



Class Code: 834
FLSA: Non-exempt

IT GIS Technician

General Purpose

The GIS Technician uses existing code and application tools to do routine data entry and editing on GIS data layers. Employees perform research to acquire and evaluate data for GIS inclusion; manage data to control the quality of the GIS data layers; correct existing data to add, delete and change geographical features; and evaluate data for completeness and accuracy. Positions in Information Technology primarily support data management, update data and perform quality control activities. Positions in other City departments work with data related to their department programs, design specialized map products in support of those programs, and respond to public inquiries about GIS data.

Distinguishing Features

Employees work at the technical level within a framework of established procedures. The classification is distinguished from the GIS Analyst and IT - GIS Programmer/Analyst, which are professional level classifications that use programming languages to modify GIS programs and systems. It is distinguished from the Information Systems Technician by the specialization of GIS.

Supervision Received and Exercised

Employees work under the general supervision of a supervisor or manager. The supervisor provides training and guidance regarding process and procedure, outlines general objectives, determines priorities and monitors progress of projects.

Examples of Essential Duties and Responsibilities

The listed examples are illustrative of the classification level and not intended to list all duties typically assigned to this classification. Employees in this classification may do all or some of the listed duties, or other related duties.

1. Input and update GIS data under the direction of professional staff. Do simple spatial analysis and database queries. Develop and maintain data layers and spatial data structures using GIS tools and relational databases. Maintain metadata describing data sources, accuracy, reliability and completeness, map feature types, descriptive feature attributes and other information about GIS data layers; verify the integrity of data. Use GIS software programs to modify and update data, and to compose map products. Prepare a variety of maps, illustrations and other graphic representations that meet specific customer needs.

- Code and digitize maps and geographic data features. Proof and review new maps for completeness and adherence to standards. Operate large format plotters to produce hardcopy mapping products. Convert existing drawings for future integration into the GIS system.
3. Recommend alteration, or refinement of computer assisted mapping methods, procedures, or techniques to better meet specified mapping requirements.
 4. Research various records to maintain current, accurate digital maps and data bases; find and compile source information for mapping; visit field locations to collect or verify data.
 5. Answers citizen questions about GIS data and map products. Communicate information to others such as emergency responders, utility companies, engineers or other regional government agencies in need of geographic information. Assist City department staff with GIS analysis and map production needs, including evaluation of data sources, preparing custom maps and graphs, and finding locations of features. Provides information to staff on how to use GIS.

Minimum Qualifications Upon Entry

Basic knowledge of:

- Practices and techniques of Geographic Information Systems (GIS)
- Methods of research and technical report preparation typical to the job assignment
- Terminology, methods and techniques used in maps and related technical records
- Computer operating systems fundamentals and procedures for the use of computer systems and related equipment used with GIS
- Principles and practices of tabular and spatial data analysis
- Fundamentals of coordinate geometry and mathematics related to the position
- Computer based mapping processes used in creating GIS system maps and graphical representations
- Principles and practices of project planning and tracking

Skill to:

- Perform mathematical computations and analyze GIS data and statistics
- Research information, compile data and prepare concise and clearly written reports
- Research and organize data from City and external sources for GIS and database entry
- Enter, load and manipulate data in a variety of databases typical to the job assignment and GIS systems
- Document procedures and the methods and processes used when maintaining GIS data
- Operate contemporary GIS software and associated computer systems sufficient to effectively carry out the duties typical to the position
- Operate word-processing, spreadsheet programs or other application software typical to office environments and the position

Ability to:

- Understand and reconcile legal property documents and exhibits
- Use precision computerized equipment with a high degree of accuracy
- Receive, clarify and synthesize end-user needs in order to provide the desired product
- Effectively prioritize tasks and plan work
- Be careful about detail and thorough in completing work tasks
- Plan project work, track progress and meet associated planned outcomes
- Explain to people with a non-technical background what the technical information means and how it can be used
- Establish effective working relationships with members inside and outside the organization
- Be pleasant with others on the job and display a good-natured, cooperative attitude

Experience and Education

A typical way to obtain the required knowledge, skills and abilities would be:

An Associates degree in planning, geography, computer technologies, GIS or a related field and one year experience using GIS software applications; or an equivalent training.

Physical, Environmental and Mental Demands (Without Accommodation)

The listed physical, environmental and mental demands are representative of those who successfully do the essential duties of this classification. Upon request, reasonable accommodation will be evaluated.

Physical and Environmental Demands

Employees regularly work indoors under controlled environmental conditions. They will regularly operate standard office equipment and computers via a keyboard. This requires finger dexterity to operate equipment, and sitting for extended periods with occasional breaks. They will communicate with others to exchange ideas verbally and in writing. This requires the ability to talk to others and hear their responses through telephonic equipment or in face-to-face encounters. Work involves sufficient mental concentration and visual acuity to operate computer software accurately. Employees must also see to focus on written information and operate standard office equipment. They will occasionally lift and transport moderately heavy objects, such as computers and peripherals.

Mental Demands

Employees apply principles of rational systems to solve practical problems and deal with a variety of concrete variables in situations with only limited standardization. They interpret a variety of instructions furnished in written, oral, and diagrammatic form. Employees occasionally encounter situations with stressed or upset individuals and short timelines. They must understand a variety of requests to produce GIS products, and analyze information to suggest solutions based on the analysis of user requirements.