



Classification: Research Scientist II (Chemical Sciences)  
 Position Number: 880-130-5581-XXX

**DUTY STATEMENT**

CURRENT       PROPOSED

|   |   |   |
|---|---|---|
| <b>RPA Number:</b><br>23-130-123  | <b>Classification Title:</b><br>Research Scientist II (Chemical Sciences) | <b>Position Number:</b><br>880-130-5581-XXX   |
| <b>Incumbent Name:</b><br>Vacant  | <b>Working Title:</b><br>Research Scientist II (Chemical Sciences)        | <b>Effective Date:</b><br>TBD   |
| <b>Tenure:</b><br>Permanent   | <b>Time Base:</b><br>Full time  | <b>CBID:</b><br>R10   |
| <b>Division/Office:</b><br>Central Coast Regional Water Quality Control Board |   | <b>Section/Unit:</b><br>Standards, Planning & Assessment, Nonpoint Source/Grants    |
| <b>Supervisor's Name:</b><br>Daniel Ellis                                     |   | <b>Supervisor's Classification:</b><br>Senior Environmental Scientist (Supervisory) |

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

**General Statement**

Under the general supervision of the Senior Environmental Scientist (Supervisory) 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.



Classification: Research Scientist II (Chemical Sciences)  
 Position Number: 880-130-5581-XXX

**Position Description**

The Research Scientist II (Chemical Sciences) is tasked with leading highly complex and technical scientific research studies, analyzing, and drawing conclusions from highly specialized research studies related to public and environmental health to develop Total Maximum Daily Loads (TMDLs) and synthesize research to support permitting program implementation of scientific elements of the TMDLs. Additionally, the incumbent will use research study conclusions to improve detection, identification, fate and transport of chemicals, including toxic chemicals, nutrients, pesticides, and biological indicators including harmful algal species and bacteria species, as well as their potential human health or ecological impacts. The Research Scientist II (Chemical Sciences) may also be tasked with analyzing and drawing conclusions from epidemiologic or biostatistical investigations (e.g., bacteria levels) to examine community-level effects from water quality impacts. Furthermore, the Research Scientist II (Chemical Sciences) may serve as a team member on public health projects, investigations, and on statewide working groups or advisory committees. The incumbent will also act as a technical scientific consultant for Central Coast Regional Water Quality Control Board (Central Coast Water Board) permitting programs.

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

|     |   |
|-----|---|
| 35% | <p>Develop, write, and guide through the entire approval process highly technical and complex TMDL projects that are scientifically-robust, research-supported, and aligned with the Central Coast Water Board's priorities for protecting human health and aquatic habitats. This includes but is not limited to components of TMDL projects such as strategies and regulatory mechanisms to improve pollution load reduction and problem statements, numeric targets, assimilative capacities, pollutant load allocations, margin of safety, implementation and monitoring plans, and California Environmental Quality Act (CEQA) documents. This also includes outreach to tribal representatives and members of other underrepresented communities, and public outreach. Conduct data analysis, source analysis, land use analysis, linkage analysis, and other advanced statistical analyses to provide support for TMDL project development. Write TMDL project reports and facilitate the administrative processes and procedures for establishing TMDLs. Develop TMDL projects focused on current or emerging science for pesticides and associated toxicity, biological indicators (e.g., bacteria indicators, harmful algal bloom species and associated algal toxins, benthic invertebrate species, bioaccumulation in fish or other organisms consumed by humans and wildlife, etc.), and molecular detection of biological indicators. Assess environmental fate and transport of chemical pollutants and their exposure pathways in humans and other biological receptors. Develop, lead, and implement research studies, programs, and policies to protect water quality and inform TMDL projects.</p> |
|-----|---|



