

CALFED  
BAY-DELTA  
PROGRAM

# **Ecosystem Restoration Program Plan**

## **Workshop Packet**

**April 8, 1997  
Sacramento**



March 24, 1997

Workshop Participants

Dear Workshop Participant:

At the end of Phase I we identified three alternatives. For each alternative there are four Program Components that address water quality, levee system integrity, water use efficiency, and ecosystem restoration. Also, each alternative contains two variable components which address water supply reliability through changes in conveyance and water storage. The alternatives vary in the amount and location of storage they propose and the manner in which they would convey water across the Delta. As this point during Phase II of the CALFED planning process we are defining the range of the three alternatives and refining and integrating the four program components.

On November 19, 1996, we held a public workshop to introduce the concepts and approach we proposed to use in developing targets for ecosystem restoration. We also introduced our ideas for monitoring, focused research, indicators, phasing of implementation and adaptive management. As a result of the workshop, we received a large number of valuable comments and suggestions. We used those comments in formatting the **Working Draft of the Ecosystem Restoration Program Plan**. We have added considerable breadth to the plan and we need your help to increase its depth.

I hope you will be able to join us at our workshop on the Ecosystem Restoration Program Plan (ERPP) on Tuesday, April 8, 1997. The Workshop will be held at the Beverly Garland Hotel, 1780 Tribute Road, Sacramento, from 8:30 a.m. to 4:00 p.m. The purpose of the workshop is to introduce you to the ERPP. We will discuss the concepts and purposes behind each of the three volumes and how you can best invest your time and technical expertise in reviewing this comprehensive and large document. We will also discuss the process of integrating the ERPP with the Storage and Conveyance configurations and the Water Quality, Water Use Efficiency, and Levee stability Program Components.

The Working Draft of the Ecosystem Restoration Program Plan will be available at the workshop, as will a summary of the ERPP.

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**CALFED Agencies**

**California**

The Resources Agency  
Department of Fish and Game  
Department of Water Resources  
California Environmental Protection Agency  
State Water Resources Control Board

**Federal**

Environmental Protection Agency  
Department of the Interior  
Fish and Wildlife Service  
Bureau of Reclamation  
Department of Commerce  
National Marine Fisheries Service

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Following the workshop we will offer all interested parties 45 days to review and comment on the working draft. In June we will offer another workshop to discuss and refine our understanding of your comments.

As environmental impact analysis proceeds, the ERPP will continue to be refined and included in the three alternatives. A DRAFT EIR/EIS will be available for public review in Fall, 1997.

We appreciate your continuing contribution to the CALFED Bay-Delta Program. Your review of the Working Draft of the Ecosystem Restoration Program Plan will help us to advance our effort substantially.

Sincerely,

A handwritten signature in black ink, appearing to read "Lester A. Snow", with a long horizontal flourish extending to the right.

