

CMARP 1999 Workplan Summary

CMARP is the comprehensive monitoring, assessment, and research program which is being developed to evaluate the changes that the CALFED program is proposing for the Bay Delta and Central Valley environment and water management system. The program uses the incremental approach of adaptive management and will build upon existing monitoring, assessment and research program already in existence.

CMARP activities and products are developed in conjunction with the CALFED programs (ecosystem, levees, water quality, watershed management, water use efficiency, transfers, storage and conveyance) and their respective technical teams. Many of the issues listed below and the corresponding tasks serve multi-program needs, although all the programs benefitting from the issue/task have not been listed in order to avoid redundancy.

Critical Issues/Tasks

1. **Issue:** *Development and refinement of monitoring strategies in concert with evolving Stage I Actions including Conservation Strategy, Category III Program and common program actions.*
Task: Continue coordination with CALFED Program Managers. Identify program monitoring and research needs as programs are developed.
When: Ongoing through 1999.

2. **Issue:** *Operating Budget for FY 1999-2000 and 2000-2001*
Task: Identify budgetary needs for CMARP tasks to be accomplished within this time frame.
When: For FY 1999-2000, by May
For FY 2000-2001, by Fall

3. **Issue:** *Research Program*
Task: Update and refine CALFED Program questions; develop and prioritize research needs; establish a request for proposal process including peer review of proposals.
When: Fall, 1999

4. **Issue:** *Interim and long term institutional structure for CMARP within CALFED structure.*
Task: Organize a sub-committee of the steering committee to develop recommendations for a structure. Develop specifications for Chief Scientist position.
When: Fall, 1999

5. **Issue:** *Peer review process for CALFED/Category III*
Task: Develop and implement a short-term, transitional external peer review process for the current funding round of Category III proposals. Develop a long-term peer review process for year 2000 proposals and beyond.
When: April, 1999
6. **Issue:** *Follow up on Category III recommendations*
Task: Develop standard protocols for monitoring various types of Category III projects within a region, and demonstrate the assessment, interpretation and reporting of data from these projects on a regional basis.
When: Fall, 1999
7. **Issue:** *Diversion effects on fish*
Task: A) Identify questions that can be addressed through monitoring and research in the short-term(1999-2000) and longer-term.
 B) Assemble a work team to develop and implement proposals that address priority questions.
 C) With current Real-Time Program Work Team, assess the effectiveness of the current monitoring program to reduce entrainment and increase operation flexibility.
 D) Develop recommendations to improve effectiveness of operation changes. Start the development of research-based questions that distinguish for fish, the consequences of the through Delta alternative from alternative three.
 E) Use the results of the third delta smelt workshop to determine what additional research is needed to address CALFED Stage 1 actions, including an assessment of the isolated transfer facility. Work will be prioritized and include a list of actions that can be started in 1999-2000.
 F) Based on a work team recommendation and in concert with external peer review panel recommendations, select and begin studies to document physical and biological mechanisms involved in the fish/X2 relationships.
When: A, B, C, April, 1999
 D, Fall, 1999
 E, July, 1999
 F July, 1999
8. **Issue:** *Fish Screen Evaluation*
Task: Establish a team to develop information necessary to evaluate the two proposed Stage 1 fish screens.
When: March, 1999

9. **Issue:** *Municipal Source Water Quality*
Task: Work with an agency and stakeholder committee to develop questions and priorities for directed actions and proposed solicitations that address loadings and reductions of contaminants that affect municipal source water quality. Identify a time schedule for work to be done for 1999-2000.
When: July, 1999
10. **Issue:** *Marking hatchery salmon*
Task: Design and implement a constant fractional marking program of salmon smolts released from Central Valley chinook hatcheries.
When: Fall, 2000
11. **Issue:** *Delta topography and bathymetry*
Task: Assemble an agency/stakeholder committee to assess the feasibility of using new techniques to improve the topographic and bathymetric coverage of the Delta. The committee will also establish a process to update location and elevations of recently established GPS benchmarks.
When: Fall, 1999
12. **Issue:** *Review of Streamflow Network*
Task: Organize a multi-agency committee to review the current stream-flow network in the Delta and Central Valley. Identify network gaps, recommend improvements and identify funding needs.
When: Fall, 1999
13. **Issue:** *Non-indigenous Species*
Task: Participate in the non-indigenous species group and through the group identify areas and specific tasks where activities will dovetail into CMARP programs.
When: April, 1999
14. **Issue:** *Integration of Conservation Strategy and Ecosystem Restoration Program monitoring needs assuring that the needed detail of species of concern are included in the overall program.*
Task: Assess metrics appropriate for the Conservation Strategy including: changes in habitat spatial extent and configuration, changes in key habitat quality attributes (e.g. riparian vegetation structure and species composition, substrate particle size distribution), in relation to composite population trends in species of concern, changes in local and regional species diversity and trends in non-indigenous species. Focus on developing these metrics for habitats within 2 primary areas of concern: San Francisco Bay-Delta and Cosumnes Watershed. Products will include the design of comprehensive habitat mapping, multispecies inventory, and non-indigenous species management.
When: Begin, July, 1999

15. **Issue:** *Data Assessment and Reporting Process*
Task: Continue development of a data assessment and reporting process using models from other monitoring programs if appropriate. Recommend an organizational process that ensures data collected becomes information and are brought to the attention of appropriate resource managers. Establish a work team from representatives of the Inventory Group, Data Management, and Data Assessment and Reporting groups to identify prioritized short-term development of a data assessment and reporting process.
When: April, 1999
16. **Issue:** *Indicator Development and Conceptual Models*
Task: Complete a list of management level indicators that will be used in the data assessment and reporting process. Choose some indicators and begin pulling together the existing data that would support them. Follow up on indicators recommendations by CALFED Indicators Workgroup and EDF expert panel.
When: Fall, 1999
17. **Issue:** *First Annual CALFED Science Conference*
Tasks: Design a conference for autumn of 2000 with presentations and published proceedings on active research and monitoring activities related to CALFED, including science projects funded by Category III.
When: Winter, 1999
18. **Issue:** *Conceptual Model factsheets*
Task: Collaborate with other programs to prepare fact sheets for CALFED program managers, agency managers and stakeholders that illustrate some of the conceptual models used in designing CMARP.
When: Fall, 1999
19. **Issue:** *Demonstration projects for CMARP monitoring and integration ideas*
Tasks: Conduct a demonstration monitoring program for either of two key issues: fish tissue contamination monitoring or aquatic toxicity monitoring. The program should be show sampling site network, ability for several programs to collaborate and coordinate, efficacy of common methods, and cooperative synthesis, interpretation and reporting of information.
20. **Issue:** *Prototype watershed monitoring program*
Task: Use Cosumnes watershed program as a demonstration and basis to fully develop a prototype watershed monitoring plan, assess needs for basic landscape information and establish pilot studies for habitat and multispecies inventory assessment.
When: Begin Fall, 1999

Process for Stakeholder and Agency Involvement

CMARP steering committee will continue to report to CALFED management, Policy Group and respective agency management for approval and progress on activities.

The steering committee members were selected to broadly represent the agency and stakeholder community. However, the most active steering committee members are agency and environmental members. Additional communication efforts will be initiated.

The various combinations of technical teams created to write the monitoring programs will be recalled as needed. The teams members were selected solely upon their technical expertise consequently resulting in a broad representation among the agency, stakeholder and independent community.