



**CALFED  
BAY-DELTA  
PROGRAM**

# Update

september 1996

*The CALFED Bay-Delta Program is an unprecedented cooperative effort among state and federal agencies and the public to ensure a healthy ecosystem, reliable water supplies, good water quality, and stable levees in California's Bay-Delta.*

**Focus of This Edition:**  
Summary of phase I  
and the phase II alternatives

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**CALFED Agencies**

CA Resources Agency	U.S. Environmental Protection Agency
CA Dept. of Fish and Game	U.S. Dept. of the Interior
CA Dept. of Water Resources	U.S. Fish and Wildlife Service
CA Environmental Protection Agency	U.S. Bureau of Reclamation
State Water Resources Control Board	U.S. Dept. of Commerce
	National Marine Fisheries Service

## Quick Scan

Phase I of the three-phase CALFED Bay-Delta Program has concluded with the release of three alternative solutions to Bay-Delta problems. As the Program advances to Phase II for generalized environmental review of the alternatives, a wide range of stakeholder communities remains engaged in the CALFED process.

## Background

The CALFED Bay-Delta Program started in June 1995 as a collaborative effort to address a declining ecosystem, uncertain water supplies, imperiled water quality, and unstable levees in California's Bay-Delta, the region where the San Francisco Bay meets the Sacramento/San Joaquin River Delta. This 738,000-acre area of channels, sloughs, and islands is a critical habitat for 120 fish and wildlife species. It also serves as the hub of California's water distribution system, supplying drinking water to 20 million people in northern, central, and southern California and irrigation water to 4 million acres of farmland.

## Three Alternative Solutions

All of the three alternative solutions, called the Phase II alternatives, are designed to address Bay-Delta problems comprehensively. They share a common program that includes water use efficiency measures, ecosystem restoration, water quality protection, and levee improvements. Also, they all include a range of water storage options. They differ in their conveyance systems -- their approaches to moving water. Alternative 1 uses the existing system of Delta channels, Alternative 2 uses the existing system but with significant modifications, and Alternative 3 uses both the existing system, with significant changes, and an isolated facility.

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## Mission Statement

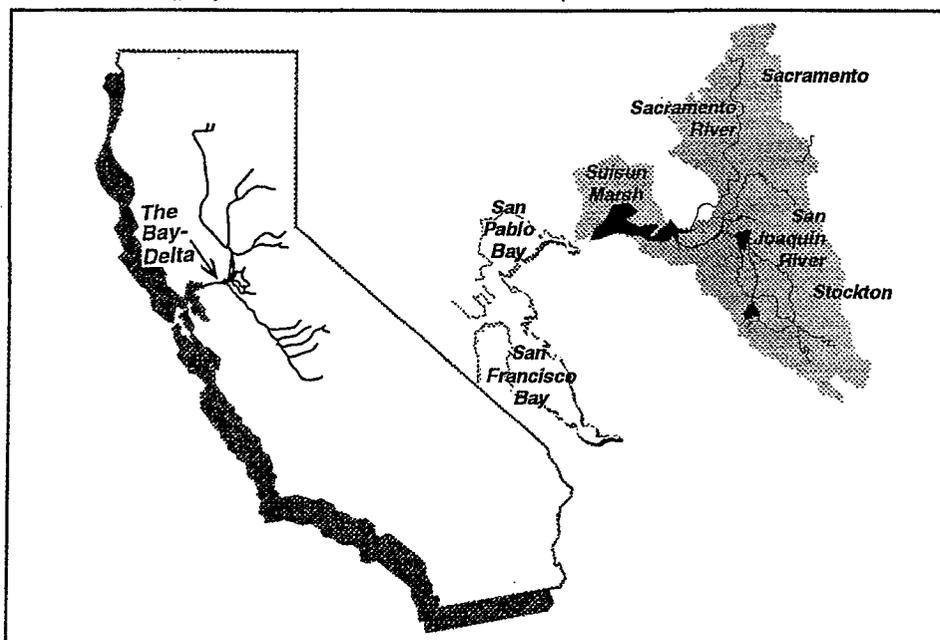
The mission of the CALFED Bay-Delta Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system.