Lester A. Snow  
Executive Director

# LOCATION AND DIRECTIONS

**The Beverly Garland Hotel**  
**1780 Tribute Road**  
**Sacramento, CA**  
**(916) 929-7900**

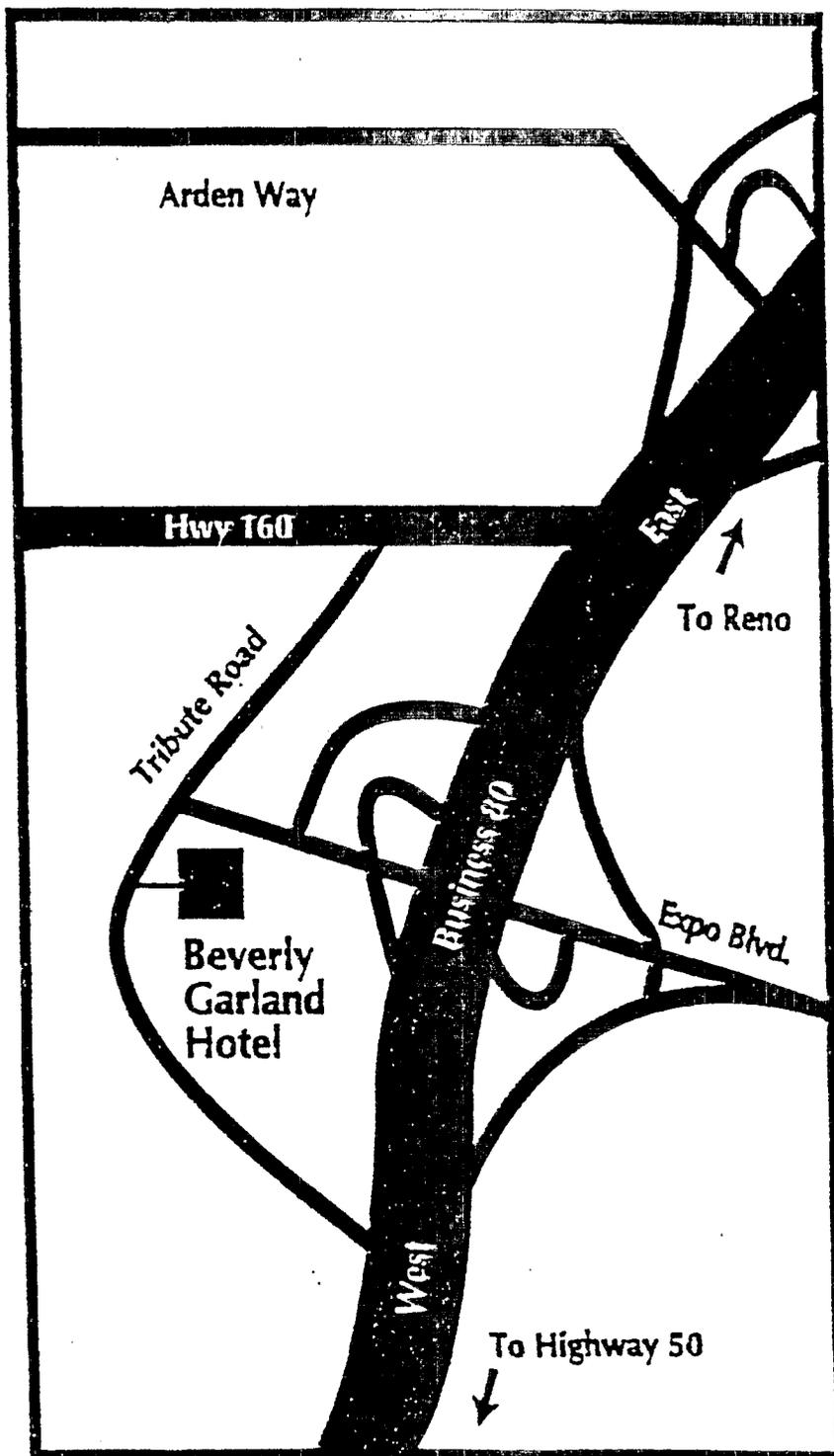
► **From San Francisco:**  
Highway 80 towards Sacramento;  
Business 80 East;  
Cal Expo off Ramp;  
Left onto Exposition Blvd.;  
Left onto Tribute Road.

► **From Reno:**  
Highway 80 towards Sacramento;  
Business 80 West;  
Cal Expo off Ramp;  
Right onto Exposition Blvd.;  
Left onto Tribute Road.

► **From Stockton:**  
Interstate 5 towards Sacramento;  
Business 80 East;  
Cal Expo off Ramp;  
Left onto Exposition Blvd.;  
Left onto Tribute Road.

► **From Tahoe:**  
Highway 50 towards Sacramento;  
Business 80 East;  
Cal Expo off Ramp;  
Left onto Exposition Blvd.;  
Left onto Tribute Road.

► **From Fresno:**  
Highway 99 towards Sacramento;  
Business 80 East;  
Cal Expo off Ramp;  
Left onto Exposition Blvd.;  
Left onto Tribute Road.



