

## ***The Delta Regional Monitoring Program (RMP)***

The Delta RMP was initiated by the Central Valley Regional Water Quality Control Board (Regional Water Board) with the primary goal of tracking and documenting the effectiveness of beneficial use protection and restoration efforts through comprehensive monitoring of water quality constituents and their effects in the Delta. The development of the Delta RMP was initially prompted by the collapse of the populations of several species of fish in the early 2000s, an event that triggered new inquiries into the potential role of contaminants in what is now termed the Pelagic Organism Decline (POD). However, these inquiries highlighted shortcomings of existing monitoring efforts to address questions at the scale of the Delta. The recognition that data from current monitoring programs were inadequate in coverage, could not easily be combined, and were not adequate to support a rigorous analysis of the role of contaminants in the POD persuaded regulatory agencies of the need to improve coordination across multiple monitoring programs.

In addition, the Delta RMP reflects an increasing desire among water quality and resource managers throughout the state for more integrated information about patterns and trends in ambient conditions across watersheds and regions. In addition, many stressors on beneficial uses are interrelated and must be addressed more holistically. The Delta RMP can be seen as a complement to existing larger-scale collaborative monitoring efforts throughout the state that attempt to address questions and concerns about regional conditions and trends (e.g., San Francisco Bay RMP, Southern California Bight Monitoring Program, Surface Water Ambient Monitoring Program).

The Delta RMP is one of the priority actions of the Bay-Delta Strategic Workplan<sup>1</sup>, which

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<sup>1</sup> California Water Board. 2008. Strategic Workplan for Activities in the San Francisco Bay/Sacramento- San Joaquin Delta Estuary.  
[http://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/strategic\\_plan/docs/baydelta\\_worplan\\_final.pdf](http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/strategic_plan/docs/baydelta_worplan_final.pdf)

responds to a joint resolution of the State Water Board and the Central Valley and San Francisco Bay Regional Water Boards<sup>2</sup>. The Delta RMP Steering Committee (SC) was formed in 2012. Subsequently, the SC appointed the two initial Technical Advisory Committee (TAC) co-chairs (Joe Domagalski, U.S. Geological Survey [USGS], and Stephen McCord, McCord Environmental Inc. [MEI]) and a TAC. The SC also appointed the Aquatic Science Center (ASC) as the interim implementing entity. Further work resulted in agreements on the goals and objectives of the Delta RMP and a Management Questions Framework to guide monitoring and assessment at the regional scale. Work to date has also helped to identify a program structure and the initial program priorities (current use pesticides, mercury, nutrients, and a pathogens special study). Since 2011, the Central Valley Regional Water Board and NPDES (National Pollution Discharge Elimination System) permittees have been working on options for modifying receiving water monitoring of regulated dischargers to make it more efficient and allow the shifting of resources to address regional questions. In October 2014, the Central Valley Regional Water Board passed a resolution that allows for participation in the Delta RMP by NPDES dischargers in lieu of individual receiving water compliance monitoring.

### ***Steering Committee***

*The core responsibilities and authorities of the Steering Committee (SC) are to determine the overall budget, allocate program funds, track progress, and provide direction to the Program from a manager's perspective. The SC will meet quarterly.*

The Delta RMP Steering Committee is the decision-making body of the Delta RMP. The Steering Committee is responsible for establishing the RMP's strategic direction and the policies and procedures that govern its operation. The Steering Committee may direct RMP staff and advisory committees to assist in meeting the objectives and may delegate day-to-day functions

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<sup>2</sup> Central Valley Regional Water Board. 2007. Resolution No. R5-2007-0161: Water Board's actions to protect Beneficial Uses of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. [http://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/resolutions/r5-2007-0161\\_res.pdf](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2007-0161_res.pdf)

of the RMP to the RMP's implementing entity.

The Steering Committee authorizes the implementation of agreements among the participating members and, specifically:

1. Directs the fiscal/operating agent to request and receive federal, state, local, and private funds from any source and to expend those moneys to accomplish the Delta RMP's goals
2. Approves budgets and expenditures
3. Directs the fiscal/operating agent to enter into partnerships, contracts, and other legal agreements on behalf of the Delta RMP, as necessary to fulfill the Delta RMP's mission
4. Approves Delta RMP work products and any other plans, products, or resolutions of the Delta RMP
5. Sets priorities and oversee the activities of the Stakeholder and Technical Advisory Committees
6. Establishes and oversees the implementation of policies and procedures necessary to the day-to-day functioning of the Delta RMP

Membership on the Steering Committee will not diminish the regulatory responsibilities or authority of any participating agency or organization.

#### *SC co-Chairs*

SC co-Chairs are part of the SC, whose responsibilities are to establish policies and procedures that govern its operation. Co-chairs serve as chair of the meetings, facilitating discussion, and encouraging members to participate in discussions. At the end of the meeting, the chair recaps what the group has agreed upon, including who has what responsibility. The co-chairs have an oversight role and are responsible for the overall functioning of the committee. Specific tasks should be assigned to staff.

