

DUTY STATEMENT

DFW 242A (REV. 07/18/22)

Department Statement:

California is one of the most biodiverse places on the planet. As such, the Department of Fish and Wildlife (CDFW) values diverse employees working together to protect nature for all Californians. CDFW is committed to fostering an inclusive work environment where all backgrounds, cultures, and personal experiences can thrive and connect others to our critical mission.

INSTRUCTIONS: A duty statement and organizational chart must be submitted with each Request for Personnel Action, Form 242	EFFECTIVE DATE
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DFW DIVISION/BRANCH/REGION/OFFICE Bay Delta Region (Region 3)	POSITION NUMBER (Agency-Unit-Class-Serial) 565-323-0762-905
UNIT NAME AND LOCATION Interagency Ecological Program (IEP) - Stockton, CA	CLASS TITLE Environmental Scientist
INCUMBENT	CURRENT POSITION NUMBER (Agency-Unit-Class-Serial)

BRIEFLY DESCRIBE THE POSITION'S ORGANIZATION SETTING AND MAJOR FUNCTIONS

Under the close supervision of the Senior Environmental Scientist (Supervisory), the Environmental Scientist (Zooplankton Imaging Scientist) is responsible for zooplankton processing including sorting, maintaining cultures, conducting microscope-based taxonomic classification, and sample pre-processing for analyses with a flow-imaging microscope (FlowCam). This position is also responsible for conducting image-sorting classification modeling and for providing expert taxonomic verification of the sorting results. The incumbent will serve as an expert on San Francisco Bay-Delta zooplankton taxonomy, ecology, and life histories as part of a multi-disciplinary team focused on methods development and use of image-based tools and will work under the mentorship of the Senior Environmental Scientist (Specialist) project lead.

PERCENTAGE OF TIME PERFORMING DUTIES	INDICATE THE DUTIES AND RESPONSIBILITIES ASSIGNED TO THE POSITION AND THE PERCENTAGE OF TIME SPENT ON EACH. GROUP RELATED TASKS UNDER THE SAME PERCENTAGE WITH THE HIGHEST PERCENTAGE FIRST. (USE THE REVERSE SIDE IF NECESSARY.)
35%	<u>ESSENTIAL FUNCTIONS:</u> Zooplankton Analysis and Digital Imaging Prepare and process zooplankton samples for taxonomic analysis and enumeration, which requires specialized knowledge of zooplankton found within the San Francisco Bay-Delta. Utilize a light microscope to identify zooplankton to the lowest practical taxonomic level, and life stage for the purposes of constructing a validated digital image library. Contribute to the development and documentation of standardized sample preparation protocols to enhance the quality of images produced by the FlowCam fluid-imaging microscope as well as related data from subsequent analyses. Integrate the use of the FlowCam with traditional microscopy to generate a comprehensive image dataset for modeling.
25%	Data Management, Analysis, and Reporting Contribute to the development and implementation of data management workflows for image analysis, from initial microscope capture through the FlowCam system, segmentation systems, and classification platforms. Adhere to established protocols for image data management, including creating rich metadata and ensuring data integrity and security. Perform quality assurance and quality control on taxonomic data. Summarize and reports on findings from zooplankton analyses for inclusion in technical reports and presentations.
15%	Zooplankton Culturing and Identification Establish and maintain live zooplankton cultures for image library development needs, including preparing culture media, monitoring water quality parameters, and providing appropriate food sources to sustain healthy populations. Apply expert knowledge of zooplankton taxonomy to identify and isolate specific taxa for culturing, and to prevent cross-contamination. Document culturing techniques and observes and records zooplankton condition.

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10%	Image Classification and Validation Operate an image classification model to process and analyze digital zooplankton images. Apply taxonomic expertise to meticulously verify and validate the accuracy of model-generated classifications. Document all validation procedures, track the digitization of species, and assist in the maintenance of comprehensive records within the system.
5%	Laboratory Operations and Interagency Coordination As a member of a collaborative team with representatives from the University of California, Davis and the CDFW Bay Delta Region, professionally maintain shared laboratory spaces and associated equipment and consumables. Coordinate the use of facilities with partners, faculty, and students in a respectful manner. Uphold all laboratory safety standards and maintain inventories of necessary supplies. Actively engage with other Interagency Ecological Program (IEP) work groups, such as the Data Utilization Work Group and the Zooplankton and Estuarine Ecology Project Work Teams. Participate in methodology development and lab meetings.
5%	Miscellaneous Duties Transport field samples to the laboratory using a state-issued vehicle. Research and prepare purchasing requests for necessary supplies. Participate in staff meetings, professional development workshops and seminars, and broader regional efforts of the California Department of Fish and Wildlife.
5%	<u>NON-ESSENTIAL FUNCTIONS:</u> Complete Attendance Reports and other administrative tasks (e.g., vehicle Mileage Logs). Continually practice and promote respectful communication as well as organizational and professional vitality especially in support of the IEP Operations Program. Special Personal Characteristics: • Extensive experience and interest in laboratory processes and taxonomy of zooplankton. • Desire and ability to develop and execute research projects in a multidisciplinary team with attention to detailed work and ability to act independently. • Interest in estuarine ecology and zooplankton taxonomy, and a commitment to improve understanding of the ecology of the San Francisco Estuary. • Possess or develop the ability to: accurately maintain, organize, and work with complex data sets; analyze and evaluate data, using a personal computer and software including Microsoft products, R, and Python. • Ability to prepare clear and concise oral and written presentations. • Ability to work safely and perform duties accurately in differing work conditions including with samples preserved in formalin or ethanol under proper ventilation. Interpersonal Skills: Ability to work independently and in a team setting and maintain good working relationships. Communicates respectfully and clearly with colleagues, external partners and the public. WORKING CONDITIONS: Use of a light microscope and/or a computer for several hours each day. Work position is primarily sitting but may involve walking or standing for brief periods. Attending regular team meetings, training, and occasional regional travel may be required. The incumbent must possess a valid California Driver License and be prepared to operate a state vehicle. Must maintain availability by telephone, chat, and/or email during business hours.

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SUPERVISOR'S STATEMENT: I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.		
PRINT SUPERVISOR'S NAME	SUPERVISOR'S SIGNATURE	DATE
Celeste Dodge, Senior Environmental Scientist (Supervisory)		
EMPLOYEE'S STATEMENT: I HAVE DISCUSSED WITH MY SUPERVISOR THE DUTIES OF THE POSITION AND HAVE RECEIVED A COPY OF THE DUTY STATEMENT. I HAVE READ AND UNDERSTAND THE DUTIES AND ESSENTIAL FUNCTIONS OF THE POSITION AND CAN PERFORM THESE DUTIES WITH OR WITHOUT REASONABLE ACCOMMODATION.		
PRINT EMPLOYEE'S NAME	EMPLOYEE'S SIGNATURE	DATE
PROPOSED, Environmental Scientist		