

**Outline of the First Triennial Audit of Implementation:
Comprehensive Monitoring Program Strategy
of the California Water Quality Monitoring Council
through December 2013**

Goals:

- 1) Water quality and associated ecosystem monitoring is more efficient and effective through coordination among governmental agencies and non-governmental organizations
 - a) Data gaps are identified and filled
 - b) Redundant monitoring is minimized
 - c) Quality control measures are in place to ensure that data are useable – are of known and documented quality
 - d) Data from multiple sources can be combined to enable broader assessments
- 2) Agency decision makers, regulators, resource managers, legislators, and the public have ready access to the integrated services of monitoring and assessment, including quality controlled data, needed to make decisions
 - a) Monitoring data are turned into meaningful assessment information
 - b) Monitoring and assessment efforts are designed to address management questions
 - c) Monitoring data and assessment information are readily accessible
- 3) Water quality improvement projects financed by the state provide specific information necessary to track project effectiveness with regard to achieving clean water and healthy ecosystems

Accomplishments:

- 1) Formation of six theme-specific interagency workgroups to improve collaboration in monitoring, assessment and reporting through the process of developing web portals to bring relevant data and information to decision makers and the public
 - a) Safe Drinking Water Workgroup
 - b) Safe to Swim Workgroup
 - c) Bioaccumulation Oversight Group (safety of eating fish and shellfish)
 - d) Wetland Monitoring Workgroup
 - e) Healthy Streams Partnership
 - f) Estuary Monitoring Workgroup
 - g) (Ocean and Coastal Workgroup – scoping initiated)
- 2) Formation of a data management workgroup to provide recommendations in the areas of data management, GIS and web development
- 3) Formation of Water Quality Monitoring Collaboration Network that provides regular web-based seminars to foster information exchange regarding existing and emerging monitoring programs and to encourage broader use sound monitoring, assessment, reporting, and data management tools and methods by agency personnel, citizen monitors and other interested parties
 - a) Webinars recorded and continuously available for viewing via the Collaboration Network's web page and YouTube
- 4) Involvement of program staff from numerous state, federal, and local governmental agencies and non-governmental organizations
- 5) Public release of six question-based, easy to use My Water Quality portals to bring monitoring data and assessment information to decision makers and the public – add portal use statistics
 - a) Is it safe to swim in our waters?
 - b) Is it safe to eat fish and shellfish from our waters?
 - c) Are our aquatic ecosystems healthy?

- i) Wetlands
 - ii) Streams and rivers
 - iii) Estuaries
 - iv) Rocky intertidal habitats (tide pools)
- d) (Is our water safe to drink? – mockup approved for portal development)
- 6) Increased visibility and credibility of participating monitoring programs
- 7) Development of consistent monitoring, assessment, reporting, and data management tools
 - a) Wetland and riparian area mapping
 - b) Rapid wetland assessment (CRAM – SWAMP endorsed)
 - c) California Aquatic Resources Inventory – statewide base map of water resources for geospatial data visualization
 - d) Data management and visualization
 - i) CEDEN
 - ii) EcoAtlas
 - iii) Estuary Monitoring Workgroup open-source data visualization tools
 - e) Partnering with Surface Water Ambient Monitoring Program (SWAMP) for scientifically validated
 - i) Monitoring protocols
 - ii) Quality assurance procedures
 - iii) Data quality documentation
 - iv) Data management
- 8) SWAMP Comprehensive Monitoring and Assessment Strategy updated to reflect leadership role in Healthy Streams Partnership and Bioaccumulation Oversight Group and as a source of monitoring and assessment methods, quality assurance, and data management tools to other Monitoring Council workgroup efforts
- 9) Wetland and Riparian Area Monitoring Plan (WRAMP) monitoring and assessment framework developed by Wetland Monitoring Workgroup and endorsed by Monitoring Council
- 10) State-federal partnership for wetland monitoring and assessment developed by Wetland Monitoring Workgroup
- 11) Initial bioaccumulation monitoring and assessment strategy developed by Bioaccumulation Oversight Group
- 12) Wetland Monitoring Workgroup assisting in the development of a wetland and riparian area protection policy by the State Water Resources Control Board
- 13) First comprehensive statewide survey of contaminants in sport fish in all California water body types conducted by the Bioaccumulation Oversight Group and published in five annual reports and through the Safe to Eat Fish and Shellfish Portal
- 14) First statewide advisory on eating fish from lakes and reservoirs developed by OEHHA and supported by data developed through Bioaccumulation Oversight Group monitoring
- 15) First statewide integrated multi-metric assessment of watershed health – funded by USEPA Healthy Watershed Initiative and guided by Healthy Streams Partnership
- 16) SWAMP monitoring and assessment methods and quality assurance and data management procedures are being incorporated into the regulatory programs of the State Water Board

