CALIFORNIA WATER BOARDS
State Water Resources Control Board
Regional Water Quality Control Boards

Water Board Function: Monitoring and assessment (surveillance)

Water Board Program(s) Relevant to Function:
Monitoring and assessment is relevant to all of the Water Boards' programs and functions, including its regulatory programs. Examples of Water Board monitoring and assessment activities include:

- Surface Water Ambient Monitoring Program (SWAMP)
- California Water Quality Monitoring Council/SB 1070
- Groundwater Ambient Monitoring and Assessment (GAMA)
- Core Regulatory
- Stormwater
- San Francisco Estuary Institute/Regional Monitoring Program (SFEI/RMP; Region 2)
- Southern California Coastal Water Research Project (SCCWRP)--BIGHT '08
- All nine Regional Boards' ambient monitoring programs
- Stream Team
- Clean Beaches Initiative (CBI)/AB 411
- California Wetlands Monitoring Workgroup
- Bioaccumulation Oversight Group (BOG)
- Clean Water Team
- Grant Program
- Impaired Waterbodies/Water Quality Assessment [CWA 305(b)/303(d)]
- Total Maximum Daily Loads

Problem/Issue Description:
The Water Boards engage in many water quality monitoring activities that involve various organizations, agencies and dischargers. These monitoring activities are directed at both groundwater and surface water, and are funded and managed by a variety of sponsors. The Water Boards' interest in water quality monitoring can be divided into two areas – regulatory compliance monitoring and ambient monitoring. The former relates to the regulation of waste discharges to waters of the State. For this purpose, the State and Regional Boards adopt specific monitoring and reporting programs that are conducted by regulated dischargers to determine compliance with waste discharge requirements and NPDES permits.

Ambient monitoring is conducted by a wide range of state, federal, and local agencies, non-governmental organizations, citizen monitoring groups, grant recipients, and regulated dischargers. The information is used to help decision makers and stakeholders understand the status of our waters and aquatic ecosystems, public health and welfare issues related to water quality, and the effectiveness of agency programs to manage our water resources. Conducting ambient water quality monitoring and assessment in an efficient and effective manner is critical to our mission, yet it is

increasingly challenging to direct, coordinate and implement these activities with available resources.

Monitoring of both ground water and surface water is necessary to:

- Assess discharger compliance
- Assess pollutants in the waste stream
- Assess discharge impacts to receiving waters
- Assess ambient water quality status and trends

Overview of Function:
Water Quality Monitoring conducted by the Water Boards is intended to accomplish several critical elements of the regulatory process. It is used to assess discharger compliance with regulatory requirements concerning waste sources, conveyance, treatment and impacts to receiving waters. It is also used to assess the effectiveness of the regulatory, planning, and other water quality management and enhancement efforts by examining the ambient water conditions to reveal the status and trends of water quality related factors.

Water Quality Monitoring is brought to bear in an iterative process of planning, implementation, data collection and analysis. In our regulatory programs, it is used to systematically measure performance of the dischargers, using regulatory permits and directives to ensure that needed monitoring is conducted. Monitoring results are compared with permit requirements, derived from water quality standards to protect beneficial uses, as prescribed in monitoring and reporting programs adopted or authorized by the State and Regional Boards. In ambient monitoring, water quality data are compared to water quality standards and other criteria to derive an assessment of the status of our waters, trends over time, and the health of aquatic ecosystems. Monitoring is also a critical component of our water quality grant programs, to determine the effectiveness of actions to improve water quality.

Role of Water Board Staff:
[Please see Water Board Staff Roles for SWAMP, GAMA, permit monitoring requirements, and citizens monitoring under binder tab 21]

Role of Regional Board Members:
Imposes monitoring and assessment requirements through permits and investigative orders. Requires investigation of water quality resulting from waste discharges.
[Also see Board Member Roles for SWAMP, GAMA, permit monitoring requirements, and citizens monitoring under binder tab 21]

Role of State Board Members:
Reviews petitions from Regional Board requirements and conducts statewide monitoring and assessments programs. Requires investigation of water quality resulting from waste discharges.
[Also see Board Member Roles for SWAMP, GAMA, permit monitoring requirements, and citizens monitoring under binder tab 21]

Primary Issues of Concern:
While many agencies, regulated dischargers, and hundreds of water bond grant recipients spend millions of dollars each year to collect water quality data, California's water quality information system is deficient. There are inconsistent monitoring objectives and methods to collect and assess the data. Often it is not possible to integrate data from different studies. And there is no single user-friendly place to access the data.

Regulatory compliance monitoring also suffers from a variety of inadequacies in its compliance monitoring requirements and internal report review, and the lack of a functional data management system. As a result, the State and Regional Boards are unable to efficiently assure discharger compliance with regulatory requirements and effectively measure the performance and success of its own regulatory and water quality improvement activities. To accomplish this, specific issues to be addressed are:

- Discharger compliance monitoring requirements are not systematically reviewed and updated. They are inadequately planned, reviewed, and assessed.
- Ambient monitoring requirements are significantly insufficient, poorly coordinated, and not properly assessed.
- The Water Boards lack access to a functional geo-referenced data management system with capabilities for user input; data collection, storage, retrieval, data analysis, effective reporting, and public web-based access.
- Monitoring and assessment information needs to be functionally integrated into the Board's mainstream regulatory and water quality improvement programs.
- Monitoring and assessment information needs to be effectively communicated and routinely used to inform and support decision-makers at all levels (the legislature, the Governor's office, agency, Water Board staff, Board members; within and outside the organization).

The California Water Quality Monitoring Council has begun to develop mechanisms whereby monitoring, assessment and reporting activities conducted by many organizations and individuals can be brought together to answer our state's most important water quality related questions. While past improvement efforts have focused mainly on technical details, such as methods consistency, standardizing data formats, and developing large databases, the Monitoring Council believes that the best way to coordinate and enhance California's monitoring, assessment and reporting efforts is first to provide a web-based platform for intuitive, streamlined access to water quality information that directly addresses users' questions. Issue-specific workgroups, under the overarching guidance of the Monitoring Council, would evaluate existing monitoring, assessment and reporting efforts and work to enhance those efforts to improve the delivery of water quality information to the user.

Definition of Key Terms:
None.