety of filing, record keeping, and tracking systems.
- Make sound decisions within established policy and procedural guidelines.
- 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, 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:

Equivalent to a Bachelor's degree from an accredited college or university with major coursework in geography, environmental science/studies, planning, landscape architecture, geology, biology, resource

management, computer science or related field and one (1) year of experience creating maps and performing spatial analysis using GIS software and/or data analysis/technical support.

Licenses and Certifications:

- Possession of a valid California Driver's License.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect District field sites, to operate a motor vehicle 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 partially a sedentary office and occasionally a field classification and standing in and walking between work areas and development sites is 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 and file information. Employees may need to lift, carry, push and pull materials and objects weighing up to 10 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 work in the field and occasionally be exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, or road hazards.

EFFECTIVE: December 2010
REVISED: August 2016
FLSA: Non-Exempt