



Engineer III (Environmental)

Class Code:
475

DEFINITION

Under direction, performs professional engineering work of advanced difficulty and complexity in connection with environmental engineering studies, engineering design, and operations support for a large water utility; assists other engineering disciplines; may provide lead technical support for District projects and programs; may function as engineer in charge of a project or program; makes presentations to governing boards, civic groups and other organizations; may provide direction to sub-professional and professional staff in a lead capacity and may provide technical review of the work of others; and performs other related work as required.

DISTINGUISHING CHARACTERISTICS

Environmental Engineer III is the advanced professional level in the engineering (Environmental) series. Under limited direction within a framework of established policies and procedures, incumbents perform a variety of engineering, lead and technical work of advanced difficulty and complexity that requires thorough knowledge of civil engineering fundamentals and substantial professional experience. Assignments are given in broad terms, are subject to review primarily upon completion, and may cover the entire field of environmental engineering. There is considerable latitude for independent judgment and action.

This class is distinguished from the intermediate-level Engineer II (Environmental) class by the increased complexity of work assignments and level of independent judgment and action, decreased level of supervision received and responsibility for the direction and review of the work of others in a lead capacity.

TYPICAL DUTIES

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

- Manages projects of substantial difficulty and complexity and size from initial planning and design through construction and startup; responsibilities include: development of scopes of work and evaluation criteria for selection and hiring of engineering consultants for projects utilizing external consultants; performing design, management of selected consultants; administration of construction contracts; preparation of change orders and review of contractor progress payments.
- Provides informed input in establishing, justifying and maintaining water quality goals, objectives and project criteria for new and existing treatment and production facilities.
- Plays a lead role in the review of plans, specifications, engineers' notes, and computations involving higher mathematics and estimates for projects of substantial difficulty.
- Anticipates new drinking water regulations and helps develop both near-term and long-range plans to better ensure District compliance; prepares comments on proposed legislation to represent the District's interest in meaningful water quality and treatment

Engineer III (Environmental)

regulations that enhance public health.

- Assembles and analyzes water quality data, oversees the preparation of routine and non-routine monitoring reports, and coordinates the preparation of summary documentation relative to results of water quality studies and engineering projects.
- Develops and implements water treatment and distribution system engineering work plans of substantial difficulty and complexity, including serving as a key engineer for executing comprehensive pilot studies; assists operators and supervisors in the start-up, troubleshooting and optimization of treatment processes; and initiates and directs special studies and investigations for improved water quality and treatment performance.
- Conducts studies and investigations of civil engineering problems of substantial difficulty and complexity, including analysis of current water usage and future water requirements, planning studies of distribution systems, analysis of performance of hydraulic structures, analysis of stream flow and special studies and analysis relative to the development of water supply sources, District facilities, etc.
- Oversees the execution of hydraulic and water quality modeling studies using District's computer programs to assess consumer impacts and optimize system operation.
- Fulfills a lead role in coordinating ongoing water treatment and distribution system regulatory compliance program; communicates effectively with regulatory agencies; develops and maintains standard operating procedures for compliance; oversees the preparation of required documentation and permit applications, responds to regulatory actions and completes follow-up measures, as needed.
- Makes presentations to governing boards, civic groups and other organizations.
- Prepares or directs the preparation of alternatives evaluations and comprehensive reports that include text, charts, maps, and diagrams for environmental engineering topics of substantial difficulty and complexity.
- May direct and review the work of a small group of subordinate engineers and sub-professional employees in a lead capacity.
- Assists in the operation of the treatment and distribution system program, including the operation and expansion of treatment and distribution system 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: Four (4) years, within the past ten, of engineering experience since obtaining either (1) A Bachelor's degree in an engineering curriculum accredited by the Engineer's Council for Professional Development; or (2) a California Engineer-In-Training

Engineer III (Environmental)

Certificate. Two of the four years must have been in environmental engineering at a level comparable to or higher than the District's Engineer II classification. An advanced degree in an accredited engineering curriculum may be substituted for one (1) year of the required experience.

Knowledge, Skills and Abilities:

Thorough knowledge of: engineering principles, terms, practices, methods and the sources of civil and environmental engineering information with particular reference to a water utility; engineering mathematics through calculus and statistical analysis methods; engineering economics and specification and contract procedures; cost estimating methods; effective project and program management practices; construction methods, materials, specifications and codes; 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 engineering problems of substantial professional difficulty; plan and direct the work of others; perform difficult mathematical calculations with speed and accuracy; interpret and prepare drawings, detailed maps, profiles, graphs and compilations of numerical data; effectively manage projects within established timeline and budget parameters; effectively use job-related computer and software applications to complete assignments; maintain accurate records and prepare a variety of memos, letters and technical reports and specifications that are clear and concise; communicate effectively both orally and in writing to technical and non-technical persons; 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.
- Must possess California State Registration as a Professional Civil Engineer.

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 and engineering equipment; speak and hear in person and on the phone; see sufficiently to perform assignments; work long or unusual hours as situations demand; and frequently lift and/or carry objects weighing up to 25 pounds and occasionally up to 55 pounds.

Revised: 12/14

Approved: 
Human Resources/Risk Manager

