

Monitoring Council Background Information Regarding Strengthened Legislation

At their February 23 meeting, the California Water Quality Monitoring Council (Monitoring Council) urged its members to seek ways to influence legislation that would bolster the Monitoring Council's efforts to improve water quality and aquatic ecosystem monitoring, assessment, and reporting. Two bills, [AB 1755 \(Dodd, The Open and Transparent Water Data Act\)](#) and [AB 501 \(Levine, Resources: Delta research\)](#) include provisions that would improve the sharing of water-related data and information between agencies and organizations that monitor or conduct research.

Note: Two other pieces of proposed legislation, [SB 573 \(Pan, Statewide open data portal\)](#) and [AB 1470 \(Alejo, Safe Water and Wildlife Protection Act of 2016\)](#) were also discussed on February 23; however these bills are now considered to be dead.

The Monitoring Council also recommended that discussing these bills could lead to a broader discussion of the Monitoring Council's need for increased authority and resources to successfully perform its mission, as outlined in our enabling legislation and in the first [Triennial Audit Report](#) and [cover letter](#).

Background on the Council and Its Workgroups

[Senate Bill 1070 \(Statutes of 2006\)](#) established the Monitoring Council and tasked it with developing a comprehensive monitoring program strategy for California to improve the efficiency and effectiveness of the state's system of water quality and associated ecosystem monitoring and assessment, and to ensure that the resulting data and information are made available to decision makers and the public via the internet. The legislation envisioned significant coordination among the efforts of a myriad of state, federal, and local governmental agencies and numerous non-governmental organizations (NGOs) currently conducting monitoring within the state.

The Monitoring Council is composed of ten members, confirmed by the Secretaries of the California Environmental Protection (CalEPA) and Natural Resources agencies, representing a wide variety of stakeholders in California's water arena, including state regulatory, resources management, and public health agencies; regulated stormwater, wastewater, and agricultural interests; water suppliers; citizen monitoring groups; the scientific community; and the public. SB 1070 requires coordination with the U.S. Environmental Protection Agency, and a representative from EPA's Region 9 Water Division in San Francisco participates in all Council meetings.

The Monitoring Council has achieved key benchmarks of SB 1070 by completing a [memorandum of understanding](#) between the CalEPA and the California Natural Resources Agency in 2007, submitting [initial recommendations](#) to the agency secretaries in 2008, and completing the [Comprehensive Monitoring Program Strategy for California](#) in 2010. As required by SB 1070, the [2010 Strategy of the Water Board's Surface Water Ambient Monitoring Program](#) (SWAMP) was integrated into the Monitoring Council's Comprehensive Strategy. The Monitoring Council proposed that the best way to coordinate and enhance California's water quality monitoring, assessment and reporting efforts is to first focus on providing a platform for intuitive, streamlined access to water quality information in a format that directly addresses users' questions. To accomplish this, the Monitoring Council recommended formation of issue-specific workgroups tasked with evaluating existing monitoring, assessment, and reporting efforts and identifying ways to enhance those efforts to improve the delivery of water quality information to the user. To date, the Monitoring Council has:

- Convened seven interagency theme-specific workgroups ([Safe Drinking Water Workgroup](#), [Safe to Swim Workgroups](#), [Bioaccumulation Oversight Group](#), [Wetland Monitoring Workgroup](#), [Healthy Watersheds Partnership](#), [Estuary Monitoring Workgroup](#), and [CyanoHAB Network](#)) and two support workgroups ([Data Management Workgroup](#) and [Water Quality Monitoring Collaboration Network](#)) staffed by issue experts representing key stakeholders from both inside and outside state government that work improve coordination, efficiency, and effectiveness of California’s monitoring, assessment, and reporting efforts relating to water quality and aquatic ecosystems;
- Released six theme-based web portals – [Safe to Swim](#), [Safe to Eat Fish](#), and Ecosystem Health of [Wetlands](#), [Streams and Rivers](#), [Estuaries](#), and [Rocky Intertidal Habitats](#) – organized around a set of core, high-priority questions that bring together continuously evolving monitoring data and assessment information and tools from multiple agencies and organizations to better inform decision making by water resource managers and the public;
- Developed the My Water Quality website at www.MyWaterQuality.ca.gov to provide a single point of access to all of these web portals; and
- Prepared [guidelines](#) for the formation of additional workgroups and development of future web portals; portals on Safe to Drink and Harmful Algal Blooms are currently in the planning stages.

