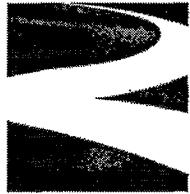


CALFED
BAY-DELTA
PROGRAM

Briefing Packet

Fall 1998



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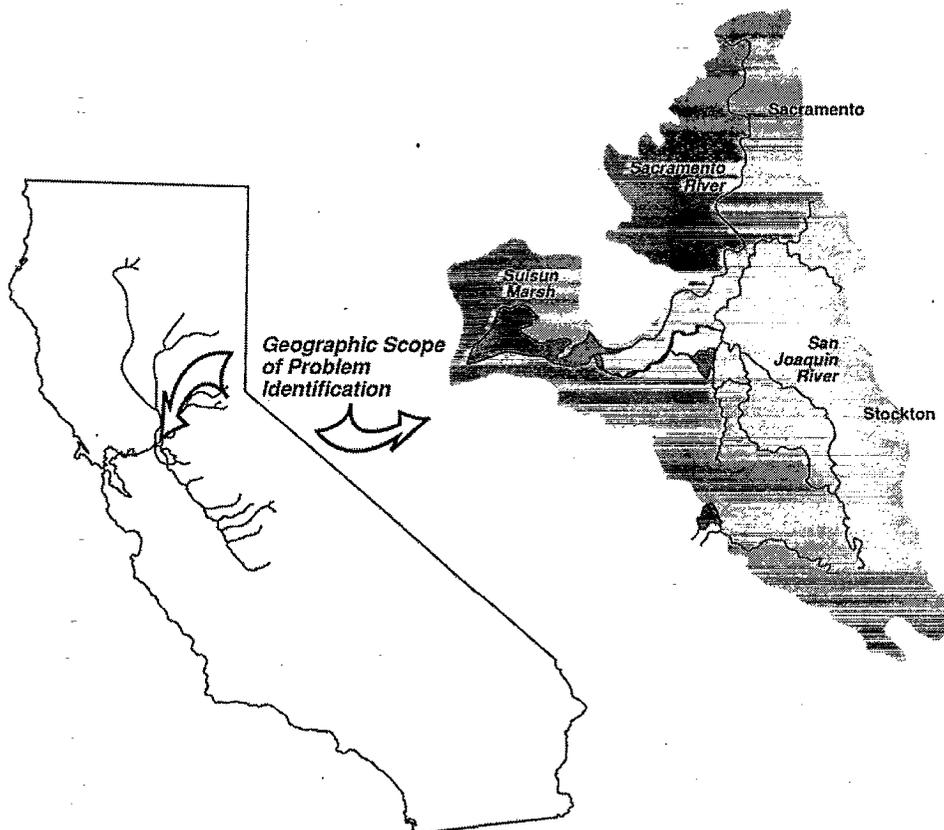
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Background to Bay and Delta Issues

- The San Francisco Bay/Sacramento-San Joaquin Delta estuary (Bay-Delta) is the largest estuary on the West Coast
- the estuary is the interface between the Sacramento-San Joaquin watershed and the Pacific Ocean.
- the estuary is a haven for plants and wildlife, supporting over 750 plant and animal species.
- the Delta itself covers over 738,000 acres in five counties.
- the Bay-Delta system supplies drinking water for two-thirds of Californians
- the Bay-Delta system supplies irrigation water for over 7 million acres of the most highly productive agricultural land in the world.



Geographic Scope for Problems and Solutions

The geographic scope for the problems consists of the legally defined Delta, Suisun Bay (extending to the Carquinez Strait) and Suisun Marsh.

The geographic scope for developing possible solutions includes a much broader area that extends both upstream and downstream of the Bay-Delta. This solution scope includes the Central Valley watershed, the Southern California water system service area, San Pablo Bay, San Francisco Bay, near-shore portions of the Pacific Ocean out to the Farallon Islands and north to the Oregon border, and the Trinity River watershed, from which flows are diverted into the Bay-Delta system.

Notable characteristics of the Bay-Delta system

Water supply systems. The Bay-Delta is the hub of California's two largest water distribution systems -- the Central Valley Project (CVP) operated by the U.S. Bureau of Reclamation and the State Water Project (SWP) operated by the California Department of Water Resources. The CVP and SWP were built to provide river regulation, improvements in navigation and flood control, water supplies for irrigation, municipal, and industrial uses, and hydropower generation. In addition, at least 7,000 other permitted water diverters take their supplies from the Bay-Delta system. Together, these water development projects divert about 20 percent to 70 percent of the system's natural flow, depending on the amount of runoff available in a given year.

Fish and wildlife resources. Water diversions, along with the effects of increased population pressures throughout California, the introduction of exotic species, water pollution, and numerous other factors, have had a serious negative impact on the fish and wildlife resources in the Bay-Delta estuary.

