

JOB DESCRIPTION AND POSITION CLASSIFICATION

CLASSIFICATION Research Data Specialist I		DWR POSITION NUMBER 1421-5742-001 1421-5742-002	SAP POSITION NUMBER 50105684/50105685	MCR 1
APPOINTEE Vacant		SAP PERSONNEL NO. TBD	DIVISION/SECTION DFO/HFO/HS/River Forecasting Unit	
COLLECTIVE BARGAINING IDENTIFIER Management Related BU: ☐ Supervisory Related BU: ☐ Confidential Related BU: ☒ Rank and File BU: R01				
RESPONSIBILITIES EXERCISED ☐ Supervisory ☐ Lead Person		IMMEDIATE SUPERVISOR (Print) Bibek Joshi	SUPERVISOR'S CLASSIFICATION Senior Engineer, Water Resources	
APPROVED BY (Personnel Analyst's Name) Sydney Mecke			DATE 10/19/2026	
<i>Percent of Time</i>	<i>Activity</i>			
	POSITION SUMMARY Under the general direction of the Senior Engineer, Water Resources, in the River Forecasting Unit, the Research Data Specialist I gathers, compiles, analyzes, and interprets meteorological, climatological, and hydrometeorological data to support Department of Water Resources (DWR) river forecasting, flood operations, and statewide water management. The incumbent serves on DWR river forecasting team, conducting research and analysis of meteorological and climatological data and applying the results to river forecasting and decision-support activities. The incumbent applies research methods and data analysis techniques to observed and model-derived meteorological and hydrometeorological information and develops analytical products and decision-support information for use by DWR and partner agencies. The incumbent works closely with the National Weather Service (NWS) California-Nevada River Forecast Center (CNRFC) Hydrometeorological Analysis and Support (HAS) team and supports research-to-operations (R2O) activities in partnership with the Center for Western Weather and Water Extremes (CW3E), universities, and other research organizations. The incumbent evaluates and helps transition innovative meteorological and hydrometeorological data, models, methods, and tools into DWR forecasting and decision-support applications. ESSENTIAL FUNCTIONS This position requires the incumbent to have working knowledge of research methods, techniques, and principles and concepts of meteorology and climatology related to the collection, analysis, and assimilation of data into meteorological forecast models. The incumbent must be able to summarize and communicate model-derived information orally and visually through written summaries, charts, maps, and graphics. Must be proficient in using word processing, data analysis, spreadsheet, mapping, and graphics software. Must have strong knowledge of California's weather patterns, climatology, and hydrology. Must be able to perform computer-related work efficiently and accurately, present results in a professional format, communicate effectively, and follow directions. The incumbent must possess strong organizational skills and communicate effectively. The incumbent must exercise competent			
SUPERVISOR'S STATEMENT: I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.				
SUPERVISOR'S NAME (Print) Bibek Joshi		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) Vacant		EMPLOYEE'S SIGNATURE ➤		DATE

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	independent judgment, analyze situations accurately and take effective action, work cooperatively with others, and maintain consistent and regular attendance. The specific duties for this position are, but are not limited to, the following:				
40%	Perform research and conduct analyses of meteorological data for issuing meteorological forecasts in support of DWR river forecasting activities, flood operations, and statewide water management. Analyze and interpret observed and model derived atmospheric data, numerical weather prediction guidance, radar products, satellite imagery, and hydrometeorological data. Work closely with DWR river forecasters and CNRFC HAS forecasters to ensure consistent and coordinated meteorological information is provided for river and reservoir inflow forecasting. As part of the State-federal HAS team, monitor meteorological conditions in real time on a rotating schedule, including evenings, weekends, and periods of significant weather, providing timely meteorological updates of rapidly changing conditions for DWR flood operations and the State-Federal Flood Operations Center. Issue internal meteorological guidance and decision-support products to support DWR situational awareness during storms, atmospheric river events, and periods of flood risk.				
25%	Conduct research and statistical analyses of meteorological, climatological, and hydrological data to support river forecasting, flood operations, water management, and other DWR programs. Coordinate statewide meteorological data collection, quality control, archiving, and dissemination. Prepare descriptive text, written summaries, tables, charts, maps, and diagrams for DWR publications and technical products. Generate and deliver daily or event-driven weather briefings, outlooks, and summaries to DWR management, engineering staff, emergency response personnel, and external partners. Respond to hydrometeorological data requests from DWR engineers, DWR's Public Affairs Office and Executive Office, other governmental departments and agencies, the press, and the public.				
20%	Under the direction of the unit manager and the State Hydrometeorologist, collaborate with CW3E and other research agencies and universities on the research, development, assessment, and R2O transition of meteorological and hydrometeorological tools, including high-resolution quantitative precipitation forecast , atmospheric river (AR) diagnostics, and ensemble forecasting products. Contribute to prototype-to-operations workflows, documentation, and verification for new model products or decision support tools. Support DWR's efforts to adopt innovations in atmospheric science—such as machine learning-enabled forecasting, sub-seasonal-to-seasonal products, and AR monitoring systems—into operational practice.				
10%	Under the direction of the unit manager, research and develop meteorological analyses of historical storms and other extreme events associated with large-magnitude floods. Prepare technical analyses and written documentation to support flood evaluations, water management studies, planning of new engineering projects, and reevaluation of existing flood control projects, including analysis of historical storms and development or evaluation of theoretical design storm events.				

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5%	Under the direction of the State Hydrometeorologist and the Division of Flood Operations Climate Resilience Lead, monitor developments in operational meteorology, numerical modeling, atmospheric river science, climate variability, and forecasting methodologies by attending meetings, workshops, and conferences. Track emerging research in long-range and climate forecasting at various government laboratories, research agencies, universities, and other institutions. OTHER RESPONSIBILITIES This position provides necessary support to the Division of Flood Operations, Flood Planning and Improvements, Safety of Dams, Operations and Maintenance, Engineering, and/or the Public Affairs Office during Governor declared emergencies, 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 Governor's Office of Emergency Services and Federal Emergency Management Agency 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 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. The incumbent must also be able to work extended hours, callbacks, alternate shifts, and weekends when necessary, and share on-call duties with other staff. During activation of the State-Federal Flood Operations Center (FOC) under the Standardized Emergency Management System, the incumbent is assigned to the FOC's Planning and Intelligence Section, working up to 13-hour shifts to support extended or 24-hour operations. This unit coordinates with a large pool of DWR employees from other offices to staff two flood centers and interdepartmental incident command teams during emergencies. SPECIAL REQUIREMENTS Possession of a valid California driver's license as the work may require driving a vehicle on public roadways or in the field on uneven terrain to participate in on-site field investigations, public outreach, or similar meetings and to operate a state vehicle. All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and are 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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	A necessary function of this position is to provide daily forecasts in close coordination with NWS, utilizing NWS hydrologic tools and models and accessing NWS networks and databases in the performance of these duties. Pre-employment eligibility may require successfully passing a security check and meeting applicable access requirements, as outlined in U.S. Department of Commerce Departmental Administrative Order (DAO) 207-12, NOAA Administrative Order (NAO) 207-12, and NWS Foreign National Access and Technology Transfer Directive (NWSI) 60-704, including any applicable requirements related to access by foreign nationals. Continued access to NWS networks and databases may also require periodic reverification and compliance with applicable security and access requirements.				