## Program Objectives

During Phase I, the Program adopted these primary objectives:

- to provide good water quality for all beneficial uses of the Bay-Delta,
- to improve and increase aquatic and terrestrial habitats and restore ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species,
- to reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta,
- to reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic breaching of Delta levees.

## California and the Bay-Delta



# History of the CALFED Bay-Delta Program

Critical to California's economy and ecology, the Bay-Delta has been the focus of competing interests virtually since the Gold Rush. And it has suffered from this. Habitats are declining, and several native species are endangered. The system no longer serves as a reliable source of high-quality water, and the levees face an unacceptably high risk of breaching.

Most recently, impetus to solve these problems came in 1992 with Governor Pete Wilson's Water Policy speech and the formation of the Water Policy Council, which brought together several state agencies with management and regulatory responsibilities in the Bay-Delta. In September 1993, the Federal Ecosystem Directorate was created to coordinate federal activities in the region.

In June 1994, the Water Policy Council and the Federal Ecosystem Directorate joined to become CALFED. By the end of that year, CALFED, in cooperation with diverse interest groups, had drafted interim Bay-Delta water quality standards and created a state/federal organization to coordinate the State Water Project and the Central Valley Project.

In June 1995, CALFED launched the CALFED Bay-Delta Program to develop a long-term, comprehensive solution to Bay-Delta problems.

## Three-Phase Program Process

The Program has divided its work into three phases. During Phase I, from June 1995 to September 1996, the Program identified the problems, developed a mission statement and several guiding principles (the "Solution Principles"), and designed three alternative solutions to Bay-Delta problems.

In Phase II, from June 1996 to September 1996, the Program will conduct a broad-based environmental review of the three alternative solutions and will identify the single preferred solution. Phase will also include technical analysis of the alternatives and development of an implementation plan.

During Phase III, starting in late 1998 or early 1999 and lasting for many years, the preferred alternative will be implemented in stages.

### Public Involvement

Organizations with an important stake in the Bay-Delta include environmental advocacy groups, urban water agencies, agricultural interests, recreational groups, and rural and source county interests.

The Program relies upon regular, detailed input from stakeholders. Significant input comes from the Bay-Delta Advisory Council (BDAC), which is

chartered under the Federal Advisory Committee Act and includes representatives of stakeholder groups jointly selected by the Governor and the Secretary of the Interior. During Phase I, the Program also conducted 14 public meetings in 13 communities from Redding to San Diego, and seven technical workshops. Attendance at these events topped 1,700. The Program also received more than 200 public comment letters during Phase I.

All Phase I public comment, oral and written, was recorded for consideration. Some comments dealt with technical and policy issues that the Program will confront in Phase II, and they will be carried into Phase II for consideration. Other comments helped direct the Program's development and the design of the alternatives during Phase I. Throughout Phase II, BDAC will continue to meet, and the Program will continue to host regular workshops and public meetings, as well as to invite written comment.

## Alternatives and Common Programs

As noted on page 1, each of the Phase II Alternatives includes a range of storage options, a conveyance system, and the common programs. The common programs are virtually identical in every alternative.

**The Water Use Efficiency Common Program** take two approaches: reduce the need to take water from the Delta and reclaim water after use. It encourages urban water agencies to recycle water and to make greater use of the Best Management Practices, commonly-accepted standards for water conservation. Similarly, it urges agricultural water users to implement cost-effective measures similar to the Efficient Water Management Practices, which are jointly-developed standards for conserving agricultural water.

**The Ecosystem Restoration Common Program** seeks to restore Bay-Delta ecosystem functions by taking advantage of natural processes and restoring some of the system's natural resilience to stressors like drought. The common program gives preference to activities that benefit several species and improve other resource areas, including water quality, levee stability, and water supply reliability. Activities could include improving shallow water and riverine habitats, restoring riparian and San Joaquin River habitats, acquiring water to boost instream flows, and controlling non-native species.

