VALLECITOS WATER DISTRICT

GIS/CADD TECHNICIAN

DEFINITION

Under general supervision, performs skilled Geographic Information Systems (GIS) and drafting work on assigned engineering/mapping related projects for District departments and the general public; performs related duties as required.

CLASS CHARACTERISTICS

This classification is characterized by its responsibility for maintaining the Geographical Information System databases for engineering and related documents. This class is distinguished from the Capital Facilities Coordinator, which is responsible for technical and administrative engineering support and analyses duties.

ESSENTIAL FUNCTIONS

Essential functions include, but are not limited to, the following:

- Interprets engineering plans, plat maps, and legal descriptions and conducts GPS surveying and data post-processing for GIS database development efforts;
- Conducts spatial/surface analysis using a variety of modules and GIS software;
- Creates and maintains geographic information systems database metadata or data dictionary to support enterprise GIS efforts for the District; coordinates with GIS support vendors;
- Participates in testing, prototyping, and training for GIS applications and software;
- Edits, creates, updates, and maintains graphic and tabular geographic information systems data structure;
- Ensures the integrity, quality, and accuracy of a variety of geographic information systems information and data through routine checking of information and data inputted;
- Performs research and analysis of geographic and tabular data from public and private sources for integration into the District’s enterprise GIS and other electronic graphics systems; provides updated information to external agencies as necessary;
- Produces freehand drawings and computer graphics and performs general technical design work; produces a wide range of computerized maps and reports;
- Prepares computer generated graphs, maps, charts, and other graphics for engineering and Board of Directors reports;
- Creates final map products and produces specialized maps for District departments, meetings, and reports; produces large photocopies copies and plots for the public and District staff and maintains graphics equipment;
- Performs GIS needs assessment and prepares work plans and goals for the GIS program; works with engineering supervisory staff to produce GIS data requested;
- Tests and debugs GIS applications; trains District staff on GIS applications with presentations, tutorials, and manuals; assists in maintaining GIS software and hardware;
• Prepares drafting for general maintenance or additions to topography maps, valve drawings, legal descriptions, and as-built drawings; prepares accurate and concise reports and correspondence;
• Monitors plotters used for map production; monitors and orders plotter supplies; may perform light maintenance or repairs to plotters; coordinates with repair and maintenance vendors as necessary; communicates with other departments on issues related to the plotter and map availability; operates copiers and a variety of office equipment;
• Performs duties in a professional manner and works well with others or in a team setting;
• Establish and maintain cooperative working relationships with co-workers, outside agencies, and the public;
• Regular attendance and adherence to prescribed work schedule to conduct job responsibilities;
• Observes safe work practices and safety methods; performs other duties as assigned.

QUALIFICATIONS GUIDELINES

Knowledge, Skills, and Abilities

Knowledge of:
• GIS program principles, techniques, and functions; methods and techniques to develop maps and compile data;
• Computer programs and equipment used to produce transparencies, color layouts, camera-ready artwork, print resolution, vector and raster images; advanced techniques used in graphic art and computer graphics;
• GIS hardware and software, such as ArcMap and ArcGIS Online;
• Interactive web maps and app services; SanGIS data
• Advanced methods, practices, techniques, and instruments used in drafting and computerized mapping; map production skills;
• The process to transfer files and prepare/setup artwork on disks for outside printer companies to utilize;
• Database systems maintenance; data compilation techniques and methodology; research methodology;
• Capabilities and limitations of GIS including hardware and software applications; and internet technology.
• Surveying principles, practices, and GPS equipment.
• AutoCAD computer software.
• Water and wastewater appurtenances such as pipes, valves, meters, manholes, etc. common to the industry.

Ability to:
• Communicate clearly and concisely, both orally and in writing;
• Establish and maintain effective working relationships with other employees and those contacted in the course of the work;
• Provide technical support for GIS programs;
• Read and utilize maps, process and analyze various forms of data, and perform calculations; read and interpret maps and data; prepare accurate maps and charts from multiple layers of data;
• Proficiently operate and use computers and applicable software applications;
• Compile and analyze GIS data; implement, maintain, and operate GIS database systems;
• Prepare clear and concise reports; organize and prioritize workload;
• Create, edit, and plot GIS data and graphics in ArcGIS;
- Identify necessary changes to GIS system data and update and/or posts needed; prepare clear and accurate maps and graphics quickly on short notice;
- Scan maps and photographs; letter neatly and clearly by freehand and mechanical means;
- Create freehand and computer generated illustrations;
- Create and maintain tabular data using scanners and plotters;
- Learn new computer applications and apply to work assignments.

**Education & Experience**

Any combination of education or experience that would likely provide the necessary knowledge and abilities is qualifying. A typical way to obtain these knowledge and abilities would be: high school graduation or equivalent, and; two years’ experience in technical engineering work, including at least one year performing GIS duties. A GIS certificate from an accredited program may be substituted for one year of GIS experience.

**Licenses, Certificates, and Special Requirements**

- A GIS certificate from an accredited program is desirable, but not required.

**PHYSICAL DEMANDS AND WORK ENVIRONMENT**

The physical demands and work environment described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Employees may be required to wear and/or use personal protective and other safety equipment. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to sit; talk or hear; use hands and fingers to grasp and feel objects, tools, or controls; and reach with hands and arms. Employees are occasionally required to stand, walk, stoop, kneel, crouch, or reach and may occasionally be required to lift up to 25 pounds. Specific vision abilities required by this job include close vision and the ability to adjust focus.

Environment: Office environment. Frequently works in or around areas with minor amounts of dust. Some work done on ladders up to 4 feet above ground. Noise level is usually quiet.
I have reviewed this Job Description with my Supervisor and agree with its contents.

______________________________________________________________________
Employee Signature                                                                                Date

______________________________________________________________________
Supervisor Signature                                                                                Date

The specific statements shown in each section of this job description are not intended to be all-
inclusive. They represent typical elements and criteria necessary to successfully perform the job.