

JOB ANNOUNCEMENT

(Posted on November 5, 2021)

Engineering Technician I and II

*Elk Grove Water District is an equal opportunity employer.
Employment is at-will.*

Elk Grove Water District is seeking qualified applicants to fill one (1) position as an Engineering Technician I or II in a full-time regular capacity. Salary range is \$66,539.20 - \$82,846.40. Send EGWD application, a resume, and a clean driving record to EGWD; 9257 Elk Grove Blvd.; Elk Grove, CA 95624; Attn: HR; stefani@egwd.org or fax 916-670-6047. Documents must be received by Thursday, December 2, 2021 by 4:00PM.

Job Definition

To perform a variety of technical office and field duties involving drafting, surveying, mapping, and construction inspections; **to develop and maintain the District's Geographic Information System (GIS)**; to update and maintain the District's asset management program; and to develop and maintain the District's water model.

Distinguishing Characteristics:

Engineering Technician I This is the entry level class in the Engineering Technician series. Positions in this class typically require little directly related work experience. The Engineering Technician I class is distinguished from the II level by the performance of less than the full range of duties assigned to the II level. Incumbents work under close supervision while learning job tasks, progressing to relatively less supervision as procedures and processes of assigned area of responsibility are learned. Receives immediate supervision from the Assistant General Manager.

Engineering Technician II This is the journey level class in the Engineering Technician series. Employees at this level receive relatively less instruction or assistance and are fully aware of the operating procedures and policies within the work unit. Positions in this class are normally filled by advancement from the I level once the incumbent meets the qualification and performance standards of the II level, demonstrates an ability to perform all facets of the position, and meets any other assessment requirements to move to the II level. Receives general supervision from the Assistant General Manager.

Examples of Essential Duties:

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

- Prepare, update, and revise engineering maps and drawings related to a variety of public capital improvement projects; perform preliminary engineering design work and calculations, including preparation of plans, charts, diagrams, graphs, tables, and sketches.
- Calculate quantities and cost estimates for assigned construction projects; obtain vendor/contractor price quotes, produce requisitions, and sign off on purchase orders for equipment, materials and supplies related to work assignment.
- File and retrieve engineering and related plans, maps, exhibits and various documents; update files and maintain document reference and retrieval systems.

- Produce maps, tables and graphs for internal and external use; determine and execute the appropriate sequence of data processing tasks; **use established Geographic Information System (GIS)** to query data and produce documents.
- Use Global Positioning System (GPS) equipment to acquire and record GIS positional and attribute data.
- **Update and maintain GIS databases** according to District's policies and procedures; assist in cleaning up data and making corrections in response to changes and additional data sets integrated into GIS.
- Perform quality control checks to ensure the integrity of GIS data and applications; review and resolve conflicts in data; evaluate currency, usefulness, and completeness of data; participate in planning.
- Provide a variety of ad hoc queried data to departments and outside agencies.
- Conduct field inspections for District facilities including commercial/residential development and capital improvement projects, involving the inspection of pipelines, pumping stations, and treatment facilities, and other District projects; review and inspect construction plans to ensure compliance with approved plans, specifications.
- Maintain and update the District's asset management program on an ongoing basis.
- Use water modeling software to analyze the District's water system. Establish and maintain effective working relationships using principals of good customer service to interact with developers and/ or contractors, assisting them with District processes and procedures and receiving, researching and responding to their questions and/or concerns.
- Perform related duties as assigned.

Qualifications:

Engineering Technician I

Knowledge of:

- Terminology, methods, practices and techniques used in technical engineering work, including drafting, surveying, mapping and construction inspection.
- Principles of algebra, geometry, and trigonometry.
- **Environmental Systems Research Institute (ESRI)-based ArcGIS** and Autodesk Auto Computer Aided Drafting (CAD).
- Scale representation on maps.
- Applicable equipment and instruments used in drafting, surveying, and mapping.
- Modern office practices, methods, and computer equipment including relevant software programs.
- Oral and written communication skills; business English including vocabulary, spelling, and correct grammatical usage and punctuation.
- Safe work practices.

Ability to:

- Perform a variety of technical office and field engineering work involving, drafting, surveying, mapping and inspections.
- Know and understand all aspects of the job; intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information including engineering calculations; observe and problem solve operational and technical policy and procedure; and explain regulations and procedures to others.

- Use CAD, **GIS**, GPS devices and other computer applications related to technical engineering work.
- Research sources of geographic data and collect, interpret and integrate cartographic data from different sources to prepare maps and reports.
- Effectively use water modeling software and its applications.
- Compile and analyze technical information and prepare technical documents and reports related to area of assignment.
- Perform mathematical calculations with speed and accuracy.
- Understand and carry out oral and written instructions and prioritize workload to meet deadlines.
- Read, write and comprehend the English language at a level necessary for effective job performance exercising correct English usage, vocabulary, spelling, grammar and punctuation.
- Communicate effectively, tactfully and positively in both oral and written form.
- Operate, use and care for drafting, mechanical and modern office equipment and technology, including computer instruments and applicable software.
- Utilize appropriate safety procedures and practices for assigned duties.
- Contribute effectively to the accomplishments of District goals, objectives and activities.

Engineering Technician II

In addition to the qualifications for the Engineering Technician I:

Knowledge of:

- Principles and practices of algebra, geometry and trigonometry as applied to the computation of angles, areas, distances and traverses.
- Practices of database design, maintenance and administration.
- Principles and practices of construction methods and techniques.
- Equipment and procedures used in digital map production, GIS mapping, and surveying.
- Proper inspection techniques to examine construction workmanship and materials for defects and faults.
- Policies and regulations related to construction, extension, and maintenance of a variety of public works and utility systems and facilities.
- Principles and practices of technical report writing and data presentation.
- Engineering maps and records.
- Construction materials and methods.

Ability to:

- Independently perform technical engineering duties.
- Use CAD, **GIS**, GPS devices and other computer applications at an intermediate skill level related to technical engineering work.
- Reduce, interpret and apply field notes in performing drafting work.
- Competently use relevant software, programs, and computer applications; import and export data; and use other data management tools.
- Maintain and develop geodatabases associated with the GIS base mapping and subsequent map layers.
- Compile and analyze technical information; problem-solve complicated engineering issues and identify alternatives and make related recommendations.

- Perform inspections of construction projects and enforce District standards.
- **Perform technical GIS work involving quality assurance and control**, data loading, editing and analysis.
- Assess vendor/contractor services, related equipment, and associated costs.
- Perform engineering and mathematical calculations with speed and accuracy.

Physical Requirements:

- Perform simple grasping and fine manipulation
- Carry, push, reach, and lift weight up to 10 pounds.
- Bend, squat, kneel, twist, or climb while performing field work.
- Walk on uneven terrain.
- Sit for extended periods of time.
- Hear and see within normal ranges; use telephone and write or use keyboard

Required Certifications and Licenses:

- Possession at the time of hire and continued maintenance of a valid California Class C driver's license is required.

Required Education and Experience:

Any combination of education, experience, and training that would provide the best qualified candidates. A typical way to obtain the knowledge and abilities would be:

Engineering Technician I

Possession of the equivalent to an associate degree from an accredited college or university with major coursework in engineering, mathematics, GIS or another field of study applicable to the responsibilities and requirements of this job class.

Engineering Technician II

Two (2) years of progressively responsible technical engineering experience that involved the use of GIS and AutoCAD comparable to the District's Engineering Technician I, and

Possession of the equivalent to an associate degree from an accredited college or university with major coursework in engineering, mathematics, GIS or another field of study applicable to the responsibilities and requirements of this job class. A bachelor's degree is desirable.