

**Phelan Piñon Hills Community Services District  
Job Description**

JOB TITLE: Engineering/GIS Technician

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EXEMPT:	No	SALARY LEVEL: 23
DEPARTMENT:	Engineering	
REPORTS TO:	Engineering Manager	APPROVED: 10/15/2024

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**SUMMARY:**

Under the general supervision of the Engineering Manager, the Engineering/GIS Technician performs data entry and a variety of technical duties in designing, implementing, operating, maintaining, and demonstrating a complex Enterprise GIS used for map generation, reporting, and other deliverables to support a variety of planning, engineering, and administrative functions. Provides GIS related information to District staff, outside agencies, and the general public, including performing occasional engineering tasks using CAD system. Assists in the administration of the District’s water availability program, engineering related contract administration, and other related duties as assigned.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:** (Responsibilities and duties may include, but are not limited to, the following)

**GENERAL:** Assists in planning and formulating engineering programs. Occasionally works with District office and field staff. Assists in organizing staff and contractors according to project requirements. Assists in analyzing reports, maps, drawings, blueprints, terrain, hydrological characteristics, and other topographical and geologic data to plan and review projects. Assists in collecting and analyzing field data and preparing graphs, charts and reports. Assists in preparing or direct preparation and modification of reports, specifications, maps, and exhibits. Assists in coordinating with contractors (inspectors, etc.) to verify conformances to design and District specifications. Use of computer assisted engineering, design, and GIS software and equipment to prepare or modify details, system mapping, charts, etc. Assists in managing mobile devices and support with device recovery. General duties may include basic IT tasks.

**ENGINEERING:** Compiles data, prepares reports related to the construction and improvement of water facilities and other District facilities, including using GIS based modeling software for fire flow testing.

**GEOGRAPHICAL INFORMATION SYSTEM (GIS)**

- Serve as the GIS administrator for a multi-machine federated ArcGIS Enterprise system that includes Portal, Server, Datastore and Microsoft SQL Server.
- Proficiently utilize the full Esri stack including ArcGIS Enterprise, ArcGIS Online, ArcGIS Pro, ArcMap, Field Maps, Survey123 and other modern software.
- Designs, develops, and administers District standards and processes in support of the GIS water data model .
- Conducts research, development, evaluation of capabilities and constraints, and administrative efforts required in supporting GIS/Database/Modeling projects.

- Designs, develops, and administers system documentation, and procedure manuals for the collection, analysis, archival, and release of data, adhering to current standards and protocols within the GIS industry.
- Maintains, updates, and verifies accuracy of parcel data, including centerlines.
- Prepares and executes queries of individual electronic databases and thematic maps producing products that include, but are not limited to web maps, tables, plots, charts, reports, and graphs.
- Digitizes maps and geographic features into GIS layers and performs quality control checks to ensure the integrity of the database.
- Performs fieldwork including collecting facility locations using GPS survey equipment and facility attribute data in performance of GIS database maintenance duties.
- Evaluates and identifies existing and experimental hardware, software, specialized equipment, and vendors.
- Updates tabular and spatial data using Esri software and Microsoft applications.
- GIS data management of customer service accounts, field operations, assets, parcel data maintenance..
- Create maps, charts, reports, and tables from GIS data or various other databases.
- Maintains and monitors supplies, equipment and hardware required for GIS operations.
- Adheres to District policies, procedures, and strategies important to the integration and implementation of GIS and the District's mission, and among local and regional governments and agencies.
- Uses of large format plotters and/or printers and custom plotting configurations.
- Develop and implement QA/QC procedures for data
- Provide technical support and training, addressing inquiries and resolving issues related to GIS tools and data.
- Develop and customize GIS applications and tools within the Esri stack to meet the needs of various stakeholders.
- Work with various departments and stakeholders to integrate GIS into their workflows and projects
- Stay updated on GIS technology trends and best practices; recommend new tools or methods to enhance GIS capabilities.
- Some knowledge of Python and SQL language

**PUBLIC RELATIONS/CUSTOMER SERVICE:**

- Provide friendly and courteous service, information, and resources while establishing and maintaining positive relationships with district officials, staff, legislative bodies, agencies, and the public. Responds to water related inquiries and questions effectively.
- Provide assistance with the coordination and completion of assigned projects with other District staff, outside agencies and/or consultants.
- May conduct public presentations and represent the District at meetings, information sessions, and industry conferences.

**ESTIMATING TASKS:** From predetermined unit prices, develop cost estimates for plan checks to determine bonding amounts needed, plan check and inspection fees needed, District projects, etc.

**QUALIFICATIONS:** To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions.

**EDUCATION AND/OR EXPERIENCE:** Requires completion of two (2) years of college level coursework in civil engineering/GIS or a related field and/or three (3) years of work experience performing technical duties related to GIS, water works engineering, inspection, and project management. Knowledge of public water distribution systems and water pipeline design experience is desirable.

**LANGUAGE SKILLS:** Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively before groups of customers or employees of an organization.

**MATHEMATICAL SKILLS:** Ability to calculate figures and amounts such as discounts, interest, commissions, proportions, percentages, area, circumference, and volume. Ability to apply concepts of basic algebra and geometry.

**REASONING ABILITY:** Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

**COMPUTER SKILLS:** To perform this job successfully, an individual should have some familiarity with a SCADA System; proficiency in Microsoft Excel, Word, Power Point, Access and GIS Enterprise databases (SDE/SQL). Proficiency in GIS skills such as ArcPro and ArcGIS Online (Esri). General knowledge of GPS applications.

**CERTIFICATES, LICENSES, REGISTRATIONS:** Employee must maintain a current, valid, California Driver's License and have proof of good driving record.

**OTHER SKILLS and ABILITIES:** Ability to use GPS equipment and perform minimal GPS tasks. Basic understanding and ability to read legal descriptions. Strong organizational/prioritization skills. Ability to work independently.

**PHYSICAL DEMANDS:** The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl and talk or hear. The contracted employee is frequently required to stand; walk and sit. The contracted employee must regularly lift and /or move up to 25 pounds, frequently lift and/or move up to 50 pounds and

occasionally lift and/or move up to 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and ability to adjust focus.

**WORK ENVIRONMENT:** The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodation may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is occasionally exposed to fumes or airborne particles; outside weather conditions; extreme cold and extreme heat. The employee is occasionally exposed to moving mechanical parts; high, precarious places; toxic or caustic chemicals and the risk of electrical shock. The noise level in the work environment is usually moderate.

**COMMENTS:** Must read and comply with the District Safety Manual and the District Employee Manual and all policies and procedures.

At the discretion of the Engineering Manager, and on rare occasions as activity is deemed necessary, this job may require participation in evening and possibly weekend meetings.