

**WEST VALLEY SANITATION DISTRICT
OF SANTA CLARA COUNTY**

GEOGRAPHIC INFORMATION SYSTEM (GIS) TECHNICIAN

Class specifications are only intended to present a descriptive summary of the range of duties and responsibilities associated with specified positions. Therefore, specifications may not include all duties performed by individuals within a classification. In addition, specifications are intended to outline the minimum qualifications necessary for entry into the class and do not necessarily convey the qualifications of incumbents within the position.

DEFINITION

Under general supervision and direction, performs the full array of duties assigned to classes within the GIS series; plans, coordinates, implements, tests, integrates, designs, documents, and maintains databases, and applications of the District's Geographic Information System (GIS) and Computerized Maintenance Management System (CMMS); develops custom GIS database and web applications, GIS mapping, user interface, and reports; performs a variety of para-professional, technical, and analytical tasks to support Engineering and other departments, including field investigations and Global Positioning System (GPS) surveys; provides training and technical support to District staff; keeps abreast of software and hardware updates and new technologies; and performs other duties as required.

DISTINGUISHING CHARACTERISTICS

The GIS Technician is an entry level classification within the GIS series. Under general supervision and or functional direction by engineering staff and or the GIS Analyst, incumbents will initially perform routine and less complex assignments involving GIS and the District's CMMS and related tasks exercising some degree of independence, good judgment, and initiative in the performance of their duties. This class is distinguished from the GIS Analyst in that the latter requires a higher level of education and experience, performs more complex assignments, and is expected to perform assigned responsibilities with increased independence. Incumbents of this classification may advance to GIS Analyst after gaining the required number of years of requisite experience, completion of educational requirements, and demonstrating a level of proficiency that meet the qualifications of the higher level class.

SUPERVISION RECEIVED AND EXERCISED

The GIS Technician receives general supervision and or functional direction by engineering staff and or the GIS Analyst. Incumbents of this class do not exercise any supervision.

EXAMPLES OF ESSENTIAL FUNCTIONS

Duties may include, but are not limited to, the following:

- Analyzes and evaluates GIS/CMMS needs and requirements, including identifying, designing, and developing GIS/CMMS web applications to increase work efficiency.
- Plans, coordinates, installs, implements, tests, and maintains databases and applications of the GIS/CMMS; integrates GIS/CMMS data and functionality with other specialized applications, land use models, hydraulic models, and risk prioritization models.

- Provides assistance, technical support, and training on GIS/CMMS, GIS Mapping (ArcGIS), field integration hardware/software, and other related systems; monitors system utilization and recommends appropriate revisions to processes and procedures.
- Performs project management, including identifying staff needs, gathering detailed requirements, analyzing project feasibility, developing project scope and estimating budget, designing and programming systems applications, performing field investigations, technical review and systems testing, and overseeing implementation.
- Develops documentation and quality control procedures, standards, and metadata.
- Develops custom applications and reports from GIS/CMMS and field integration systems to assist in the functions of the District departments, development of strategies, processes, policies, and models for capital projects, work order, and asset management decisions; provides support to various department staff conducting studies and special projects for the District.
- Performs advanced database queries and reports using Structured Query Language (SQL).
- Attends meetings, conferences, workshops, and training sessions and reviews publications to remain current on principles, practices, and new developments pertinent to GIS/CMMS and the District.
- Establishes positive working relationships with representatives of community organizations, state/local agencies, District management and staff and the public.
- Performs related work as required.
- Drives a motor vehicle.

WORKING CONDITIONS

Position requires sitting, standing, walking on both level and inclined slippery surfaces, reaching, twisting, turning, kneeling, bending, stooping, squatting, crouching, grasping, crawling and making repetitive hand and finger movement in the performance of daily duties both in the field and office setting. Typical examples of requirements include:

- Use of near and far vision: reading and reviewing documents, using computers, operating assigned equipment, watching/observing traffic or equipment use in the field.
- Use of acute hearing: during phone conversations, communicating with other individuals, listening for auditory signals or cues from office and field equipment.
- The ability to lift, carry, pull and push tools, supplies and other equipment of varying weight. Reference the GIS Technician Task Analysis for strength and motion requirements to perform essential functions of this position.
- The ability to work outdoors in all weather conditions, including wet, dry, hot, and cold.
- Continuous use of office equipment and computers for extended periods of time and on a regular basis.