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Letter from Lester Snow

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## WORKSHOP AGENDA

### ECOSYSTEM RESTORATION PROGRAM PLAN

Tuesday, April 8, 1997  
8:30 a.m. - 4 p.m.

#### LOCATION

Beverly Garland Hotel  
Sacramento, CA

- 8:30**     **Registration** (CALFED Staff)
- 9:00**     **Welcome and Agenda Review** (Lester Snow)
- Overview of CALFED Program and the Ecosystem Restoration  
          Program Plan** (Lester Snow, Dick Daniel)
- Introduction to ERPP Resource Visions** (Dick Daniel)
- Introduction to ERPP Ecozone Visions** (Terry Mills, Frank Wernette)
- Integration with other CALFED Components** (Lester Snow)
- 12:00**     **Lunch**
- 1:00**     **Concepts for Phasing of ERPP Implementation** (Cindy Darling, Kate Hansel)
- Monitoring, Research and Indicators for Adaptive Management -  
          Break-out Session**
- Next Steps in the Process** (Lester Snow, Dick Daniel)
- 4:00**     **Adjourn**

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## Workshop Purpose

This workshop will explain the several elements of the Working Draft of the Ecosystem Restoration Program Plan (ERPP). We will discuss the purpose of each element and how they interact and are interdependent. The principal objective of this workshop is to introduce this document to you in a manner that enables you to focus your review and comment on this part of the CALFED Program.

The ERPP is but one of the four program components common to all alternatives being assessed in the CALFED Programmatic Environmental Impact Report/Environmental Impact Statement. Thus, the ERPP is not a stand-alone document. It will be integrated with the water use efficiency, levee system integrity and water quality program component. Equally as important, it must work in conjunction with the water supply and conveyance alternatives. An important part of this workshop will center around discussions of the process for component integration. We do not plan to use this workshop to discuss assurances, future institutional framework, costs, or finance strategies. These are subjects which are being developed by the Bay-Delta Advisory Council, its workgroups, and Program staff and will be the subjects of future public discussions.

This packet contains a summary and overview of the Ecosystem Restoration Program Plan and a guide to the elements of the ERPP. It also contains a discussion on the integration of the ERPP with the other CALFED Bay-Delta Program components. The Working Draft of the ERPP will be available at the workshop. If you are unable to attend, the ERPP can be mailed to your following the workshop. Please contact Dick Daniel, CALFED Ecosystem Restoration Program Manager at (916) 657-2666, or in writing at CALFED Bay-Delta Program, 1416 Ninth Street, Suite 1155, Sacramento, CA 95814.

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## GUIDANCE FOR PUBLIC COMMENT

CALFED staff are seeking in-depth responses from you about the Working Draft of the Ecosystem Restoration Program Plan (ERPP). After considering the material in the summary and the three volumes, please consider the questions which follow as guides for your comments and responses.

Please explain your rationale and, where possible, list source documents when recommending changes, additions or deletions. CALFED will consider your comments as they continue to refine the ERPP and prepare to incorporate and integrate it into the CALFED alternatives.

**The deadline for submitting comments is Friday, May 23, 1997.** Comments should be mailed or faxed to:

Mr. Dick Daniel  
CALFED Assistant Director  
1416 Ninth Street, Suite 1155  
Sacramento, CA 95814  
FAX (916) 654-9780

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## ERPP Questions

1. Is the framework we base the ERPP on appropriate? From your viewpoint, is restoration of ecological processes and functions and the protection and recreation of habitats the appropriate focus for the ERPP?
2. Does the Ecosystem Restoration Program Plan cover the full breadth of environmental concerns which manifest themselves as problems in the Delta? Please be specific as to processes or functions which we may have overlooked, are there habitats or species which make a unique contribution? Are there any stressors which we need to add or omit?
3. How would you suggest we add depth to the ERPP? Are there ecological units that should be added to our ecological zones? Are there implementation objectives missing? Can you offer suggestions for targets or additional programmatic actions?
4. What questions do you feel need to be addressed through focussed research?
5. Is our preliminary working draft of a monitoring program sufficiently comprehensive and/or are there areas of redundancy or overlap?
6. How would you proposed we phase implementation of the ERPP? Please think in terms of a 25-year implementation effort.
7. Are our indicators of ecosystem health appropriate? Are there indicators you would add to measure progress toward achieving the implementation objectives? Are there a few indicators which you would combine into a "Leading Ecological Indicators Index"?
8. Do you understand our proposed use of adaptive management to refine the program over time?
9. From your perspective, what issues or opportunities does the ERPP raise for integration with the water quality, system vulnerability, and water use efficiency common programs and the water supply and conveyance alternatives?