## ***Technical Advisory Committee***

*Under direction of the Steering Committee, the Technical Advisory Committee (TAC) provides technical oversight of the RMP. It consists of technical representatives from the RMP membership groups, with technical and administrative support from RMP staff<sup>3</sup>. The TAC makes recommendations to the Steering Committee based on technical evaluation of proposed or existing program elements. The Steering Committee then considers TAC recommendations in formulating their decisions. The TAC will meet as needed, at a minimum quarterly.*

The purpose of the TAC is to provide oversight of the technical content and quality of the RMP. The responsibilities of the TAC are to:

- assist the Steering Committee in developing, reviewing, and revising the Delta RMP's monitoring and special studies in line with the management questions;
- report to the Steering Committee on technical issues and guide the development of white papers as requested by the Steering Committee;
- select and convene subcommittees to provide guidance on specific technical issues, with members drawn from both within and outside the TAC, as needed, to include specialized scientific or technical expertise not fully represented on the TAC;
- provide technical review and recommendations to the Steering Committee on project proposals;
- provide technical review and recommendations to the Steering Committee on policies being considered for adoption, and;
- provide technical review of the planning, development, and publication of RMP communication products, including the Pulse of the Delta report.

The TAC consists of experts in water quality, estuarine science, and related fields who are able to provide scientific opinions on the broad range of subject areas related to the Delta RMP's

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<sup>3</sup> Currently, staff from the Central Valley Regional Water Board and Aquatic Science Center have been specifically assigned to work on the Delta RMP and are funded by the State Water Board.

activities. Finally, TAC members work collaboratively to examine technical issues and develop advice and recommendations for the Steering Committee.

### *TAC Structure*

TAC members will be drawn from RMP membership groups represented on the Steering Committee, but are not limited to these. Each designated SC member designates one person to sit on the TAC. Thus, the voting membership of the TAC consists of technical representatives of the groups represented on the SC.

Membership on the TAC is for a two-year term. The number of terms served by an individual is not limited but membership on the TAC must be renewed. The members of the TAC will appoint a Chair for a two-year term<sup>4</sup>. A qualified Chair has a broad understanding of scientific issues in the Delta and can provide strong leadership, meeting management, and direction to the group.

In particular instances (e.g., a represented group has only a few staff with the appropriate expertise), a SC member or alternate may serve on the TAC. If a particular issue comes up that may create a conflict of interest, the SC member serving on the TAC would recuse themselves from decisions on the SC.

A conflict of interest may also arise if members of the TAC or its subcommittees have a direct financial interest in a funding recommendation or decision (e.g., a consultant or researcher intending to bid on a contract for a proposed program activity). The participation of local scientists in planning processes can bring tremendous value to the RMP, but the RMP needs to ensure that the monitoring that is recommended and performed is not inappropriately biased by scientists that may have a conflict of interest. In cases where a conflict of interest exists, the TAC or subcommittee members will recuse themselves from funding recommendations. External peer review of workplans and products by scientists with no financial interest in the

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<sup>4</sup> The exceptions are the initial TAC co-chairs, which were selected by the SC and charged with forming the TAC.

work to be done is essential not only to attaining high standards of scientific rigor, but also provides a mechanism for preventing the inappropriate influence of scientists with a conflict of interest.

Delta RMP staff act as the liaison between the Steering Committee, the TAC, and the TAC subcommittees. During the design period, the TAC co-chairs provide the communication link between the SC and the TAC and will be assisted by Delta RMP staff (ASC) as needed.

### *TAC co-Chairs*

The co-chairs coordinate the TAC's oversight of the technical content and quality of the RMP, co-chair TAC meetings, and help to ensure review of all program proposals and technical products. During the design period, they will also provide a communication link between the SC and TAC and help to ensure consistencies and resolve timing and scheduling issues between the SC, TAC, and subcommittees.

More specific roles of the TAC co-chairs:

- During the design period, communicate regularly with program staff and TAC subcommittees to ensure deadlines are met and the monitoring plan is developing consistently across all committees
- In coordination with staff, develop meeting agendas and meeting materials at least two weeks in advance of each meeting
- Facilitate meetings to ensure agenda is covered, meeting is on time, and participants are given ample opportunities to contribute
- Facilitate decisions and help ensure that decisions and recommendations are documented.

### *Flexibility*

The TAC may recommend adding subcommittees as appropriate. If there is need for additional

expertise, subcommittees may be formed that report to the TAC. The subcommittees may be drawn from the organizations represented on the Steering Committee but may be drawn from a variety of sectors, e.g. academia, NGOs, government agencies, and industry. In addition, the TAC may advise ASC to convene appropriate science advisory panels and/or independent experts for specific projects, initiatives, reports, and studies.

### *Other Stakeholders*

All meetings of the Steering Committee and Technical Advisory Committee are open to the public. Stakeholders that are not RMP participants will have the opportunity to weigh in by participating in meetings and providing additional project and product review. Stakeholders may also participate in specific technical subcommittees.