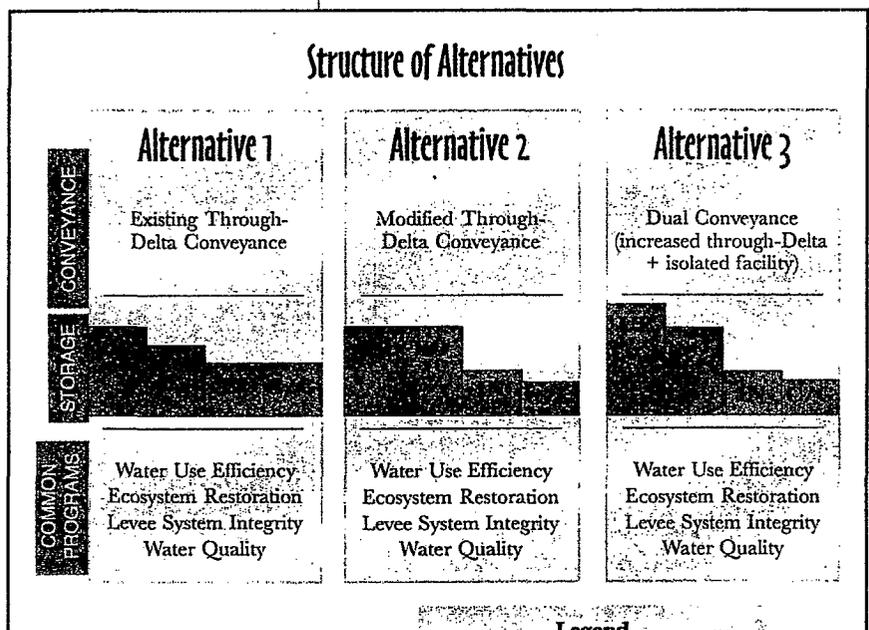
**The Water Quality Common Program** focuses on limiting the release of pollutants, particularly salinity, selenium, pesticide residues, and heavy metals, into the Bay-Delta system and its tributaries. Activities could include improving the management of urban stormwater runoff, cleaning up and limiting runoff from high priority mines, providing incentives for urban water agencies to upgrade their filtration systems, managing agricultural drainage, developing watershed protection programs, and offering incentive to retire the agricultural lands whose discharge most degrades San Joaquin River water.

**The Levee System Integrity Common Program** addresses levee maintenance and stabilization, subsidence reduction, emergency management,

## Solution Principles

According to the Program's "solution principles," which were developed at public workshops during Phase I, the Bay-Delta solution must ...

- Reduce conflicts in the system
- Be equitable
- Be affordable
- Be durable
- Be implementable
- Have no significant redirected impacts.



**Legend**

**UP:** upstream storage (any offstream storage upstream of the Delta supplied by the Sacramento or San Joaquin Rivers or r their tributaries)

**SO:** south of Delta storage (any offstream storage supplied with water exported south from the Delta)

**IN:** in-Delta storage

**C/G:** conjunctive use/groundwater banking

*Conjunctive Use - Integrated management of surface water and groundwater supplies to meet overall water supply and resource management objectives*

*Groundwater Banking - Using available storage capacity within groundwater basins to store surface water that is recharged during periods when it is available (e.g. during peak flood flows)*

## Some Guiding Assumptions

The Program has developed some fundamental assumptions about the Bay-Delta and the effects that Program actions might have on the system. While these assumptions will be studied and tested during Phase II, the success of any comprehensive Bay-Delta solution rests largely on their basic validity.

- The importance of a unit of water in the system is not fixed, but varied according to the flow rate, the time of year, and the water year type.
- A comprehensive program of ecosystem restoration will improve ecosystem functions and the recovery of Bay-Delta species that are currently threatened, endangered, or of special concern.

If these assumptions are correct, it should be possible to manage water to take advantage of its time value and thereby to restore ecosystem functions and recover species of concern. This will allow the Program to improve water supply reliability and create new opportunities to increase water supplies. In short, increased water supply reliability and new supply opportunities will occur simultaneously with ecosystem restoration.

beneficial reuse of dredged materials, and creation of habitat corridors as mitigation for negative impacts. Delta islands would be prioritized, a strategic plan devised, and stable funding sources identified, with the goal of bringing as many levees as possible up to a higher standard of stability.

