

GIS COORDINATOR

DEFINITION

Under direction of higher level staff, performs technical activities related to developing, coordinating, and maintaining the City's Geographic Information System (GIS), databases, and related applications; supports citywide database administration, including integrating local and regional data sets, development of GIS internal and public mapping programs, and providing GIS services and support to staff and system users; performs other related duties as assigned.

CLASS CHARACTERISTICS

This classification is distinguished by its performance of specialized duties in the development, coordination and oversight of the City's Geographic Information System, databases, and related applications. Incumbents in this classification are expected to be proficient programmers and have the ability to conduct systems analysis, design, development, and implementation of GIS computer application systems. Duties are performed under the supervision and direction of higher level staff, but performance of duties requires the use of independence, initiative, and discretion within established guidelines. May exercise technical and functional supervision of assigned part-time and volunteer staff.

EXAMPLES OF ESSENTIAL DUTIES – duties may include, but are not limited to the following:

- Develops, coordinates, and maintains the City's Geographical Information System (GIS), databases, and related applications.
- Consults with City departments to identify GIS needs and requirements; designs and develops the resulting GIS databases and applications, including performing needs assessments, coordinating the acquisition and preparation of data for GIS purposes (to include logical and physical data modeling), testing, and examining data integrity.
- Serves as a technical resource to all City departments, including establishing GIS system protocols, providing assistance and training on the proper use of GIS data and systems; coordinates the purchase of GIS software; maintains software licenses; troubleshoots and provides support for GIS software, databases, and other related applications; meets with City users to ensure common understanding of GIS needs and ensure consistent delivery of GIS services; keeps current with changing technologies concerning applications and operations.
- Researches, creates, quality checks, and maintains GIS data layers; uses data sources such as local or regional agency data/GIS spatial web servers, CAD drawings, GPS data, and orthophotos to create and maintain layers; creates and maintains metadata; designs cartographic and other visual graphic output; conducts spatial overlay analysis, including image analysis and 2D visualization.
- Designs and implements programs and code using specified programming languages and applications such as Avenue, Python, SQL, Visual Basic (VB), ArcIMS, ArcGis Server, and ArcView, to automate GIS processes.

- Develops and oversees maintenance of the City's internet web mapping applications and maintains the City's public GIS data download site.
- Performs a variety of technical analysis, including field surveys, and project analysis and design through Global Positioning System (GPS); processes and integrates the information into the GIS program.
- Performs all other related duties as assigned.

REQUIREMENTS

Knowledge of: Principles, practices and techniques of Geographic Information System programs, including application design, system analysis, database management, and related hardware and software; principles and practices of spatial analysis, map projections, coordinate systems and conversions, automated mapping systems, cartography, 3-D landscape visualization and analysis, image rectification and aerial photograph interpretation; global positioning systems (GPS), operation, setup, configuration and maintenance of GIS workstations, software and relational and attribute databases including, ESRI applications such as ArcGIS, ArcEditor, 3D and Spatial Analyst, ArcGis Explorer, ArcView, ArcGis Server, ArcIMS, and related technical concepts and terminology; presentation mapping and plotting, research, documentation, maintenance, entry, and verification of computer hardware and software for GIS applications; peripheral hardware and software related to digital mapping and GIS, including CAD/CAM software, scanners, digitizers, printers, and plotters; a working knowledge of computer graphic programs including Adobe Illustrator and Photoshop; geographic data collection and verification methods and procedures; applicable mathematical functions and analysis; principles, practices and techniques of record keeping, report preparation and technical writing; software languages including, Python, Avenue and Visual Basic.

Ability to: Work within a networked client/server computerized environment; collect, organize, develop, analyze and present geographic data; interpret maps, subdivision plans, natural resource data, aerial photography and engineering drawings; interpret and digitize legal descriptions using coordinate geometry; program GIS applications to meet user needs; troubleshoot and perform routine maintenance on GIS workstations and peripheral equipment; test and implement GIS applications; plan and coordinate projects identifying priorities and deadlines for completion; perform research documentation, maintenance and verification of spatial and attribute data; import, export, translate, convert and transfer mapping and attribute data using the Internet and the network; analyze user needs; identify goals and objectives; examine alternatives and develop procedures; exercise critical thinking and problem solving skills; support system users ranging from novice to advanced level; develop, coordinate, and conduct staff training and community presentations; prepare and maintain accurate and complete technical records and documentation; work independently and as a member of a work team; communicate effectively, both orally and in writing; establish and maintain cooperative and effective working relationships with others contacted in the course of work.

OTHER REQUIREMENTS

- Must possess a valid California Driver's License.
- Must be willing and able to work a flexible and varied work schedule that is often determined by the needs of the systems, projects, and construction schedules. This may include evenings, weekends, and holidays.

PHYSICAL REQUIREMENTS

Work is generally performed in both a general office and field environment. Must be able to perform the physical aspects of the job, including sitting for periods of time; prolonged viewing of a computer screen and use of keyboard and mouse; operating standard office equipment, including a computer and GIS equipment; traversing uneven terrain; operating a motor vehicle; working outside in varying weather conditions, hearing and speech to communicate in person and over the telephone; lift, push, pull, and carry up to 50 lbs, lifting, pulling, dragging, and carrying up to 50 pounds.

EXPERIENCE AND TRAINING

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 GIS, geography, computer science, or a related field; and at least three (3) years progressively responsible experience using ArcGIS or related GIS applications, preferably in a public sector environment; and at least one (1) year of programming experience.

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