



Engineer I/II

Class Code:
428,429

DEFINITION

Under supervision, performs a variety of professional environmental engineering work in connection with water quality studies, treatment and distribution system operations, water quality regulations, facility improvements, and other related work; assists other engineering disciplines on assigned projects; provides administrative support to District projects and programs; may exercise technical and functional oversight over engineering support staff; and performs other related work as required.

DISTINGUISHING CHARACTERISTICS

Engineer I is the entry level in the engineering series. Under close to general supervision within a framework of established policies and procedures, incumbents perform a variety of engineering and administrative tasks of limited to moderate difficulty. Assignments are given in specific terms and are subject to frequent review while in progress and upon completion, except where tasks are well defined by established standards, policies and procedures. Assignments may cover the entire field of environmental engineering and may include other engineering and technical disciplines. There is limited latitude for independent judgment.

This class is distinguished from the intermediate-level Engineer II (Environmental) class by the routine nature and limited complexity of work assignments and the level of supervision received. Upon recommendation of the immediate supervisor and approval by the department manager, incumbents in this class may advance to the Engineer II classification after gaining experience and achieving proficiency that meets the Engineer II experience requirements.

Engineer II is the intermediate level in the environmental engineering series. Under general supervision within a framework of established policies and procedures, incumbents perform a variety of engineering and administrative tasks of moderate difficulty requiring the use of some independent judgment. Assignments are given in general terms and are subject to periodic review while in progress and upon completion. Assignments may cover the entire field of environmental engineering and include other engineering and technical disciplines. There is some latitude for independent judgment and action in well-defined areas of work.

This class is distinguished from the entry-level Engineer I (Environmental) class by the increased complexity of work assignments and level of independence with which assignments are performed and the decreased level of supervision received. This class is distinguished from the advanced-level Engineer III (Civil) class which has responsibility for performing the most difficult and complex engineering assignments, may function as the engineer in charge of a project or program, and may direct the work of others.

TYPICAL DUTIES

TYPICAL EXAMPLES OF DUTIES MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

- Assembles and analyzes water quality data, prepares routine monitoring reports and writes letters relative to results and water quality studies and engineering projects.

Engineer I/II (Environmental)

- Conducts hydraulic and water quality modeling of the water system using District computer programs to assess consumer impacts and system needs.
- Performs research applicable to improving analytical methods and treatment and distribution practices; and assists in the review and analysis of operating records to help identify improvement needs.
- Assists in the development of standard procedures for watershed, treatment, and distribution operations personnel.
- Monitors water quality legislation and assists in the preparation of staff reports providing periodic updates and impact on District operations.
- Assists in the development of design standards and operational performance criteria related to projects involving the planning, design, construction and start-up of new or improved treatment and distribution facilities.
- Performs other related work as required.

REQUIREMENTS

Any combination of education and experience that would likely provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the knowledge, skills, and abilities would be the equivalent of:

Education and Experience:

For positions in the Operations & Maintenance Department and Engineering Department: A Bachelor's degree in an engineering curriculum which is accredited by the Engineers' Council for Professional Development, or a California Engineer-In-Training Certificate;

For positions in the Water Resources Department: A Bachelor's degree in an engineering curriculum which is accredited by the Engineers' Council for Professional Development, or a related field of study; or a California Engineer-In-Training Certificate;

For all positions, the following experience is required in addition to the education requirements:

Engineer I: No work experience is required.

Engineer II: Two years, within the past ten, of practical engineering experience. An advanced degree in an accredited engineering curriculum may be substituted for one year of the required experience.

Knowledge, Skills and Abilities:

Engineer I:

General knowledge of: environmental engineering principles, terms, practices and technology related to basic chemistry and laboratory procedures; engineering mathematics through calculus; **Working knowledge of:** engineering methods, and design processes; basic statistical principles and methods of analysis; computer programs and languages and engineering applications; pertinent Federal, State and local laws, codes and regulations; safe work practices as they relate to the position and the ability to identify workplace hazards and/or unsafe conditions and take appropriate action to correct same.

Skill and Ability to: apply engineering principles and practices to the solution of routine professional engineering problems; conduct literature searches and research available sources of information; perform difficult mathematical calculations with speed and accuracy; interpret and prepare drawings, graphs, charts and compilations of numerical data; effectively use job-related computer and software applications to complete assignments; maintain accurate records and prepare a variety of memos, letters and technical reports that are clear and concise; exercise sound judgment in decision making; communicate effectively both orally and in writing; establish and maintain effective working relationships with those contacted in the course of the work; and perform the essential functions of the job without causing harm to self or others.

Engineer II:

Working knowledge of: environmental engineering principles, terms, practices and technology related to basic chemistry and laboratory procedures; engineering mathematics through calculus; engineering methods, and design processes; statistical analysis methods and design processes; computer programs, languages and engineering applications; pertinent Federal, State and local laws, codes and regulations governing water quality and environmental compliance; safe work practices as they relate to the position and the ability to identify workplace hazards and/or unsafe conditions and take appropriate action to correct same.

Skill and Ability to: apply engineering principles and practices to the solution of specific engineering problems; conduct literature searches and research available sources of information; perform difficult mathematical calculations with speed and accuracy; interpret and prepare drawings, graphs, charts and compilations of numerical data; effectively use job-related computer and software applications to complete assignments; maintain accurate records and prepare a variety of memos, letters and technical reports that are clear and concise; exercise sound judgment in decision making; communicate effectively both orally and in writing to technical and non-technical persons; provide oversight and direction to contract service providers (consultants) including review of work products; establish and maintain effective working relationships with those contacted in the course of the work; and perform the essential functions of the job without causing harm to self or others.

Additional Requirements:

- Must possess a valid California driver's license and have a satisfactory driving record.

Working Conditions/Physical Requirements:

The essential functions of the job require the ability to sit for extended periods of time when performing office tasks; reach above or below shoulder height; finger dexterity to operate a computer and other office equipment; speak and hear in person and on the phone; see sufficiently to perform assignments; periodically drive a vehicle from site to site; walk, bend, and climb to conduct inspections under a variety of climatic and geographic conditions in a field environment with potential exposure to loud noise, chemicals, fumes, and other environmental substances: and to frequently lift items weighing up to 20 pounds and occasionally up to 55 pounds.

Revised: 12/14

Approved: _____
Human Resources/Risk Manager

