

**ERPP SCIENTIFIC REVIEW PANEL**  
October 6-9, 1997 (tentative)  
Sacramento, CA  
Draft Agenda

**PURPOSE OF PANEL DISCUSSIONS**

To provide advice and recommendations on key issues surrounding development of the Ecosystem Restoration Program Plan (ERPP) of the CALFED Bay-Delta Program.

**Day 1**

**WELCOME -- BACKGROUND & GENERAL OVERVIEW**

- Overview
- Background

**PLANNING APPROACH of ERPP**

- Question 1
- Question 2
- Question 3

**PUBLIC COMMENT**

**DAY 2**

**SETTING TARGETS**

- Question 4

**SCOPE of the ERPP**

- Question 5

**PROCESS OF ADAPTIVE MANAGEMENT**

- Question 6

**PROCESS OF PHASING**

- Question 7
- Question 8

**PUBLIC COMMENT**

**DAY 3**

**INDICATORS OF ECOSYSTEM HEALTH**

- Question 9

**SCIENTIFIC FOUNDATION OF ERPP**

- Question 10

**IRREVERSIBLE CHANGES**

- Question 11

**REQUIREMENTS FOR SUCCESSFUL IMPLEMENTATION**

- Question 12

**PUBLIC COMMENT**

**DAY 4**

**FINAL DELIBERATION AND DEVELOPMENT OF RECOMMENDATIONS**

**SUMMARY AND REVIEW AT DISCRETION OF CHAIR AND PANEL**

**PUBLIC COMMENT**

**REVIEW AND WRAP UP**

- Wrap up by Panel
- CALFED process next steps

**ERPP SCIENTIFIC REVIEW PANEL**

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**Draft Presentation Outline**

**PURPOSE OF PANEL DISCUSSIONS**

To provide advice and recommendations on key issues surrounding development of the Ecosystem Restoration Program Plan (ERPP) of the CALFED Bay-Delta Program.

**EXPECTED OUTCOMES**

- Identify primary areas of scientific agreement and areas of disagreement.
- Assess and evaluate the scientific validity and rationale for the underlying hypotheses and implementation objectives of the ERPP.
- Obtain advice on the presentation and structure of the ERPP.
- Recommend options for structuring the adaptive management strategy.

**Day 1**

**WELCOME; BACKGROUND & OVERVIEW**

**Overview**

Review agenda for Panel deliberations.  
Review expected outcomes.  
Review categories of questions to be discussed.  
Review role of facilitator.  
Review role of technical advisory committee.  
Explain opportunities for comment by members of the public.

**Background**

Geo-biological background  
Brief history of human interaction with water/biological system  
*Describe agreed upon historical milestones; minimize to extent possible political language.*  
Brief history of conflict  
Brief history and description of structure of CALFED program  
*Include speaking points on the value of science in public policy decision-making, use of stakeholder input, Program organization, Program objectives, and the need to balance program outcomes among stakeholder interests.*  
Summary of ERPP planning approach  
*Include chronology of planning process, how CALFED proposes applying adaptive management theory, stakeholder input into development of targets, and implementation objectives and indicators.*

**PLANNING APPROACH of ERPP**

**Question 1 - To what extent is the general planning approach described in the ERPP appropriate and adequate to meet the ecosystem quality objective of the CALFED Bay-Delta Program?**

*Describe the foundation of the ERPP and present "Step down outline format" describing the approach and the Program's rationale for the approach. Describe major stressors and relationships to implementation objectives and targets.*

**Question 1 (continued) - How does this approach differ from other restoration efforts with which you are familiar? What lessons can be learned from other restoration programs? Are there elements of the ERPP planning approach that are unnecessary? Are there elements missing that can improve the process?**

**Question 2 - To what extent do the implementation objectives adequately describe a vision of ecological health?**

*Include the CALFED definition of "ecological health".  
Issues and concerns regarding the ERPP (issues and concerns will be described to help set the context for deliberations):*

- *Many stakeholders have commented that the definition of "ecological health" is ambiguous.*

**Question 3 - Is the relationship between targets and implementation objectives clearly defined?**

*Highlight in the presentation the three categories of targets and the rationale used to propose quantifiable and qualitative targets. Disclose those implementation objectives lacking targets and explain.*