Challenges:

- 1) Lack of formal support for Monitoring Council's strategy from Agency Secretaries
- 2) Limited support from departmental and program managers
 - a) Leads to inconsistent workgroup leadership
 - b) Restricts participation in workgroup and portal development efforts
 - c) Numerous workgroup-developed tools, especially in the area of wetlands, have no state agency home to provide for long-term maintenance, training and development
 - d) Uneven awareness and use of workgroup-developed tools by state agencies and others
- 3) Lack of participation by numerous state governmental organizations identified in the legislation – outreach needed
 - a) California Coastal Commission
 - b) State Lands Commission
 - c) Department of Parks and Recreation
 - d) Department of Forestry and Fire Protection
 - e) Department of Pesticide Regulation
- 4) Lack of participation by other relevant agencies and programs – outreach needed
 - a) Lake and Streambed Alteration program of the Department of Fish and Wildlife
 - b) State Coastal Conservancy
 - c) Shellfish protection and marine biotoxin programs of the Department of Public Health
 - d) Division of Water Rights of the State Water Board
 - e) California Department of Transportation
 - f) Biogeographic Data Branch of the Department of Fish and Wildlife
 - g) Delta Science Program of the Delta Stewardship Council
- 5) Lack of dedicated funding for the program – existing limited funding from State Water Board, USEPA, SFCWA
 - a) Resources needed to initiate and sustain collaboration
 - i) Staff time for workgroup meetings and monitoring, assessment, and reporting collaboration
 - ii) Improving data management and access infrastructure
 - iii) Portal development and maintenance
 - b) Business plans developed by each workgroup could begin to answer this need
- 6) Most data still siloed within departmental programs and offices – lack of commitment to sharing
 - a) Largely inaccessible to others or to the public
 - b) Inconsistent formatting
 - c) Inconsistent documentation
 - d) Inconsistent quality assurance/quality control
- 7) General lack of access to data generated by citizen monitoring groups
- 8) Insufficiently rapid access to data needed to make timely decisions, such as swimming safety
- 9) Inconsistent use of indicators and assessment thresholds by varying departments and programs
- 10) Need for greater interaction between theme-specific Monitoring Council workgroups
- 11) Relevant statewide assessment endpoints and measures generally lacking in many areas
- 12) Commitment to data transparency lacking in some agencies and programs
- 13) Need for consistent base map (GIS layer) of California's water resources
 - a) Lack of state steward for National Hydrography Dataset and National Wetlands Inventory
 - b) Lack of procedures for incorporation of locally derived intensive mapping efforts

Unaddressed Mandates of SB 1070 and MOU:

- 1) Monitoring Council recommendations to ensure that water quality improvement projects financed by the state provide specific information necessary to track project effectiveness with regard to achieving clean water and healthy ecosystems [CWC § 13181(a)(6)(B)] [MOU, Section V.4.]
- 2) Agreement, including agreement on a schedule, with regard to the comprehensive monitoring of statewide water quality protection indicators that provide a basic minimum understanding of the health of the state's waters [CWC § 13181(e)(2); assigned to State Water Board in coordination with the Monitoring Council]
- 3) Identification of the full costs of implementation of the comprehensive monitoring program strategy and proposed sources of funding for the implementation of the strategy, including federal funds that may be expended for this purpose [CWC § 13181(f); assigned to State Water Board] [MOU, Section V.4.; recommendations assigned to the Monitoring Council]
- 4) The Secretaries for Cal/EPA and Resources will oversee the implementation efforts of this MOU [MOU, Section IV]

