



GIS SPECIALIST

DEFINITION

Under general direction, plans, manages, and oversees the daily functions, operations, activities, projects, and programs of the District's GIS databases, database layers, and geographic information systems capabilities; utilizes GIS tools and utilities to perform database quality checking and improvement processes; develops custom and standard maps, spatial analyses, and other GIS products; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from the Innovation and Technology Manager. Exercises no direct supervision over staff.

CLASS CHARACTERISTICS

This fully qualified journey-level classification is responsible for providing professional support to the District's GIS systems. Positions at this level perform the full range of duties as assigned, working independently, and exercising judgment and initiative. Performance of the work requires the use of considerable independence, initiative, and discretion within operating procedures and policies of the work unit.

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 where appropriate so qualified employees can perform the essential functions of the job.

- Performs GIS data management, capture, conversion, and data entry work using ESRI ArcGIS Desktop software.
- Maintains data integrity using quality control procedures.
- Designs, builds, and maintains GIS applications for use by District staff and the public using ArcGIS Server/ArcGIS Online and/or other appropriate resources.
- Updates GIS database with data from various sources including staff, consultants, and 3rd party sources; audits uploaded information for errors or inconsistency both visually and using automated tools.
- Maintains an up-to-date account of land use, parcel and street centerline information as required based on city and county general plans.
- Designs, creates, and updates GIS database and layers using satellite imagery, aerial photographs, geographical surveys, hard copy maps, digital data conversion, and GPS data.
- Performs the necessary data formatting and conversion between GIS systems and AutoCAD.
- Creates technical reports, system atlas maps, and presentation-quality maps for meetings, reporting, and the support of other daily and ongoing projects and activities.
- Coordinates and collaborates with other agencies to meet the District's GIS needs and objectives.
- Offers GIS recommendations and implements solutions.

- Coordinates the planning, implementation, maintenance, and support of all GIS components; databases, server/endpoint software, and contract/licenses.
- Administers the implementation, operation, and maintenance of GIS-related hardware including, but not limited to, plotters, scanners, and GPS equipment.
- Coordinates integration of GIS with other District functions or databases such as: asset management, work orders, customer billing, meter reading, and others.
- Oversees projects relating to GIS data migration between platforms, integrations, and configuration of new GIS systems.
- Trains and assists staff in the use of GIS-related applications
- Creates programs/scripts to automate GIS processes and workflows.
- Directs the establishment and maintenance of working and official division files.
- Observes and complies with District and mandated safety rules, regulations, and protocols.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Geographic Information System principles, practices, and standards.
- Standard engineering terminology, symbols, mathematics, and record keeping.
- Cartography, including coordinate systems, projections, coordinate geometry and elements of effective map design.
- Current version of ESRI software (including Network Analyst and Spatial. Analyst extensions), ArcGIS Server and ArcGIS Online.
- Microsoft Office (Excel, Word, Access, Outlook) and SQL Server
- Programming languages used in GIS systems such as Python and Visual Basic
- Personal computers, servers, and mobile devices and the use of scanning, plotting and GPS equipment.
- Geodatabases, geometric network datasets and relational databases.
- Database Management
- Safe work practices

Ability to:

- Plan, organize, oversee, and manage the information technology program and operations.
- Develop and implement goals, objectives, practices, policies, procedures, and work standards.
- Read and understand blueprints, maps and civil engineering plans and specifications.
- Format and transfer data between the GIS system database and other sources.
- Write simple scripts/programs.
- Perform complex geographic analysis.
- Create maps and program GIS applications to meet District needs.
- Interpret and analyze technical information and make independent judgments, identify alternative solutions, offer recommendations, and foresee potential consequences of proposed actions.
- Demonstrate clear and concise oral and written communication.
- Establish and maintain cooperative working relationships with District staff, management, the public and other stakeholders.
- Perform difficult technical computer and mapping work through personal initiative.
- Prepare and maintain accurate documentation, records, and reports.

- Effectively plan, coordinate and organize work flow.
- Work efficiently and accurately.
- Operate a vehicle observing legal and defensive driving practices.
- Operate standard office equipment, office software applications, and engineering related software including ArcGIS.
- Observe proper safety precautions

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:

Bachelor's degree from an accredited college or university with major coursework in engineering, geography, information technology, or a related field.

Experience:

A minimum of four (4) years of responsible GIS support experience in the field of Engineering, preferably including record keeping and developing and maintaining GIS maps, layers and databases.

Licenses and Certifications:

- Possession of a valid California Driver's License, to be maintained throughout employment
- Possession of a Certificate of Completion of a formal course of instruction in the use of ArcGIS software at a recognized college, university, or an accredited trade school / vocational school or ESRI

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 visit various District sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person 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 and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 25 pounds.

ENVIRONMENTAL CONDITIONS

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.