### *Implementing Entity*

The implementing entity oversees and administers the Delta RMP. Currently, the implementing entity is the Aquatic Science Center (ASC). The main responsibilities of the implementing entity are outlined in **Table 1**.

### *Delta RMP staff*

ASC and the Central Valley Regional Water Board currently provide staff support to the Delta RMP. ASC staff responsibilities are identical with the responsibilities outlined for the implementing entity (**Table 1**). Regional Board staff provides additional logistical support to the SC and TAC.

### *Leadership Team*

The Delta RMP leadership team consists of designated committee chairs (TAC co-chairs and SC co-chairs) and senior Delta RMP staff. In the leadership team, program staff works closely with

committee chairs to 1) plan, guide, and lead program activities, 2) ensure planned activities efficiently achieve program goals and objectives, and 3) identify potential issues and challenges as well as options for effectively addressing them.

**Table 1.** Main responsibilities of the implementing entity of the Delta RMP.

Responsibilities	Tasks
1. Program management	<ul style="list-style-type: none"> <li>a. Program planning                             <ul style="list-style-type: none"> <li>· Prepare workplans and budgets</li> </ul> </li> <li>b. Coordinate program activities                             <ul style="list-style-type: none"> <li>· Act as the liaison between the SC, the TAC, and the TAC subcommittees</li> <li>· Coordinate with program participants</li> <li>· Plan workflow</li> <li>· Track deliverables</li> </ul> </li> <li>c. Coordinate collaborating agencies and organizations                             <ul style="list-style-type: none"> <li>· Organize and participate in meetings to coordinate work and programs</li> </ul> </li> <li>d. Contract and financial management                             <ul style="list-style-type: none"> <li>· Track expenditures</li> <li>· Accounting</li> <li>· Coordinate audits</li> <li>· Provide financial updates to SC</li> <li>· Develop and oversee contracts</li> <li>· Invoice program participants</li> </ul> </li> <li>e. Technical oversight                             <ul style="list-style-type: none"> <li>· Coordinate peer review</li> <li>· Review and coordinate review of RMP work products to ensure the quality of deliverables</li> </ul> </li> </ul>
2. Governance	<ul style="list-style-type: none"> <li>a. SC meetings                             <ul style="list-style-type: none"> <li>· Prepare agenda packages and background documents; participate in meetings, write meeting summaries, action item follow-up, plan meetings with Chair and Co-Chair.</li> </ul> </li> <li>b. TAC meetings:                             <ul style="list-style-type: none"> <li>· Prepare agenda packages and background documents; participate in meetings, write meeting summaries, action item follow-up.</li> </ul> </li> <li>c. TAC subcommittee meetings                             <ul style="list-style-type: none"> <li>· Prepare agendas and background documents; participate in meetings, write meeting summaries, action item follow-up</li> </ul> </li> </ul>
3. Communications	<ul style="list-style-type: none"> <li>a. Implement communications plan                             <ul style="list-style-type: none"> <li>· Produce and distribute RMP products</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Develop and maintain a calendar of RMP communications products</li> <li>• Identify appropriate communication channels and disseminate RMP information</li> <li>• Implement planned events (e.g. annual meeting)</li> <li>• Respond to or coordinate response to inquiries for RMP data and reports, including press calls.</li> </ul>
<p>4. Data management</p>	<p><i>Perform and/or coordinate the following activities</i></p> <p>a. Data processing and upload to CEDEN</p> <ul style="list-style-type: none"> <li>• Format data</li> <li>• Upload RMP results to RDC database and replicate to CEDEN</li> <li>• Coordinate data collection, data management, and laboratories</li> <li>• Track data deliverables and pending issues</li> </ul> <p>b. Database maintenance and online data access</p> <ul style="list-style-type: none"> <li>• Incorporate updates and corrections to data as needed, including re-analyzed results and updates implemented by CEDEN/SWAMP</li> <li>• Provide, maintain, and upgrade web-based data access tools</li> </ul> <p>c. Quality assurance</p> <ul style="list-style-type: none"> <li>• Perform QA/QC review</li> <li>• Develop, maintain, and update Quality Assurance Program Plan (QAPP)</li> <li>• Coordinate interlaboratory comparison tests</li> </ul> <p>d. SOPs and templates</p> <ul style="list-style-type: none"> <li>• Develop and maintain laboratory SOP file system</li> <li>• Provide, maintain, and enhance software tools and processes such as EDD templates</li> <li>• Write and maintain internal SOPs to increase efficiency of data management tasks</li> </ul>
<p>5. Sampling Coordination and Logistics</p>	<p><i>Perform and/or coordinate the following activities:</i></p> <p>a. Coordinate field sampling</p> <p>b. Prepare sampling plans</p> <p>c. Make maps of sampling locations</p> <p>d. Field sampling</p> <p>e. Ensure delivery of samples to laboratories</p>
<p>6. Analysis, Assessment, and Reporting</p>	<p>a. Summarize information on data collected</p> <p>b. Develop technical content (text, analysis, graphics)</p> <p>c. Design and publish reporting products</p> <p>d. Establish, coordinate, and maintain web presence of RMP products and results</p>