**Question 3 (continued) - How could the relationship be improved?**

**PUBLIC COMMENT**

**Day 2**

**SETTING TARGETS**

**Question 4 - Based on your experience, is this hybrid approach developed by the CALFED Program a reasonable method for setting restoration targets?**

*Explain the rationale for the hybrid approach. Describe the process by which the targets were set and explain why. Explain the limitations to the approach. Note the presence of exotic species, their role(s) in the ecosystem and the ERPP.*

*Issues and Concerns:*

- *A general comment from stakeholders is that the ERPP should include targets for habitat and processes, rather than for species, due to uncontrollable variables and difficulty with site-specific monitoring.*
- *Generally, stakeholders have commented that given widespread physical changes, use of historical populations as targets may be unreasonable.*

**Question 4 (continued) - How have other programs set restoration targets? How can we improve this process?**

**SCOPE of the ERPP**

**Question 5 - What are the conceptual strengths and weaknesses of pursuing this approach of tiering of actions?**

*Present the definition and rationale of the CALFED problem and solution scope, and ERPP scope. Explain that tiering refers to differing levels of actions within each zone, as well as, differing levels of actions across geographical regions. Note that CALFED is seeking to undertake actions with discernible benefits to the Delta and dependent species. Specifically, describe rationale for placing Central and South SF Bay in the third tier. Address how the ERPP uses landscape ecology theory and the rationale for its application.*

*Address feasibility of striving for highest ecosystem quality and contrast with calls for use of cost/benefit analysis to, for example, determine tiering of actions.*

*Issues and Concerns:*

- *Many stakeholders believe the ERPP does not adequately address the terrestrial component of the Bay-Delta ecosystem.*
- *A few stakeholders commented that limiting the scope of the ERPP to restoring species dependent on the Delta ignores the biological connectivity of the Bay-Delta ecosystem, including the entire SF Bay.*

**Question 5 (continued) - In your experience, under what circumstances would restoration of ecological processes and habitats beyond CALFED's focused Ecological Zones (the uppermost areas of tributary watershed above major dams, the Central and South San Francisco Bay, and the nearshore Pacific Ocean) result in measurable benefits to the Delta itself?**

### **PROCESS OF ADAPTIVE MANAGEMENT**

**Question 6 - To what extent is the general adaptive management approach described in the ERPP appropriate and adequate to achieve the implementation objectives?**

*Note that the program is attempting to achieve the ERPP objectives in a climate of scientific uncertainty. Include example describing how monitoring, focused research and indicators will translate to changing ERPP implementation as new information and understanding occurs. Explain ongoing opportunities for public review of and comment on focused research and monitoring efforts. Explain how research and monitoring data will be coordinated with data from other programs. Address how adaptive management will avoid a trial-and-error approach and include an example describing approach. Describe actions to be taken when indicators reach certain thresholds.*

*Issues and Concerns (The following issues and concerns are generally raised during evaluation of adaptive management program):*

- *Clearly define the goals, problems to be addressed, and process of adaptive management. Adhere to these definitions throughout phased implementation.*
- *Explain how the program will address the problems of reporting restoration success in a large and diverse ecosystem in addition to long response times, large spatial scales, variability between pilot/experiment sites and variability in measurements.*
- *Do not "experiment" in high-value and threatened ecosystems or in potentially dangerous situations, such as levees.*
- *Adaptive Management should research and consider the effects of stressors not clearly linked to the system, such as ocean condition impacts on anadromous fisheries.*

**Question 6 (continued) - How does this approach differ from other adaptive management efforts, and what lessons can be learned? Are there elements of the adaptive management process that are unnecessary? Are there elements missing that can improve the process?**

### **PROCESS OF PHASING**

**Question 7 - Can you comment on our approach or recommend a method that addresses scientific uncertainty and biological urgency to achieve proper phasing of actions?**

*Provide examples of conflicts between actions and how the conflicts will affect phasing. Note that the CALFED Program is expected to last 20 to 30 years. Describe the proposed phasing and explain the rationale for particular types of actions in the phases. Explain how phasing will be influenced by funding cycles.*