In-delta agriculture and levees. Settlers first constructed levees in the Sacramento-San Joaquin Delta during the late 1800s, converting swamp and overflow lands into agricultural land. Over time, Delta residents increased the levee heights to maintain protection as both natural settling of levees and shallow subsidence of Delta island soils occurred (biological oxidation, peat fires, and wind erosion have lowered interior island elevations over time). Now, the interior of some of these islands, particularly in the western Delta, lies below sea level.

Water quality. The Delta is a source of drinking water for millions of Californians and is critical to the state's agricultural sector. In addition, good water quality is required to maintain the high quality habitat needed in the Bay-Delta system to support a diversity of fish and wildlife populations. Bay-Delta water quality is a primary concern. Bromide, which enters the Bay-Delta system from the Pacific Ocean, is a particular concern. During disinfection of drinking water, bromide is capable of undergoing chemical reactions that produce unwanted and potentially harmful chemical byproducts.



Sacramento/San Joaquin Delta

Bay-Delta Conflicts

For decades the Bay-Delta region has been the focus of competing interests--economic and ecological, urban and agricultural.

Summary of major conflicts:

- *Fisheries and Water Diversions.* The conflict between fisheries and water diversions results primarily from fish mortality attributable to water diversions. This includes direct loss at pumps, reduced survival when young fish are drawn out of river channels into the Delta, reduced spawning success of adults when migratory cues are altered, and reduced survival associated with inadequate stream flows and reduced Delta outflows. The need to protect species of concern has prompted restrictions on pumping and other regulations that allow sufficient fishery flows to remain in the natural system, which restricts the quantity and timing of diversions.
- *Habitat and Land Use.* Habitat to support various life stages of aquatic and terrestrial plants and animals in the Bay-Delta has been converted to agricultural and urban uses. In addition, some habitat has been lost or adversely altered due to construction of flood control facilities and levees to protect developed land. Efforts to restore habitat can also create conflict with existing uses, such as agriculture and levee maintenance.
- *Water Supply Availability and Beneficial Uses.* As water use and competition for water have increased during the past several decades, so has conflict among users. A major part of this conflict is between the volume of instream and out-of-stream water needs, and the timing of those needs within the hydrologic cycle.
- *Water Quality and Human Activities.* Water quality for ecosystem and consumptive uses can be adversely affected by a broad range of human activities. In addition to particular activities that discharge pollutants (such as abandoned mines or industrial sources), urban and agricultural areas produce degraded surface runoff that can seriously negatively affect the Bay-Delta's many beneficial uses.

Results of conflicts. These conflicting demands have resulted in several resource threats to the Bay-Delta:

- the decline of wildlife habitat.
- the threat of extinction of several native plant and animal species.
- the collapse of one of the richest commercial fisheries in the nation.
- the degradation of the Delta water quality.
- a Delta levee system faced with a high risk of failure.
- reduction in water supply reliability.

Consequences of failure to act to reduce these conflicts

Failure to reduce these conflicts will result in significant negative consequences, both for California's environment and for California's economy.

Environmental consequences

- further declines in populations of ESA-listed species
- growing threat to other species

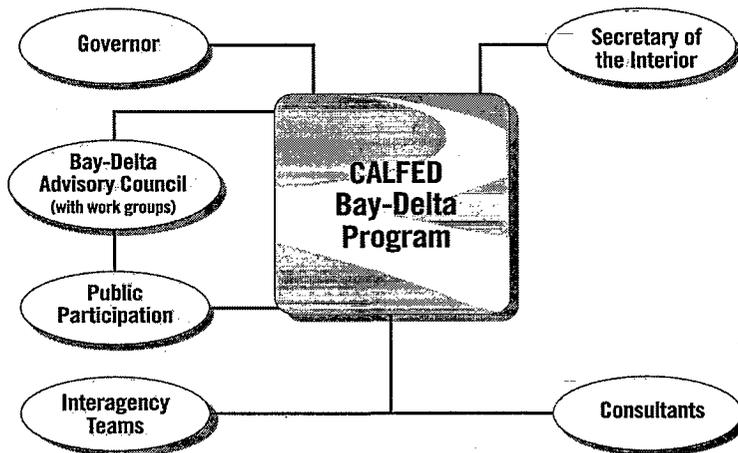
Economic consequences

- further restrictions on water deliveries, leading to loss of industry and agricultural production in California
- possible new restrictions on water diversions throughout Central Valley
- substantially increased water treatment costs in Santa Clara Valley and urban Southern California.