Proposed Legislation Relates to Monitoring Council Mandates

[AB 501](#), *Resources: Delta research (Levine)* would require a person conducting Delta research (broadly defined; includes monitoring), whose research is funded, in whole or in part, by the state, to share the primary data, metadata, and other supporting materials created or gathered in the course of that research. The bill would require a state agency that funds or participates in Delta research to (1) make it a condition of a Delta research grant that the grantee implement a data management plan that specifies how the grantee will share research data, metadata, and findings with other researchers and (2) adopt policies and programs to disseminate and share Delta research results, unless the agency determines that sufficient funds are not available for that purpose. The bill would authorize the formation of an interagency group to adopt coordinated guidelines to provide consistent procedural and technical requirements for Delta research and would exempt the adoption of these coordinated guidelines from the procedural requirements for the adoption of regulations.

[AB 1755](#), *The Open and Transparent Water Data Act (Dodd)* would require the Department of Water Resources (DWR) to create and manage a statewide water information system to improve the ability of the state to meet the growing demand for water supply reliability and healthy ecosystems, that, among things, would integrate existing water data information from multiple databases. The bill would require DWR, the State Water Board, and the Department of Fish and Wildlife (DFW) to develop protocols for data sharing, documentation, quality control, public access, and promotion of open source platforms and decision support tools for water data and to submit to the Legislature a report on those protocols. The bill would create the Water Information System Administration Fund and would specify that moneys in the fund would be available, upon appropriation, to DWR for the improvement of water data and for the purposes of the act.

The Monitoring Council and Its Workgroups Are Well Positioned to Satisfy These Needs

These two bills focus on the very same issues already being addressed by the Monitoring Council and its interagency workgroups. The Monitoring Council believes that it provides the best forum to tackle tasks that

these bills would require. It makes sense for the Monitoring Council to be designated as the appropriate organization to lead the changes envisioned in these pieces of legislation.

The Monitoring Council's **Data Management Workgroup** is developing tools and concepts that address recommendations contained in the Delta Stewardship Council's Environmental Data Summit vision paper, [Enhancing the Vision for Managing California's Environmental Information](#), including options for data federation, data management plans, and sharing data via web services. These efforts will provide options and recommendations to the Monitoring Council regarding specific methods to improve data documentation, stewardship, and sharing between agencies and with the public. The Monitoring Council recently endorsed the formation of a Steering Committee to provide direct guidance to the Workgroup effort and to provide management support for workgroup participation. The Steering Committee would providing additional governmental department representation and leadership from data users within agency programs that inform information technology decision making.

The Monitoring Council's **Estuary Monitoring Workgroup** is coordinating the development of interagency data display and analysis tools to enhance its [California Estuaries Portal](#), currently focused on the San Francisco Bay-Delta estuary. Through a partnership with [Bay-Delta Live](#), the Estuary Workgroup is developing a series of dashboards to directly inform real-time resource management decision making, drawing data from a variety of state and federal governmental partners. In one example, fish trawl data from the U.S. Fish and Wildlife Service will combine with turbidity sample results in the form of a "heat map" allowing improved operation of the export pumps to control water withdrawals so as to minimize entrainment of Delta Smelt, while maximizing the reliability of water supplies. In another project, the Estuary Monitoring Workgroup is developing an online interactive version of the Department of Water Resources' Delta [Water Quality Conditions Report](#) to the State Water Board in accordance with Water Rights Decision 1641. With regular incorporation of the latest data, this online version of the report will allow staff of the State Water Board, other state and federal agencies, and the public to more easily explore the impact of water exports on the quality of Delta waters.

The Monitoring Council's **Wetland Monitoring Workgroup** has developed standardized protocols for mapping, classifying, and evaluating the extent and condition of California's wetland resources. The workgroup has also developed standardized protocols for managing and interpreting wetland location, extent, and condition information through a variety of interconnected web-based tools. Wetland location and extent are captured in the California Aquatic Resource Inventory (CARI) that combines the best mapping data from federal, state, and local sources. The California Rapid Assessment Method (CRAM) permits expedited wetland condition assessment tailored to specific wetland types found in California. CRAM is used to assess wetland condition by a variety of state and federal agencies as diverse as the Water Boards, the Coastal Conservancy, Caltrans, the U.S. Army Corps of Engineers, and Moss Landing Marine Laboratories. CRAM data are compiled from trained practitioners within these agencies through the online [eCRAM database](#). Wetland restoration project information is captured in Project Tracker. Targeted toward wetland practitioners, [EcoAtlas](#) compiles all of this information and provides an online platform for analyzing maps and data regarding wetland location, extend, and condition along with water quality and ecosystem information gleaned from a variety of other data repositories. The EcoAtlas watershed profile tool allows users to summarize and analyzed these data on a broader watershed basis. A version of this information tailored to the public is provided through the [California Wetlands Portal](#). State and federal partner agencies and non-governmental organizations, represented by workgroup members, have agreed to embrace these tools, thereby enabling the development of a coordinated wetland program where none formerly existed.