Classification: Research Scientist II (Chemical Sciences)  
 Position Number: 880-130-5581-XXX

|     |  |
|-----|--|
| 30% | <p>Evaluate peer reviewed research, technical memorandums, and other scientific studies to develop new water quality standards, numeric values to interpret narrative water quality objectives, and numeric targets for TMDL. Design and lead scientific studies to evaluate sources and the geographic extent and magnitude of water quality pollution and its impact on environmental and human health to inform TMDL development. Design and oversee contracts to develop new scientific findings to support TMDL development and implementation (e.g., molecular studies, water quality criteria development, fate and transport modeling, body burden and resultant health effects, etc.). Perform data analysis and develop scientific briefs/guidance documents to inform ongoing and future work of the programs implementing TMDLs (i.e., the Irrigated Lands Program, Stormwater Program, and other waste discharge permitting programs). Conduct assessments of the impacts caused by harmful algal blooms, bacteria indicators, toxic chemicals, and bioaccumulation/body burdens of toxins throughout the region. Develop TMDLs that include numeric thresholds that are based on scientific assessments of the relationships between body burdens and resultant health or ecological effects of pesticide and/or nutrient-induced-toxicity. Work on TMDL that address: environmental fate and transport of chemical pollutants and pollution, exposure pathways and body burdens of chemical pollutants in humans and biological receptors, relationships between body burdens and resultant health and/or ecological effects, environmental or human exposures, effects, or risks, and methods and technologies that have the potential to prevent adverse public and environmental health effects of chemical exposures.</p> |
| 15% | <p>Lead cross-program coordination with other Central Coast Water Board programs (e.g., Irrigated Lands, Stormwater, Waste Discharge, Grants, and Cannabis programs) and lead or advise on completing complex environmental and scientific investigations, analyses, research, surveys, and studies related to surface water quality and public health associated with drinking water and recreation beneficial uses of surface waters in the Region. Provide scientific expertise in the development and review of local, regional and statewide policy, plans, permits, and associated programs that may affect water quality or water resources. Act as a scientific lead and research advisor to provide recommendations that promote protection for water quality and prevention and control of illness and mortality, monitoring or testing programs or protocols to measure and/or demonstrate effectiveness of public health and environmental protection strategies. Develop tools to assist non-NPDES permitting and planning staff when interpreting toxicity provisions including developing guidance and methods to assist permit writers in utilizing narrative water quality objectives and toxicity provisions when developing effluent limits in Waste Discharge Requirements (WDRs) and designing ambient water quality monitoring studies. Develop similar and additional tools to assist permit writers in utilizing narrative water quality objectives for turbidity, pesticides, biostimulatory substances, bioaccumulation/body burden, bacteria indicators, etc.</p>   |



Classification: Research Scientist II (Chemical Sciences)  
 Position Number: 880-130-5581-XXX

|     |   |
|-----|---|
| 15% | <p>Represent Central Coast Water Board policies before the general public, special interest groups, technical committees, and governmental agencies, and make presentations before the Central Coast Water Board and State Water Board. Conduct internal and public meetings and presentations to solicit public input and facilitate development, approval, and implementation of TMDLs, pesticide-related water quality criteria, and related scientific policies. Serve as Central Coast Water Board scientific lead on various statewide science committees including, but not limited to, biostimulatory and nutrient criteria development, Bioassessment Working Group, California Cyanobacteria and Harmful Algal Bloom Network, Safe to Eat Workgroup, minimum flows, and estuary protection. Develop Central Coast specific summaries of Statewide water quality data reports and findings produced by Statewide Water Board programs and other agency programs. Act as scientific lead on behalf of the Central Coast Water Board as the region's liaison to both the Management Agency Agreement coordinator with California Department of Pesticide Regulation and the Memorandum of Agreement with the National Oceanic and Atmospheric Administration (NOAA), USEPA, California Coastal Commission, and others regarding the quality management of the watersheds that drain into the Monterey Bay National Marine Sanctuary.</p> |
|-----|---|

**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. Ability to lift 15 pounds, bend and reach above shoulders to retrieve files and/or documents.

**Typical Working Conditions:**

The incumbent works in an office building in San Luis Obispo, in an enclosed cubicle in a smoke-free environment or at an approved telework location. The work schedule is Monday through Friday. Travel may be required locally and within the state.

**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 |
|-----------------|----------------------|------|
| Daniel Ellis    |                      |      |
| Employee Name   | Employee Signature   | Date |
|                 |                      |      |



Classification: Research Scientist II (Chemical Sciences)  
Position Number: 880-130-5581-XXX