



Classification: Senior Engineering Geologist  
(Specialist)  
Position Number: 880-250-3751-045

**DUTY STATEMENT**

CURRENT       PROPOSED

<b>RPA Number:</b> 23-250-018	<b>Classification Title:</b> Senior Engineering Geologist (Specialist)	<b>Position Number:</b> 880-250-3751-045
<b>Incumbent Name:</b> VACANT	<b>Working Title:</b> Hydrogeologist	<b>Effective Date:</b> JULY 2023
<b>Tenure:</b> Permanent	<b>Time Base:</b> Full Time	<b>CBID:</b> U09
<b>Division/Office:</b> Division of Water Quality		<b>Section/Unit:</b> Sustainable Water Plans and Policies
<b>Supervisor's Name:</b> Claire Waggoner		<b>Supervisor's Classification:</b> Environmental Program Manger I

<b>Human Resources Use Only:</b>	
<b>HR Analyst Approval:</b>	<b>Date:</b>

<b>General Statement</b>
Under the general direction of the Environmental Program Manager I in the Sustainable Water Plans and Policies (Section), and consistent with good customer service practices and the goals of the State and Regional Board's Strategic Plan, the incumbent is expected to be courteous and provide timely responses to internal/external customers, follow through on commitments, and to solicit and consider internal/external customer input when completing work assignments.
<b>Position Description</b>
The Senior Engineering Geologist (Specialist) serves as the Section's Hydrogeologist who provides technical engineering geologic and hydrogeologic expertise to support the equitable expansion of water supplies in California, such as recycled water, stormwater capture and use, and desalination while protecting water quality, natural ecosystems, and beneficial uses. The incumbent will travel to attend meetings, training, conferences, or other program-related events, including occasional overnight travel.



Classification: Senior Engineering Geologist  
 (Specialist)  
 Position Number: 880-250-3751-045

<b>Essential Functions (Including percentage of time):</b>	
25%	Conduct complex engineering geologic and hydrogeologic evaluations, characterize geochemical processes, and identify water quality concerns and engineering solutions to protect water supplies. This includes evaluating: environmental conditions; water quality; groundwater contaminant mass loading including constituents of emerging concern; occurrence, fate, and transport of contaminants; subsurface soil stratigraphy and lithology; well construction and sampling methods; aquifer testing, evaluation, and interpretation; water balance, and groundwater modeling. Evaluate site-specific water quality limits, receiving water quality, soil attenuation, groundwater hydrogeologic characteristics (permeability, transmissivity, gradients, etc.), and other data as required. Manage projects and serve as a statewide hydrogeologic expert, including on infiltration, geochemical processes, and engineering solutions that may impact quality of water supplies.
25%	Use expertise in hydrogeology, infiltration, and geochemical processes to review and interpret data, technical reports, and engineering designs and plans for water supplies. Identify and map hydrogeologically advantageous areas for increasing local water supplies, including locations where hydrogeologic conditions would support new water supply projects that would result in improved water quality, energy savings, and reduced discharge and costs. Evaluate and develop groundwater models and conduct analyses of hydrologic processes to identify volumetric potential for water supplies. Develop technical and policy recommendations and actions to apply integrated water resource management principles to planning and management of water supply, wastewater, and stormwater systems.
15%	Compile, review, and analyze data and technical reports including related to thickness of offshore sediment; geophysical survey data; onshore and offshore seabed core sampling data; seismic and erosional stability; subsurface lithology and water-bearing zones; aquifer thickness and transmissivity; volumetric potential; potential for aquifer drawdown; and seawater intrusion. Summarize findings and make recommendations related to the feasibility of brackish groundwater wells and subsurface seawater intakes. Identify groundwater basins impaired from salts and nutrients, including areas affected by seawater intrusion. Prepare written and verbal reports. Provide technical expertise to the regional water boards in permitting desalination projects consistent with the regulations in the California Ocean Plan.
10%	Analyze and manage large and complex data sets. Perform large scale data migrations and manipulations to support geospatial analyses. Join and manipulate data that exceed the limits of conventional data analysis tools. Use programming languages (e.g., R, Python, Structured Query Language) and geographic information systems (e.g., ArcGIS) to transform, analyze, and summarize large datasets. Review data quality, validate data, and create statistical summaries. Develop, review, and use models. Conducts technical reviews of processes, analyses, model results, reports, and maps. Use data visualization tools (e.g., PowerBi, Tableau) to produce graphs, charts, and maps.



Classification: Senior Engineering Geologist  
 (Specialist)  
 Position Number: 880-250-3751-045

10%	Independently identify problems, develop technical and policy recommendations, prepare and review guidance, policy, planning, or regulatory documents and legislative proposals related to integrated water resource management. Develop and implement water quality control plans (e.g., California Ocean Plan), policies (e.g., Recycled Water Policy, Stormwater Infiltration Policy), permits, and implementation plans related to integrated water resource management that are consistent with local, state, and federal water quality regulations.
10%	Represent the State Water Board in outreach and engagement efforts, including giving presentations, facilitating meetings and workshops, and conducting consultations. Respond to technical and regulatory questions related to desalination. Conduct equitable stakeholder and outreach and engagement, establish and maintain partnerships, and foster open communication for voices from historically underserved communities. Conduct outreach and analyses and develop findings consistent with Water Code section 13149.2. Conduct programmatic assessments and identify actions to implement the Racial Equity Resolution, Racial Equity Action Plan, Human Right to Water Resolution, and Climate Change Resolution related to hydrogeology and integrated water resource management.

**Marginal Functions (Including percentage of time):**

5%	Perform other duties as required.
----	-----------------------------------

**Typical Physical Conditions/Demands:**

The job requires extensive use of a personal computer and the ability to sit/stand at desk, utilize a phone, and type on a keyboard for extended periods of time. The job also requires giving presentations and attending meetings virtually as well as in person. This position requires travel to various locations throughout the state by car, rail, and air to attend meetings, trainings, and site visits.

**Typical Working Conditions:**

When in-office, the incumbent works in an office cubicle on the 15th floor of a high-rise office building in downtown Sacramento. The work schedule is Monday through Friday. Periodic travel is required locally and within the state, including occasional overnight travel.



Classification:  
Position Number:

**Supervisor Statement**

I certify this duty statement represents an accurate description of the essential functions of this position. I have discussed the duties of this position with the employee and provided the employee a copy of this duty statement.

Supervisor Name	Supervisor Signature	Date

**Employee Statement**

I have discussed these duties with my supervisor and have been provided a copy of this duty statement. I certify I have read, understand, and can perform the duties of this position either with or without reasonable accommodation\*.

*\*A Reasonable accommodation is any modification or adjustment made to a job, work environment, or employment practice or process that enables an individual with a disability or medical condition to perform the essential functions of his or her job or to enjoy an equal employment opportunity. (If you believe reasonable accommodation is necessary, check yes. If unsure of a need for reasonable accommodation, inform the hiring supervisor, who will discuss your concerns with the Reasonable Accommodation Coordinator.)*

Do you need a reasonable accommodation to perform the essential functions of this position?

**YES**       **NO**

Employee Name	Employee Signature	Date