The Monitoring Council's **Healthy Watersheds Partnership** draws on the expertise of the [Surface Water Ambient Monitoring Program](#) (SWAMP) and numerous governmental and NGO partners to assess the condition of California's rivers and streams through chemical, physical habitat, and biological indicators. SWAMP also provides standardized methods and tools through peer reviewed standard operating procedures (SOPs) for

monitoring and assessment, ensuring and documenting the high quality of the resulting data, and managing those data through an accessible, searchable data repository, the [California Environmental Data Exchange Network](#) (CEDEN). CEDEN is in the process of being connected to the federal Water Quality Exchange (WQX), allowing California's data to be combined with data gathered by the U.S. Environmental Protection Agency, U.S. Geological Survey, U.S. Department of Agriculture, and numerous state, tribal, and watershed stewardship organizations around the country. The Healthy Watersheds Partnership managed the creation of the first statewide [integrated assessment](#) of the health and vulnerability of California's watersheds. The Partnership is poised to extend that effort by combining data from additional sources to produce watershed report cards that more accurately capture both health and vulnerability indicators. The goal of this effort is to produce information that can be used to prioritize watershed protection and restoration efforts.

The Monitoring Council's **Bioaccumulation Oversight Group** (BOG) has conducted the first statewide assessment of chemical contaminants found in sport fish from lakes and reservoirs, streams and rivers, and coastal waters to assess potential health risks to human consumers of those fish. Their [Safe-to-Eat Fish Portal](#) summarizes those data, allowing both agency personnel and members of the public to make informed decisions about how to reduce human health risks from mercury, PCBs, legacy pesticides, and other fish contaminants, as well as to prioritize programs aimed at reducing those risks. A recent BOG study provided the first statewide documentation of the risk that mercury poses to wildlife in California's lakes and reservoirs, as well as tools that can be used to assess similar risks in water bodies that have not yet been monitored.

The Monitoring Council's **CyanoHAB Network** is also drawing on the expertise of SWAMP and additional partners from public health agencies, tribes, lake managers, the National Oceanographic and Atmospheric Administration, and NASA to develop and deploy new tools to identify harmful algal blooms (HABs), to document threats to public health, animals, and livestock from the cyanotoxins that HABs release, and to warn recreational users of our waters and inform them on how they can protect themselves. Satellite imagery will be analyzed to provide early warning of developing HABs, and information will be provided to water body managers and local health agencies to help them assess risks and to prevent harmful exposures.

The Monitoring Council Needs Additional Authority and Resources to Achieve Its Legislative Mandates

The Monitoring Council and its workgroups have made substantial strides at improving monitoring, assessment, and reporting through collaboration. However, as identified in the Monitoring Council's first [Triennial Audit Report](#), the goals of developing a coordinated and efficient program to monitor and assess the quality of California's water resources cannot be achieved without (1) the authority to compel state governmental organizations to become directly involved and (2) the resources needed to conduct coordinating activities, including workgroup activities and the development of technology to readily share environmental data between agencies and with the public. SB 1070 assumed that the increased efficiency derived from coordination would pay for the cost of collaborative efforts, such as those conducted by the Monitoring Council's workgroups, and the development of open data systems. The Monitoring Council and its workgroups assumed that initial portal development efforts would lure additional agency programs to come to the table in order to have their data included. However, eight years of implementation have clearly demonstrated that these assumptions were in error.

Since publishing the Triennial Audit, the Monitoring Council has engaged in a strategic planning exercise to better manage the realities of its situation. The Monitoring Council and its workgroups are becoming more nimble, focusing on new and urgent issues as they arise and defining their priorities to serve the needs of governmental partners. These include addressing harmful algal blooms that are increasing in frequency and extent with the rise in global temperatures and the effects of California' drought, and developing tools that

resource managers need to conduct their daily activities, such as data dashboards with which to make informed real-time decisions regarding how to balance the co-equal goals of water supply reliability and ecosystem restoration in the Delta.

The Council is poised to do more; but dedicated resources and authority to compel participation are needed. At a minimum, the Monitoring Council should be specifically tasked with the interagency coordination actions specified in AB 1755 and AB 501. Ideally, additional legislation is needed to refine and strengthen the original mandates of SB 1070.

For Additional Information

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