*Issues and Concerns:*

- *General comments on Phased Implementation include: the approach could allow declines in important ecosystem components and prioritization of actions should be based on scientific certainty, biological urgency, and cost-effectiveness.*
- *ERWG commented that research on actions with less certain but potentially high biological benefit should occur prior to implementation of actions with known but lesser biological benefit.*
- *ERWG suggested stressor reduction efforts should be pursued before restoration of ecological processes.*

**Question 8 - Multiple actions will be needed to achieve the implementation goals. Some of these actions may conflict to varying degrees, while other actions may interact to provide synergistic benefits. Based on your experience, are there any specific elements or proposed actions in the ERPP which are likely to conflict with each other?**

**Question 8 (continued) - Do you have any suggestions for actions which would optimize the probability of synergistic benefits?**

PUBLIC COMMENT

Day 3

**INDICATORS OF ECOSYSTEM HEALTH**

**Question 9 - Will the indicators selected adequately define this vision of ecological health?**

*Repeat CALFED's definition of "ecological health". Explain that indicators focus primarily on habitat and processes, rather than on species, and are quantifiable. Explain the time and spatial scales that will be used to formulate the indicators and why those scales are useful.*

*Issues and Concerns:*

- *One stakeholder has suggested that indicators should reflect changes caused by stressors not clearly linked to the system, such as impacts from increasing urbanization.*
- *Literature on adaptive management mentions that indicators should not be artificially manipulated by an adaptive management action.*

PUBLIC COMMENT

### SCIENTIFIC FOUNDATION OF ERPP

**Question 10 - One of the most debated issues involves the management of hydrologic processes necessary to support basic ecological processes and functions of riverine and estuarine ecosystems. What methods or approaches would you suggest to determine the hydrologic characteristics (including frequency of occurrence, length of duration, quantity of discharge, and others, if applicable) of the hydrograph that serve to support basic ecological processes and functions which sustain aquatic ecosystems?**

*Explain how the storage and conveyance system currently operates and how it affects the hydrograph. Explain changes proposed by the Program and what it expects to achieve with re-operation. Describe how the hydrology affects riverine processes, for example, sediment distribution.*

*Issues and Concerns:*

- *(The following three issues characterize general concerns regarding restoration of the Bay-Delta):  
The relationship between flows and fish production is unclear. In other words, it is difficult to predict the response of fisheries to changed flow regimes.*

*Using historical flow regimes in a highly modified system, such as the Bay-Delta, may not produce the desired results.*

*Previous attempts to determine instream flow requirements are inadequate.*

- *ERWG has commented that stressor reduction efforts may conflict with efforts to increase biological production.*

**Question 10 (continued) - Would these be applicable to the Bay-Delta Ecosystem?**

### IRREVERSIBLE CHANGES

**Question 11 - Given irreversible changes to the Bay-Delta system, are the implementation objectives of the ERPP reasonable?**

*Present CALFED's definition of "irreversible changes". Explain CALFED's approach to addressing unforeseen problems.*

**Question 11 (continued) - What irreversible changes have occurred in other systems, how have those affected restoration efforts, and what lessons can be applied to this system?**

**REQUIREMENTS FOR SUCCESSFUL IMPLEMENTATION**

**Question 12 - Does the ERPP identify and incorporate all of the requirements necessary for implementation of a successful long-term restoration program?**

**Question 12 (continued) - Based on your experience and review of the ERPP, how can the ERPP be strengthened?**

PUBLIC COMMENT

Day 4

**FINAL DELIBERATION AND DEVELOPMENT OF RECOMMENDATIONS**

**SUMMARY AND REVIEW AT DISCRETION OF CHAIR AND PANEL**

PUBLIC COMMENT

**REVIEW AND WRAP UP**

*Day's agenda at discretion of Chair and Panel. Could be a combination of further flushing out of issues on individual questions and reviewing/developing/recommending responses to questions. Provide summary of major outcomes from discussion.*

*Wrap up by Panel, including a critique of the process, suggestions on questions to pose during future review of the ERPP, and recommendations for the next steps.*

*CALFED process next steps.*