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# A GUIDE TO THE ECOSYSTEM RESTORATION PROGRAM PLAN ORGANIZATION

The Ecosystem Restoration Program Plan (ERPP) working draft is contained in four complementary documents, the Executive Summary, Volume I (Resources Visions), Volume II (Ecological Zone Visions), and Volume III (Implementation). Much of the information presented in this plan is in the form of a vision. Each vision provides a description of the element, its influence on ecosystem health, an assessment of its status, activities or programs needed for improvement of resources, and its link to other resource elements. Individually, these visions are the objectives, targets, and actions needed to attain a healthy Delta. Cumulatively, the integration of the objectives, targets, and actions provide for a robust and resilient ecosystem restoration program for the Sacramento- San Joaquin Delta Ecosystem.

The executive summary is a condensation of the three volumes and its text and tables contain information on the framework of the plan's approach, the areas where restoration needs to take place, and the targets which describe the magnitude of change suggested.

Volume I (Resources Visions) establishes the framework and ecological philosophy of the ERPP. The information on ecological functions, processes, habitats, species, and stressors at work or contained in the ERPP study area. This is the framework of the ERPP. The Ecological Zones (Volume II) provides a synthesis of resource problems and solutions for the 14 ecological zones and their component units. The implementation of the program is sketched out in Volume III. Compared to Volumes I and II, Volume III is only a preliminary working draft of the ideas we have on monitoring, indicators of ecological health, focused research, phasing and adaptive management. Volume III is very much a 'work in progress' document.

## **Volume I: Resource Visions**

Volume I presents our visions for five classes of ecosystem elements: 1) physical processes; 2) ecosystem functions; 3) habitats; 4) species and species groups; and 5) stressors.

*Physical Processes:* These are the natural forces which shaped the Delta and maintain its dynamic integrity. These processes are streamflows, gravel and sediment supply, landscape shapes and patterns influenced by water and Delta hydraulic processes influenced by tides, river inflow, weather and other factors.

*Ecosystem Functions:* These control much of the habitat building aspects of the ecosystem and dictate which species might colonize the habitats. Included in these functions are gravel recruitment, stream temperatures and floodplain processes.

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*Habitats:* Twelve types of habitat needed by fish, wildlife, and plants dependent on the Delta are presented here.

*Species and Species Groups:* In this section are discussions of species needs, why they are of special concern, and their intended (or likely) future contribution to the Delta will be.

*Stressors:* This section details 15 stressors that impair ecological processes, functions, habitats, or species.

## **Volume II: Ecological Zone Visions**

Volume II presents visions for the 14 ecological zones included in our problem/solution study area. Each vision follows a standard format. The introductory sections provide a link between the zone and the overall health of the Bay-Delta. The introduction generally describes the ecological processes, functions, habitats, species, and stressors that need to be addressed to achieve a healthy Delta.

The 'Pathway to the Vision' section describes likely means for successful implementation of the proposed programmatic actions. The important relationships or linkages of each zone to adjacent zones are also provided.

Each vision for an ecological zone provides a comprehensive discussion of implementation objectives (what we plan to accomplish), targets (how much we suggest be done, although some targets remain to be identified), and programmatic actions (alternative ways of achieving the targets). Each set of implementation objectives is completed by a rationale section which provides perspective and justification for the proposed targets and actions. A reference list is provided for each ecological zone. It contains a brief listing of the technical and scientific reports which contributed information used to develop target levels and programmatic actions.

