

**CLASS SPECIFICATION**  
**Geographic Information Systems Specialist**

**GENERAL PURPOSE**

Under general supervision, performs a variety of professional-level duties in the development, analysis, implementation and support of the City's geographic information system (GIS); and performs related duties as assigned.

**DISTINGUISHING CHARACTERISTICS**

Geographic Information Systems Specialist is the entry-level class in the professional GIS class series. An incumbent is responsible for carrying out a variety of professional and technical duties, including identifying and gathering GIS data, creating and producing maps, performing spatial analyses and entering, updating and maintaining GIS data in the City's GIS database system.

Geographic Information Systems Specialist is distinguished from Senior Geographic Information Systems Analyst in that an incumbent in the latter class performs complex GIS system development and maintenance duties requiring the application of advanced GIS principles and theories.

Geographic Information Systems Specialist is further distinguished from Geographic Information Systems Technician in that an incumbent in the former class is required to have a professional sufficiency in the theory and principles of geographical information system software manipulation, usage requirements and analysis of system outputs.

**ESSENTIAL DUTIES AND RESPONSIBILITIES**

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this class.

1. Using GIS and related software and hardware, supports and contributes to the analysis of engineering, land development, research, facilities management and other business and customer service requirements of the City.
2. Prepares, designs and produces a variety of maps and other graphic representations displaying layers and attribute data from GIS databases, using cartographic techniques to represent spatial data; develops and maintains data layers, using GIS tools; performs complex spatial analyses; prepares and designs custom queries and crystal reports, graphs and charts; incorporates maps, charts, spreadsheet data and text into reports.
3. Creates, updates and maintains GIS data and databases; compiles, reviews, structures, edits, reformats, updates, processes and maintains digital and hard copy GIS and GPS data for inclusion in the GIS database; develops standard GIS applications to access and analyze City databases; assists in converting existing City digital geographic and facilities data into formats for inclusion in the GIS database; assists in performing quality control and assurance processes for converted data.

4. Develops and implements the more routine automated tools to achieve more effective utilization of GIS applications and outputs.
5. Provides technical support to City and department staff on GIS applications and software; serves as technical resource for other staff on difficult GIS database and application issues; provides backup support to other GIS staff in the performance of their duties.

## **QUALIFICATIONS**

### **Knowledge of:**

1. Principles, practices and techniques of automated drafting and mapping.
2. Geographic information system database issues, including operation and quality control and assurance.
3. Geographic information system concepts and analytical techniques, including computerized mapping and attribute-data conversion, manipulation and analysis.
4. Principles and practices of relational database design.
5. Micro and mini-computers, drafting/mapping peripheral equipment and computer system operations.
6. Global positioning survey concepts and analytical techniques.
7. Basic principles of structured programming languages.

### **Ability to:**

1. Collect, interpret and integrate relevant data from multiple sources.
2. Develop sound, accurate professional GIS-based mapping and other products to support City operations.
3. Develop and coordinate work plans for assigned GIS projects.
4. Use and apply relational database management systems.
5. Independently perform responsible GIS assignments with initiative and creativity.
6. Interpret maps, graphs, satellite and aerial images and geologic conditions.
7. Perform spatial analyses.
8. Communicate clearly and effectively, both orally and in writing.
9. Establish and maintain effective working relationships with City management, staff and others encountered in the course of work.

**Education, Training and Experience:**

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from a four-year college or university with a degree in GIS, civil engineering or a closely related field; and two years of increasingly responsible experience in the use of geographic information systems; or an equivalent combination of training and experience.

**Licenses; Certificates; Special Requirements:**

A valid California driver's license and the ability to maintain insurability under the City's vehicle insurance policy.

**PHYSICAL AND MENTAL DEMANDS**

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

**Physical Demands**

While performing the duties of this class, the employee is regularly required to sit; talk or hear, in person and by telephone; use hands repetitively to finger, handle, feel or operate standard office equipment; and reach with hands or arms. The employee frequently is required to walk and stand.

Specific vision abilities required by this job include close vision and the ability to adjust focus.

**Mental Demands**

While performing the duties of this class, the employee is regularly required to use oral and written communication skills; read and interpret data, information and documents; analyze and solve problems; use math and mathematical reasoning; learn and apply new skills or information; perform highly detailed work on multiple, concurrent tasks; work under changing and intensive deadlines with frequent interruptions; and interact with City management, staff and others encountered in the course of work.

**WORK ENVIRONMENT**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The employee works under typical office conditions, and the noise level is usually quiet.