Under this MOU, the responsibilities of the Secretaries of Cal/EPA and Resources (collectively "the Secretaries") include, but are not limited to, the following:

1. The Secretaries will direct their boards, departments, and offices to establish and cooperatively participate in the Monitoring Council for improving integration and coordination of water quality and related ecosystem monitoring, assessment, and reporting.
 2. The Secretaries will establish policies and procedures to ensure that water quality improvement projects, including bond-funded grant projects financed by the state, include the ability to track project effectiveness with respect to specific water quality and ecosystem health.
 3. The Secretaries will meet annually to review the Monitoring Council's progress in integrating and coordinating water quality monitoring programs with state, local, and federal agencies, and with the public to identify additional opportunities for progress.
 4. The Secretary of Cal/EPA, commencing December 1, 2008, will conduct a triennial audit of the completeness and effectiveness of the comprehensive monitoring program strategy that has been recommended by the Monitoring Council. The Secretary of Cal/EPA will consult with the Secretary of the Resources Agency in conducting the audit.
- 5) Monitoring Council to review existing water quality monitoring, assessment, and reporting efforts and recommend specific actions and funding and staffing levels necessary to coordinate and expand those efforts, as needed, to create an ongoing assessment of the health of the state's waters and the effectiveness of programs to protect and improve the quality of those waters. [MOU, Section V]

Sustainability:

- 1) Lack of sustainable dedicated funding and management support for coordination and collaboration is a challenge for all workgroups and for the Monitoring Council
 - a) Most workgroups rely on voluntary efforts of a few staff members and one-time grants, departmental budget redirections and contracts to accomplish coordination and portal development tasks
- 2) Some workgroups efforts have departmental funding

- a) SWAMP portion of Healthy Streams Partnership monitoring funded by State Water Board and USEPA
 - b) Bioaccumulation Oversight Group monitoring and collaboration funded by State Water Board and USEPA
 - c) Coastal beach swimming safety monitoring funded through USEPA and State Water Board
 - d) Estuary Monitoring Workgroup leadership and portal development funded by State and Federal Contractors Water Agency – limited term basis
- 3) To be successful, workgroup and portal development efforts must be blended into the normal way of doing business of governmental organizations – How can Monitoring Council-related actions satisfy existing departmental monitoring, assessment, and reporting mandates?
- a) Water Rights Decision 1641 interactive online Delta water quality report to replace annual DWR reporting to the Water Boards – part of California Estuaries Portal
 - b) Environmental outcomes performance measures of the Water Board tied to My Water Quality
 - c) Drinking water system public reporting through the Safe to Drink Portal (?)
 - d) Tracking of Bay-Delta Conservation Plan habitat restoration projects through EcoAtlas and Estuary Portal (?)

Next Steps and Recommendations:

- 1) Once again, request agency secretaries approval of comprehensive monitoring program strategy
- 2) Revisit MOU with agency secretaries to achieve agreement on rolls and responsibilities of all parties
- 3) Increase outreach to agency and program managers
- 4) Through workgroup members, identify monitoring, assessment and reporting mandates of existing and potential governmental agency and non-governmental partners that can be addressed by the Monitoring Council's workgroup processes, tools and the My Water Quality portals
 - a) Use these to entice agency/organization managers to participate in workgroups, to utilize the tools developed by those workgroups, and to fund portal development/maintenance
 - b) The Sacramento-San Joaquin Delta is a key resource around which such collaboration should be built
- 5) Develop business plans that identify key workgroup actions, necessary funding and potential funding sources to ensure sustainability
- 6) Develop recommendations for data formats and data transfer protocols to ensure that water resource data can be effectively shared (machine to machine) between agencies and with other data providers and users
- 7) Develop proposal for legislation needed to advance implementation of the Monitoring Council's strategy