Geographic Information System Analyst

Summary
Research, design, implement, and maintain Geographic Information Systems (GIS) applications and databases, utilizing software and data standards developed by the Geographic Information Systems Division.

Class Characteristics
General Supervision is provided by a higher-level manager; responsibilities may include direct or indirect supervision of lower level professional, technical, and clerical personnel.

Essential Duties, Skills, and Demands of the Position
The duties, skills, and demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with a disability to perform the essential duties, skills, and demands.

Duties:
Research of GIS use within the industry of the specific departmental or divisional discipline; recommend strategies for use of new technologies and related products.

Design of GIS applications, including database design, user interface, and output specific to the departmental or divisional need.

Implementation of new GIS and related software applications, including interfacing with the Information Technology (IT) Division for hardware and network coordination.

Conduct GIS queries and analysis of departmental data sources in order to develop decision-making tools critical to departmental and divisional needs.

Creation of graphical and tabular output such as maps, charts, and reports for use in project analysis, council presentations, public reference, etc.

Operate, troubleshoot and perform routine maintenance on GIS workstations, related peripherals, and communication networks.

Assist in the development and maintenance of GIS standards, protocols and quality control procedures; maintain compliant metadata; write and maintain user and technical operating instructions and documentation.

May serve as the project manager for assigned projects and initiatives; develop project structure, strategies, testing and timelines; coordinate the work of staff and consultants, contractors, vendors, and/or regulatory agency staff to ensure timely and appropriate project completion; monitor expenditures; coordinate with stakeholders.

This position may also be responsible for other systems and data related to the department or

division's function, such as Computer Aided Design (CAD), web development, and other mapping related applications.

Perform related duties as assigned.

Skills/Abilities:
Read, analyze, and interpret technical information.

Write reports, define problems, collect data, establish facts, and draw valid conclusions.

Present information and respond to questions from elected officials, fellow employees, clients, customers, and the general public.

Define problems, collect data, establish facts, and draw valid conclusions; identify, analyze, evaluate, diagnose, and solve system problems.

Interpret an extensive variety of technical instructions, and deal with abstract and concrete variables; think logically and in abstract terms; analyze situations quickly and objectively to determine the proper course of action.

Explain technical concepts in non-technical terminology and train others in the use of systems.

Develop both static and interactive cartographic products to clearly present the results of complex data analysis.

Utilize spatial analysis techniques to provide insight to City decision making.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of the work.

Physical Demands and Work Environment:
While performing the duties of this job, the employee is regularly required to sit, use the computer keyboard and mouse, use hands to finger, handle, or feel, reach with hands and arms, talk or hear, stand, walk, and stoop, or crouch. Occasionally lift and/or move up to 25 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus. Requires the ability to work in an office environment where the noise level is usually moderate.

Qualifications
Knowledge of:
GIS software, including Environmental Systems Research Institute (ESRI) Arc suite of software products, AutoCAD, Microsoft Office suite, web development, applications and common GIS programming languages including Python, JavaScript, HTML, and SQL.

Microsoft suite of products, AutoCAD, web development and other mapping related applications.

Relational database technology and metadata creation.

Education and Experience
Any combination equivalent to the education and experience likely to provide the required knowledge and abilities would be qualifying. A typical way to gain such knowledge and abilities would be:

Education:
A Bachelor's from an accredited college or university with major course work in geography, GIS, computer science, or a related field.

Experience:
Two years of technical professional experience involving GIS analysis, programming, systems engineering, or similar field in an information systems environment.

Certifications/Licenses:
Possession of a valid California Class C driver's license.

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