



Job Description

Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties, or responsibilities that are required of the employee for this job.

Job title	Geographic Information Systems (GIS) Applications Developer I/II
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GENERAL PURPOSE

Under general supervision (GIS Applications Developer I) to direction (GIS Applications Developer II) provides highly advanced professional support in the analysis, design, evaluation, development, programming, testing, implementation, documentation, and maintenance of District Enterprise GIS systems to enhance operational effectiveness and decision-support; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

GIS Applications Developer I: This is the entry-level classification in the GIS Applications Developer series. Initially under close supervision, incumbents perform the more routine tasks while becoming familiar with the District's geographic information systems environment and practices. As experience is gained, assignments become more varied, complex, and difficult; close supervision and frequent review of work lessen as an incumbent demonstrates skill to perform the work independently. Positions at this level usually perform most of the duties required of the positions at the GIS Applications Developer II level but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

GIS Applications Developer II: This is the fully qualified journey-level classification in the GIS Applications Developer series. Positions at this level are distinguished from the GIS Applications Developer I level by the performance of the full range of duties as assigned, working independently, and exercising judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision (GIS Applications Developer I) to direction (GIS Applications Developer II) from assigned supervisory or management personnel. Exercises no direct supervision over staff.

TYPICAL 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 position.

Positions at the GIS Applications Developer I level may perform some of these duties and responsibilities in a learning capacity.

- Participates in the work in developing and providing GIS data, products, and services to the District. Develops and maintains geospatial data layers and databases to meet high standards for completeness, accuracy, and utility. Coordinates the process and loading of GIS data; reviews GIS products for accuracy, completeness, and aesthetics and compliance with standards and customer requirements; coordinates the delivery of services and sharing of data with other departments and outside entities.
- Participates in work to achieve Enterprise GIS initiatives; coordinates the development and maintenance of knowledge sharing websites; participates in design development, testing, and implementation of enterprise software and GIS applications and tools to automate processes and facilitate analyses and reporting; assigns and maintains privileges and security protocols; performs database and system configuration and administration functions.
- Performs complex technical work associated with project and ongoing assignments; maintains and administers GIS databases to ensure integrity, completeness, accuracy, and accessibility; performs complex analytical assignments including spatial and other analysis; integrates data from a variety of sources to produce GIS products to meet user requirements.
- Assists GIS staff with translating system specifications into logical processes to prepare detailed system designs or enhancements; conducts system analysis and programming of applications or enhancements, using applicable business and scientific programming languages.
- Meets with users; studies application requirements; prepares documentation and drawings for coding and logic flow; using designated programming languages, writes, edits, debugs, and revises program code for application modifications, conversions, or enhancements.

- Works with assigned testers and the Quality Assurance division to execute test plans, ensuring performance, outcomes, and security are within specification; modifies or assists in modifying programs to correct identified issues.
- Ensures applications operate in a fully automated fashion and require minimal intervention, maximizing the District's technology investment.
- Mentors GIS staff; develops procedural manuals and technical guides; conducts technical training for GIS staff and members of the user community; serves as a technical resource and provides advise to department users on the uses and operations of GIS systems.
- Ensures GIS data is meeting proper standards and automated quality control mechanisms are in place where applicable.
- Researches, recommends, and implements solutions for systematic problems and improvement in functionality.
- Designs, edits, writes, tests, documents, and implements system maintenance, software upgrades and conversions, program modifications, and enhancements.
- Participates in professional group meetings; stays abreast of new trends and innovations in their area of responsibility.
- May share on-call responsibility within the Enterprise GIS group for critical system support and maintenance.
- Observes and complies with all District and mandated safety rules, regulations, and protocols.
- Performs related duties as assigned.

REQUIRED QUALIFICATIONS

Positions at the GIS Applications Developer I level may exercise some of these knowledge and abilities statements in a learning capacity.

Knowledge of:

- Geographic information systems concepts and analytical techniques; including computerized mapping and attribute-data conversion, manipulation, and analysis.
- Geographic information system database issues, including administration, development, operation, security, and quality control assurance.
- Principles and practices of GIS programming and application development using a variety of programming languages.
- Principals of extract transfer and load processes using software and/or scripts.
- Techniques for maintenance of ArcGIS software releases and application regression testing.

- Global Positioning Systems (GPS) concepts, configuration, and maintenance.
- Work cooperative across departments to accomplish GIS program objectives.
- Principles and practices of general ArcGIS Enterprise (Portal, ArcServer, Web Adaptor, Data Store) and ArcGIS Online administration and maintenance.
- Fundamental GIS web application and mapping development principles, practices, methods, and protocols.
- Multiple testing methods used in software development to determine functionality and reliability.
- District and mandated safety rules, regulations, and protocols.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Understand and apply user systems specifications in writing program code.
- Perform coding in multiple languages.
- Prepare workflow diagrams to document business processes.
- Create GIS applications and web maps.
- Perform GIS database administration.
- Analyze, create, maintain, and develop GIS data.
- Troubleshoot and resolve applications functionality and reliability issues.
- Complete project responsibilities and assignments efficiently and in accordance with District standards.
- Prepare clear and concise documentation.
- Work collaboratively and effectively as a project team member.
- Train others on work practices and procedures.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Understand and carry out written and oral instructions.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Experience:

Any combination of experience and education that provides the required knowledge and abilities is qualifying, along with the specific licenses/certifications as outlined below:

- GIS Applications Developer I: Three (3) years of professional GIS development and administration experience supporting diverse and comprehensive geographic information systems.
- GIS Applications Developer II: Five (5) years of progressively responsible professional GIS development and administration experience supporting diverse and comprehensive geographic information systems, or two (2) years of experience as a GIS Applications Developer I with the District.

Education:

- GIS Applications Developer I/II: Equivalent to a bachelor's degree from an accredited college or university with major coursework in geographic information systems, computer science, programming, or a related field.

Licenses/Certifications:

- None.

PHYSICAL DEMANDS

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

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone. This is primarily a sedentary office classification although standing in work areas, walking between work areas may be 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 up to 25 pounds.

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.

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

FLEX REQUIREMENTS

Positions in the GIS Applications Developer I/II class series are flexibly staffed; positions at the GIS Applications Developer II level are normally filled by advancement from the GIS Applications Developer I level; progression to the GIS Applications Developer II level is dependent on (i) management affirmation that the position is performing the full range of duties assigned to the classification; (ii) satisfactory work performance; (iii) the incumbent meeting the minimum qualifications for the classification including any licenses and certifications; and (iv) management approval for progression to the GIS Applications Developer II level.

Eastern Municipal Water District
Job Title: GIS Applications Developer I/II
Last Update: August 2021

This job description has been reviewed and approved by all levels of management in cooperation with the union (if applicable):

Approved by:	<i>Board of Directors</i>
Date adopted:	<i>August 3 2021</i>
Date modified:	
FLSA determination:	<i>Exempt</i>

Job Description Acknowledgment

I have received, reviewed, and fully understand the job description for GIS Applications Developer I/II. I further understand that I am responsible for the satisfactory execution of the essential functions described therein, under any and all conditions as described.

Employee Name (print): _____ *Date:* _____

Employee Number: _____

Employee Signature: _____