## Range of Storage Options

Each alternative includes a range of storage options, though specific sites and capacities of new storage are not specified. New storage could include some combination of conjunctive use and groundwater banking with offstream surface storage. Surface storage could be upstream of the Delta (supplied by the Sacramento or San Joaquin Rivers or their tributaries), south of the Delta (supplied with water exported from the Delta), or in the Delta.

### Alternative 1: Existing Conveyance System

In Alternative 1, water would be conveyed through the current system of Delta channels. The permitted capacity of the south Delta pumps could be increased to their physical capacity (15,000 cubic feet per second). When fish are least vulnerable to the effects of diversions, roughly during late fall and early winter, the pumps could operate at full capacity. Then pumping could be minimized during the higher priority periods for ecosystem health.

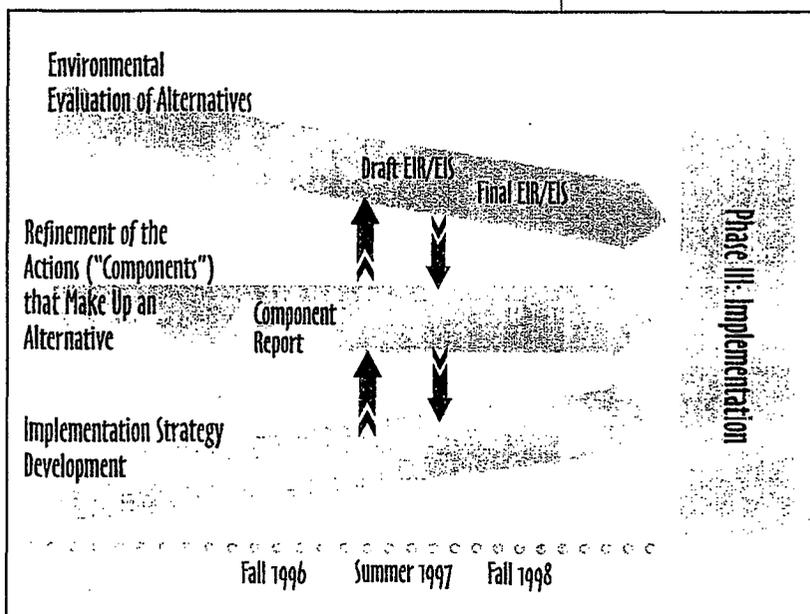
### Alternative 2: Modified Through-Delta Conveyance System

In Alternative 2, through-Delta conveyance would become significantly more efficient thanks to improvements in the existing channel system, ranging from dredging and widening of selected channels to major reconfiguration of channels and flow patterns. As in Alternative 1, the permitted capacity of south Delta pumps could be increased to their physical capacity and pumping shifted to times of the year when the environment is least sensitive.

### Alternative 3: Dual Conveyance System

Alternative 3 would combine improvements in the existing channel system with construction of an isolated facility (a pipeline, canal, or other structure that isolates from natural Delta flow some of the water intended for human use). A range of capacities will be studied for the isolated facility, from 5,000 to 15,000 cubic feet per second. At the highest capacity, the isolated facility could supply all Delta export needs during spring, when fish are most vulnerable to through-Delta conveyance.

## Phase II Process



## More about Phase II

Phase II includes three simultaneous processes. The *programmatic* environmental review will forecast broad environmental impacts of the alternatives. (During Phase III, *project-level* environmental review will be conducted on individual projects in the comprehensive solution to forecast detailed environmental impacts.) The Program will issue a draft programmatic EIR/EIS during the summer of 1997 and a final version, including the recommended Bay-Delta solution, in the fall of 1998. State and federal approval of the final EIR/EIS is expected by the end of 1998.

Meanwhile, the Program will develop an implementation strategy addressing technical, financial, institutional and organizational issues and will conduct detailed technical analyses to refine the alternatives.