Geographic Information System Program Manager

Definition

Under general direction, plans, analyzes, coordinates, and administers the City-wide Geographic Information Systems (GIS) program; evaluates and personally participates in the functions necessary to implement and sustain the creation, maintenance, and use of GIS databases and applications; meets with City personnel to discuss GIS product requests, such as maps and reports, analysis requests, and develops methods to generate requested products; maintains hardware, software licenses, and supplies; performs complex GIS database and graphical user interface research, design, analysis, and programming; and performs related work as required.

Class Characteristics

This is a single-position, professional classification responsible for overseeing and administering the City's Enterprise GIS and related equipment. Incumbents are expected to possess the ability to adapt specific program procedures and activities to meet the needs of the City, other agencies, and technological advances. Successful performance of the work requires skill in proactively evaluating program goals and objectives to define and integrate the requirements of various internal and external clients. The work requires the frequent use of tact and judgment, knowledge of City-wide operations, and the ability to conduct independent projects and programs. This class is distinguished from GIS Technician in that the GIS Manager has overall management responsibility for GIS projects and programs, functions, and activities.

Supervision Received and Exercised

Receives general direction from the Chief Technology Officer. Exercises general supervision over assigned staff.

Typical Job Functions
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.

Plans, manages, and oversees the daily functions, operations, and activities of the Geographic

Information Systems Department in the Information Technology Divison, including the design, administration, and maintenance of citywide GIS applications, database infrastructure, and web based and mobile applications; establishes support processes to ensure availability of application and database services.

Develops and implementations goals, objectives, policies, and priorities for the assigned function; determines within departmental policy, appropriate service and staffing levels; recommends, administers, and documents policies and procedures.

Develops and administers the GIS program budgets.

Develops and standardizes procedures and methods to improve and continuously monitor the efficiency and effectiveness of assigned programs, service delivery methods, and procedures; assesses and monitors workload, administrative and support systems, and internal reporting relationships; identifies opportunities for improvement and recommends to the IT Manager.

Selects, trains, motivates, and evaluates assigned personnel; provides or coordinates staff training; works with employees on performance issues; implements discipline and termination procedures; leads and conducts internal affairs investigations.

Consults with other City departments regarding GIS needs and requirements, including identifying, designing, and developing GIS applications, strategies, and procedures for integrating the GIS program with existing City databases.

Serves as a technical resource to all City departments, including providing assistance and training in the proper use of GIS data and systems, and recommending, troubleshooting, and providing support for GIS software, databases, and other related applications.

Designs GIS application processes and work flow strategies for the management, access, and retrieval of data, defines data rules and relationships, and develops methods for quality control of databases.

Performs GIS applications research, development, conversion, installation, and maintenance projects, including conception and initiation, definition and planning, launch and execution, monitoring and controlling, and close-out; defines project requirements, methods, and end objectives in consultation with end users; estimates and tracks project budget; coordinates project activities with team members, other information technology services staff, user representatives, and outside vendors.

Writes and maintains user and technical operating instructions and documentation; prepares training materials and conducts formal and informal training programs on the use and operation of the applications 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.

Creates and maintains a variety of maps and tabular data from a variety of sources; explains technical information to non-technical system users, including assisting them in accessing and interpreting GIS information.

Develops and implements quality assurance/quality control procedures including geospatial data management policies and guidelines, standards and metadata documentation.

Directs City research activities to identify, acquire, and integrate data from other agencies and organizations into the City's data library; maintains and updates the City's information catalogue; creates and maintains government-compliant metadata; and develops procedures to share appropriate data.

Represents the City in inter-agency coordination activities related to GIS.

Attends meetings, conferences, workshops, and training sessions and reviews publications and audio-visual materials to become and remain current on principles, practices, and new developments pertinent to GIS and the City.

Performs other duties as assigned.

Qualifications

Knowledge of:

Administrative principles and practices, including goal setting, project management, and the development, analysis, and evaluation of programs, policies, and operational needs of the assigned functional area.

Principles and practices of budget development and administration.

Principles and practices of employee supervision including work planning, assignment, review and evaluation, and the training of staff in work procedures.

Principles and practices for developing and coordinating a broad-based GIS program with applications for City departments, public agencies, private clients, and the general public.
Principles and techniques of cartography and publication-quality map production using ArcGIS and other software.

Database design and integration between Microsoft SQL and ArcGIS.

Theories and techniques of GIS applications to cadastral mapping.

Familiarity with natural resource management issues and the principles and practices of open space and/or park planning.

Technology, hardware, software, and current applications related to GIS systems, including database management, mapping and report generation, and desktop publishing systems.

Principles and practices of identifying technology needs and issues, researching and evaluating technology, applications and the most effective courses of action and implementing solutions.

Applicable Federal, State, and local laws, codes and regulations.

Modern office practices, methods, and computer equipment and applications related to the work.
Record keeping principles and procedures.

English usage, grammar, spelling, vocabulary, and punctuation.

Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and City staff.

Ability to:

Recommend and implement goals, objectives, and practices for providing effective and efficient services.

Plan, organize, assign, review, and evaluate the work of staff; train staff in work procedures.

Evaluate and develop improvements in operations, procedures, policies, or methods.

Research, analyze, and evaluate new service delivery methods, procedures, and techniques.

Coordinate a broad-based GIS program that includes effective database development, management and accessibility.

Assess user needs and recommend appropriate hardware, software, and systems to meet these needs.

Perform complex modeling, mapping, database maintenance, and other GIS professional-level tasks.

Develop documentation and informational materials and train users in GIS applications.

Interpret, apply and explain technical materials to non-technical users.

Interpret, apply and explain complex Federal, State, and local laws, codes, regulations, departmental policies and procedures.

Understand the organization and operation of City departments and of outside agencies as necessary to assume assigned responsibilities.

Prepare clear and effective reports, correspondence, policies, procedures, and other written material. Make accurate arithmetic, financial, and statistical computations.

Establish and maintain a variety of filing, record-keeping, and tracking systems.

Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; 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 experience and training that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to graduation from an accredited four-year college or university with major coursework in cartography, geographic information science, geography, information systems, computer science, or related field and four (4) years of progressively responsible experience in GIS analysis, design, and development.

Licenses and Certifications

None.

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 to visit various City 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 primarily a sedentary office and but occasionally 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 must possess the ability to lift, carry, push and pull materials and objects weighing up to 25 pounds.

Environmental Elements

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances.

FLSA: Exempt
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