

JOB DESCRIPTION
Senior Engineering Geologist
Code Number: 28011

GENERAL PURPOSE

Under direction, conducts complex engineering projects, engineering analyses, research, planning, modeling, and design for a variety of water capital construction programs and/or maintenance/improvement programs; may lead, plan, organize, direct and review the work of professional and technical staff; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

This is an advanced journey level class, responsible for leading the work of professional and technical staff, and serving as a highly skilled specialist in the field of geology, engineering geology and hydrogeology.

ESSENTIAL DUTIES AND RESPONSIBILITIES

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the class.

Utilizing consulting engineering firms or in-house staff, administers the design and preparation of major production and monitoring well construction projects,, updates and maintains the District's groundwater basin model, completes model simulations and evaluates simulation results, conducts water resources planning and evaluations, and assists with development and implementation of groundwater production and recharge operations plans; prepares cost estimates; establishes the scope, schedule and budget for assigned projects; negotiates and manages consultant contracts; reviews drawings and specifications for compliance with District standards; interprets specifications and District policies and initiates or reviews change orders; prepares periodic project status reports.

Represents the District with consultants and contractors; prepares correspondence on technical geologic and hydrogeologic issues; coordinates groundwater development planning and management activities with other departments and outside agencies; revises design and construction standards to improve methods, procedures and practices; makes authoritative interpretations of applicable laws, regulations, policies and design standards; revises and approves construction documents.

FLSA DETERMINATION: Meets professional exemption from overtime.

Assesses and evaluates alternative water supply options for the District and determines effective courses of action; performs complex engineering calculations and designs.

Provides day-to-day leadership and works with staff to ensure a high-performance, customer service-oriented work environment which supports achieving the department's and the District's mission, strategic plan, objectives and values.

Assists in developing, implementing and monitoring work plans to achieve goals and objectives; contributes to the development of and monitors performance against the annual department/unit budget; may lead and participate in developing, implementing and evaluating plans, work processes, systems and procedures to achieve annual goals, objectives and work standards; assists in the development and implementation of engineering geology and hydrogeology standards and priorities.

Participates in the preparation of operating budget recommendations; authorizes the purchase of materials and monitors work activities and expenditures to control costs.

Tracks, evaluates and reports on design project progress to department management.

Monitors, coordinates, evaluates, modifies and provides quality assurance to the preparation of pressure zone plans, groundwater management plans and EMWD Master Plans.

Plans and manages water supply enhancement projects including evaluation of groundwater extraction/recharge requirements, alternatives, costs and potential impacts.

Prepares specifications for construction and equipping of production, monitoring and exploratory wells.

Completes final designs and monitors well construction and equipping.

Designs, conducts and evaluates well performance and aquifer tests; conducts well interference and impact evaluations.

Assists with completion of inter-departmental assessments of basin water resources and groundwater supply and operations alternatives including configuration and evaluation of numerical model runs to assess historic and planned well and recharge operations.

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Senior Engineering Geologist

Mentors lower-level staff in all phases of assigned duties and office procedures.

Coordinates with other departments, units, agencies and private firms/individuals.

Performs related duties as assigned.

DESIRED MINIMUM QUALIFICATIONS

Knowledge of:

Principles and practices of geology and hydrogeology as applied to water supply development and water resources planning, management and protection; modern methods and techniques used in the design and construction of production, monitoring and exploratory wells; computer simulation modeling of complex groundwater systems; computer databases and geographic information systems; modern developments, current literature, and sources of information regarding the assigned area of engineering; applicable laws and regulatory codes related to development and construction of water wells.

Ability to:

Make complex engineering computations and check, review and design plans and specifications for a wide variety of water-related capital projects; conduct independent project engineering; manage contracted engineering firms; identify needs and assignments and exercise judgment in carrying them out; use a personal computer for data processing management and analysis, groundwater modeling, spreadsheet and word processing applications; communicate clearly and concisely, orally and in writing; establish and maintain effective working relationships with those contacted in the course of work; follow and apply written and oral work instructions; make sound independent judgments within established guidelines; train others in work processes and procedures.

Training and Experience:

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from an accredited college or university with a bachelor's degree in geology, hydrology, hydrogeology, or Civil Engineering, and a minimum of 5 years relevant professional experience in hydrogeologic and water quality evaluations, water resources planning and development, and well construction. Desirable experience includes: (1) computer modeling, (2) design and implementation of computerized information and mapping systems, (3) working knowledge and repair of field equipment used for well monitoring and sampling, and (4) proficiency with a variety of desktop

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Senior Engineering Geologist

computer office and technical applications used by the District and commonly used in the water industry.

Licenses; Certificates; Special Requirements:

A valid certificate of registration as a Professional Geologist, Certified Engineering Geologist, or Certified Hydrogeologist.

A valid California driver's license and the ability to maintain insurability under the District's Vehicle insurance Policy.

PHYSICAL AND MENTAL DEMANDS

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Physical Demands

While performing the duties of this job, the employee is regularly required to sit and stand; talk and hear, both in person and by telephone; use hands to finger, handle, feel objects or controls; reach with hands and arms; and drive a vehicle.

Work will be performed in both office and varied field environments. Specific vision abilities required by this job include close vision, color vision, and the ability to adjust focus.

Moderate lifting of equipment, soils and water samples and supplies is required.

Mental Demands

While performing the duties of this class, the incumbent is regularly required to use written and oral communication skills; read and interpret data, information and documents; analyze and solve complex problems; use math and mathematical reasoning; perform highly detailed work under changing, intensive deadlines, on multiple, concurrent tasks; work with constant interruptions, and interact with officials and the public.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

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Senior Engineering Geologist

The employee will work under typical office conditions and under a variety of field conditions related to well construction, well monitoring and testing and other field projects. The noise level in the office work environment is low, noise levels in the field will vary and may require the use of protective equipment. Field environments may include exposure to extreme elements including wind, rain, dust, mud, heat and cold for short to prolonged periods. Some field work will be conducted in close proximity to heavy construction equipment and materials. Field work will be performed on an as-needed, on-call basis during daylight and night-time hours any day of the week.

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Senior Engineering Geologist