Some of these requirements and others may be accommodated, for otherwise qualified individuals requiring and requesting such accommodations.

MINIMUM QUALIFICATIONS

Education and Experience:

Any combination equivalent to the education and experience requirements that provides the required knowledge, abilities, and skills necessary for the position is considered qualifying. A typical way of meeting the required education and experience is to possess the equivalent of:

- An Associate Degree or equivalent amount of coursework which includes study in the areas of GIS, engineering, geographic studies, computer science, or closely related field. See below for the substitution option for the Associate Degree requirement.
- One year of work experience utilizing GIS, computer aided drafting (CAD), global positioning system (GPS), or performance of related work.

License/Certificate:

- For the GIS Technician classification only, a GIS Certificate from an accredited college may be substituted for the Associate Degree requirement.
- Possession of, or ability to obtain, a valid Class C California driver's license is required to perform the duties of the position. Continued maintenance of this driver's license in compliance with established District vehicle operation standards, and the ability to be insured for the operation of a vehicle in accordance with the terms and conditions of the District's insurance program are conditions of employment.

KNOWLEDGE/ABILITIES/SKILLS

The following are representative samples of KAS's necessary to perform essential duties of the position.

Knowledge of:

- Principles, practices, and advances in GIS technology.
- GIS, ArcGIS, District CMMS, field integration, and report writing software.
- Systems programming, database systems, database management, and web application development.
- Cartographic mapping principles.
- Basic land surveying practices and GPS.
- MS Office Suite software; Word, Excel, PowerPoint, Access, Projects, and Outlook.
- Modern office practices, methods, and office equipment.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Mathematic and statistical concepts.
- Applicable federal, state, and local laws, codes and regulations including District codes, ordinances, and design standards.
- Closed circuit television (CCTV) inspection methods, industry standards for pipeline and manhole inspection, and associated software.

Ability and Skill to:

- Investigate and evaluate new technology and changes to District GIS/CMMS software and serve in an advisory capacity to supervisors and managers.

- Organize, prioritize, manage, and execute a variety of projects and multiple tasks in an effective and timely manner to meet critical deadlines.
- Plan, coordinate, implement, and maintain a broad-based GIS and CMMS program that includes effective and efficient database development and management, database accessibility, and systems integration.
- Write code and programs using symbolic program language to produce automated systems instructions; read, interpret, and apply information from complex technical publications, manuals, and other documents.
- Understand and evaluate spatial relationships and patterns.
- Perform complex modeling, mapping, data analysis, and other engineering tasks.
- Properly integrate GIS/CMMS data and functionality with other specialized applications data from land use, and engineering models (hydraulic models, risk prioritization models).
- Accurately read, interpret, and analyze technical documentation, studies, reports, plans and specifications, complex laws, codes, regulations, and ordinances.
- Interpret and analyze mathematical and statistical data.
- Perform accurate arithmetic, financial, and statistical computations.
- Operate modern office equipment including computer equipment and a variety of word processing and software applications.
- Prepare clear and concise reports, correspondence, policies, procedures, training documents, and other written materials using correct English, grammar, spelling, vocabulary, and punctuation.
- Proficiently use a variety of engineering and Microsoft Office software applications to create letters, reports, graphs, databases, and spreadsheets.
- Use the English language to effectively communicate with tact and professionalism in correspondence, e-mail, in person, and over the phone.
- Plan, schedule, assign, and oversee activities of assigned staff.
- Establish and maintain positive working relationships with representatives of community organizations; state/local agencies, contractors, District staff, and the public.
- Safely and effectively operate engineering tools and equipment.
- Drive a motorized vehicle safely and responsibly.