## **Volume III: Implementation**

Volume III is a preliminary working draft. It contains five sections: 1) adaptive management; 2) focussed research; 3) monitoring; 4) indicators; and 5) phased implementation.

*Adaptive Management:* This section describes what adaptive management is and how this concept will be used to guide future changes to the ERPP. Adaptive management is a process dependent of the insights developed from focussed research, monitoring, and the performance of indicators.

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*Focussed Research:* Here we start to identify the questions scientists and managers need to resolve as we go forward with implementation of the ERPP. Some of the questions are fundamental to the effort and require comprehensive answers. Others address a need to refine our understanding.

*Monitoring:* Because the ERPP recommends great changes in the way we manage the Bay Delta Ecosystem and the investment of substantial resources, we must monitor the effects of change. Physical, chemical, and biological changes are proposed and these must be measured against baseline or benchmark conditions. The section on monitoring includes current activities, those proposed under the Central Valley Project Improvement Act and monitoring that needs to be added to the overall effort.

*Indicators:* The indicators are the gauge we propose to use to measure our progress toward ecosystem restoration. They too are a work in progress and will continue to be refined. They will be linked to each implementation objective.

*Phased Implementation:* The ERPP is a very ambitious, long-term plan. It will result in substantial investment and there are varying degrees of uncertainty associated with some of the implementation objectives and targets. Phased implementation will help us to schedule actions where there is scientific consensus on the probable outcome. It will provide for pilot or demonstration projects where a particular action needs more refinement, or where we need to gain field experience. Where we lack scientific certainty, the phasing program will provide the lead time to conduct focussed research. We need and will solicit help in refining the preliminary working draft of our concepts for phased implementation.

### **CALFED Efforts Related to the ERPP**

When implemented, the ERPP will be an integral part of the overall CALFED solution. This solution will also address water quality, water use efficiency, system integrity, and water supply reliability. However, the ERPP does not integrate all of the CALFED program components. The program components, once integrated, will form the substance for the three alternatives for environmental impact analysis. Additionally, assurances to implement the CALFED solution, as agreed upon, are also necessary. Finally, as environmental impact analysis proceeds, costs, both initial and long term, will also be developed.

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## Component Integration

Common components of ecosystem restoration, water quality, water use efficiency, and system integrity and the variable components of storage and conveyance will be combined into program alternatives for the environmental impact analysis.

The combining process will identify and take advantage of the possible linkages between components. For example, the ecosystem restoration component might include creation of shallow tidal habitat, while the levee system integrity component might include certain levee improvement with opportunities for associated habitat improvement. Combining these actions into a single program level action might improve each action and the overall cost effectiveness. There are also direct linkages between each common component and the variable storage and conveyance component. For example the location of aquatic habitat improvements might differ with and without an isolated conveyance facility or with the alignment and magnitude of a thru-Delta option.

A matrix will be prepared for each alternative that arrays the variable and common component actions against each of the other component actions. Opportunities for combining multiple actions into a single programmatic action that better achieves the CALFED Bay-Delta Program Objectives and Solution Principles will be identified. Evaluations will be made of the opportunities in terms of cost savings, operational benefits, and other effects. the guiding principle is to derive as many benefits as possible from each action. Components descriptions will be revised accordingly. Special considerations and areas of potential conflict between actions will be identified.

Examples of the type of evaluations that will be conducted between the common and variable components include:

- Trade-offs between water quality and storage and conveyance capacities.
- benefits of new storage accruing to ecosystem quality objectives.
- joint system integrity and habitat restoration opportunities.
- Interactions between new storage and water use efficiency improvements
- Locations of water quality actions and ecosystem improvement areas.

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The results of the evaluations will demonstrate the effects of a range of storage and conveyance capacities on the common program components for each alternative and how the common components differ between alternatives. In coordination with workgroups and technical teams, an integration team of Program staff and consultants will use the component linkage and evaluation to assemble the programmatic alternatives that represent a range of possible and practicable actions.