

JOB DESCRIPTION AND POSITION CLASSIFICATION

CLASSIFICATION Senior Engineer, Water Resources (Spec)		DWR POSITION NUMBER 1380-3261-005	SAP POSITION NUMBER 50000920	MCR 1
APPOINTEE Vacant		SAP PERSONNEL NO. TBD	DIVISION/SECTION Modeling Support Office/Delta Modeling Section	
COLLECTIVE BARGAINING IDENTIFIER Management Related BU: ☐ Supervisory Related BU: ☒ Confidential Related BU: ☐ Rank and File BU: ☐ E48				
RESPONSIBILITIES EXERCISED ☐ Supervisory ☒ Lead Person		IMMEDIATE SUPERVISOR (Print) Prabhjot Sandhu	SUPERVISOR'S CLASSIFICATION Supervising Engineer, Water Resources	
APPROVED BY (Personnel Analyst's Name) Tammy Geer			DATE 10/23/2026	
<i>Percent of Time</i>	<i>Activity</i>			
	POSITION SUMMARY: The Senior Engineer, Water Resources, under the general direction of the Supervising Engineer, Water Resources of the Delta Modeling Section in the Modeling Support Office, is a non-supervisory staff specialist providing consulting level expertise in multi-dimensional modeling and leading the development of three dimensional models. The incumbent will also conduct special studies on the hydrodynamics and water quality of the Sacramento-San Joaquin Delta system.			
	ESSENTIAL FUNCTIONS: The incumbent is required to act independently and function as a competent project leader and representative for the Delta Modeling Section; work cooperatively with others to define, formulate and conduct multi-dimensional model development; and effectively develop and present development results and conclusions. Maintain regular, consistent, predictable attendance and exercise good judgment. The specific duties are:			
30%	In conjunction with the Supervising Engineer, manage and coordinate the multi-disciplinary and multi-agency three dimensional Delta modeling project for the purpose of understanding potential impacts to water supply and water quality brought about by environmental changes, project operations and Delta structures. Duties include coordinating and leading multi-D development and application activities of participating staff. Tasks will be completed by using bathymetric data, hydrodynamic and water quality data, software to process data, and Semi-implicit Cross-scale Hydroscience Integrated System Model (SCHISM) and Delta Simulation Model 2 (DSM2).			
30%	Develop and apply the new complex methodologies in the development of multi-dimensional models for the purpose of understanding potential impacts to water supply and water quality brought about by environmental changes, project operations and Delta structures. Tasks will be completed by using bathymetric data, hydrodynamic and water quality data, software to process data, and SCHISM and DSM2.			
SUPERVISOR'S STATEMENT: I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.				
SUPERVISOR'S NAME (Print) Prabhjot Sandhu		SUPERVISOR'S SIGNATURE ➤		DATE
EMPLOYEE'S STATEMENT: I HAVE DISCUSSED WITH MY SUPERVISOR THE DUTIES OF THE POSITION AND HAVE RECEIVED A COPY OF THE DUTY STATEMENT.				
EMPLOYEE'S NAME (Print)		EMPLOYEE'S SIGNATURE ➤		DATE

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Senior Engineer, Water Resources (Spec)		1380-3261-005	50000920	1
APPOINTEE		SAP PERSONNEL NO.	DIVISION/SECTION	
Vacant		TBD	Modeling Support Office/Delta Modeling Section	
Percent of Time	Activity			
20%	Coordinate and conduct the most complex hydrodynamics and water quality mathematical modeling studies of historical and planning conditions in the Sacramento-San Joaquin Delta to support Department programs that are evaluating the effect of environmental, operational or structural changes in the Delta including vulnerability to island flooding. Coordinate and conduct the most complex hydrodynamics and water quality mathematical modeling studies of historical and planning conditions in the Sacramento-San Joaquin Delta to support Department programs that are evaluating the effect of environmental, operational or structural changes in the Delta. Tasks will be completed by using bathymetric, hydrodynamic and water quality data, software to process data, and SCHISM and DSM2.			
10%	Develop and maintain collaborative working relationships with the multi-dimensional modeling community of agency staff and consultants for the purpose of model development review, model transparency and the reduction in duplication of effort. Tasks will be completed by using web site, software to process and present data, and SCHISM and DSM2.			
10%	Make presentations to various federal, State and local agencies regarding status and results of the multi-dimensional model development and computer modeling analyses in order to clearly communicate results of the development process and modeling analysis. This may require driving a vehicle on public roadways to get to various meeting sites. Write documents, reports and correspondence of a technical nature to communicate results of the complex model development process and modeling analyses to other Department personnel or to the public. Tasks will be completed by using web site, software to process and present data, and SCHISM and DSM2.			
	SPECIAL REQUIREMENTS: Extensive knowledge of numerical methods, computer modeling, and the hydrodynamics and water quality in the Sacramento-San Joaquin Delta. Possession of a valid certificate registration as a civil engineer issued by the California State Board of Registration for Professional Engineers. All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and is free from discrimination. The Department of Water Resources is committed to its mission and employees, and we are grounded in our commitment to public safety. Regular, consistent, and predictable attendance is essential to the successful performance in this position.			

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<i>Percent of Time</i>		<i>Activity</i>					
		OTHER RESPONSIBILITIES: This position provides necessary support to the Divisions of Integrated Regional Water Management, Flood Management, Safety of Dams, Operations and Maintenance, Engineering, and/or the Public Affairs Office during Governor declared emergencies, drought, flood, dam, State Water Project, and other incidents and emergencies. Additionally, this position may participate in emergency operations in the capacity of area teams, field inspection, coordination, and assist agencies such as Cal OES and FEMA in disaster work, including performing fieldwork to complete damage survey reports for droughts, flooding, earthquakes, and other emergencies. This position may also serve in one of the sections as established in the Incident Command System to assist the Department in performing its emergency preparedness, response, recovery, and mitigation functions. These functions are established in the California State Emergency Plan and the Department's Administrative Orders.					