Bay-Delta Framework and Accord -- efforts to reduce conflicts

- June 1994 Framework Agreement between State and federal agencies with management or regulatory responsibilities for the Bay-Delta
 - agreement for State to adopt Bay-Delta water quality standards and for federal government to withdraw their standards
 - agreement to create State and federal agency committee to coordinate operations of State Water Project and Central Valley Project to achieve compliance with environmental regulatory requirements.
 - agreement to work together on a long-term plan to address Bay-Delta issues (Bay-Delta Program)
- December 1994 Bay-Delta Accord -- an agreement between State and federal agencies and stakeholders -- extended to December 1999.
 - establishes water quality flow standards for the Bay-Delta estuary
 - establishes that water flows for environmental purposes higher than Accord standards will not be achieved through regulatory re-allocation of water in Bay-Delta
 - establishes a near-term ecosystem restoration program that addresses non-flow factors in the ecosystem (Category III program)

May 1995 -- CALFED established to develop long term Bay-Delta Program and to administer Category III Program.



Role of government agencies -- develop an integrated program.

- an executive director was appointed by CALFED agencies to oversee the development of a long-term, comprehensive plan for the Bay-Delta.
- the executive director selected staff from the CALFED agencies to carry out the task.
- CALFED agencies work with the interagency CALFED Program team through multi-level technical and policy teams.

CALFED	
<u>State Agencies</u>	<u>Federal Agencies</u>
Resources Agency of California*	U.S. Department of Interior
- Department of Water Resources	- Bureau of Reclamation*
- Department of Fish and Game	- Fish and Wildlife Service*
	- Bureau of Land Management
	- U. S. Geological Survey
California Environmental Protection Agency	U.S. Army Corps of Engineers*
- State Water Resources Control Board	U.S. Environmental Protection Agency*
California Department of Food and Agriculture	U.S. Department of Commerce
	- National Marine Fisheries Service*
	U.S. Department of Agriculture
	- Natural Resources Conservation Service*
	- U.S. Forest Service
	Western Area Power Administration
* Co-lead agencies for EIS/EIR	

Role of the public -- advise, comment, and work with government agencies.

- Stakeholder groups are major participants in CALFED's activities.
- collaborative effort includes representatives of agricultural, urban, environmental, fishery, business, and rural counties.

- The Bay-Delta Advisory Council (BDAC), a 34-member federally chartered citizens' advisory committee, provides formal comment and advice to the agencies during regularly scheduled public meetings.
- CALFED process has also included members of the public in development of every Program component from ecosystem restoration to financing.
- CALFED has undertaken a wide variety of outreach activities, including:
 - scoping meetings
 - technical workshops
 - public information meetings
 - public BDAC workgroup meetings
 - presentations before focused groups
 - media outreach
 - newsletters
 - regularly updated information on the Program's Web site
 - a toll-free public information telephone line
 - 17 formal public hearings on the draft programmatic EIS/EIR
- CALFED has also worked to involve California's diverse multi-cultural communities
 - producing fact sheets in five languages (Spanish, Chinese, Japanese, Korean, and Vietnamese)
 - meeting with multi-cultural business, media, social service and agricultural organizations
 - placing media notices in ethnic media outlets.
- Increasing awareness and knowledge among the state's multi-cultural communities is a continued goal of CALFED's public outreach.

CALFED Activities

Coordination of near-term ecosystem restoration (Category III)

- Originated in the December 1994 Bay-Delta Accord
- State and federal agencies and various stakeholder groups agreed to fund program and to work together on program implementation
- interim program until long-term Bay-Delta Program is adopted

Cooperative approach. Signatories agreed to work together on designing the program and choosing the specific projects that would be funded through this program.

Funding made available. Funding has been provided from State and federal governments and from stakeholders for 133 projects:

- \$30 million from Metropolitan Water District, on behalf of stakeholders (3 installments, \$10 million each)
- \$430 million authorized by Congress (3 installments of \$143.3 million each)
 - \$85 million appropriated in FFY 98
 - \$75 million appropriated in FFY 99
- \$60 million in General Obligation bonds authorized by California voters through Prop. 204 (1996).

CALFED role

- setting priorities for expenditure
- recommending specific projects for funding.
- By law, formal approval of funding rests with the Secretary of the Interior for federal funds and with the Secretary for Resources for State funds.

Development of the Bay-Delta Program. In the June 1994 Bay-Delta Framework Agreement, State and federal agencies agreed to work together to develop long-term solutions to address problems affecting public values in the Bay-Delta estuary.

Development of the Bay-Delta Program

Program activities have been divided into three discrete phases:

- Phase I -- Problem Identification, Goal Setting, and Preliminary Approaches.
- Phase II -- Development of alternatives and choice of preferred alternative.
- Phase III -- Implementation of adopted program (preferred alternative).

Phase I -- Problem Identification, Goal Setting, and Preliminary Approaches.

(May 1995-September 1996)

- identified the problems confronting the Bay-Delta
- developed a mission statement and guiding principles
- devised three preliminary categories of solutions for Delta water conveyance
- recognized that implementation of the Bay-Delta Program would occur in phases
- recognized that phased implementation requires adaptive management

Problems confronting the Bay-Delta.

Ecosystem Quality

- Important aquatic habitats are inadequate to support production and survival of native and other desirable estuarine and anadromous fish in the Bay-Delta system. Examples of fishes that have experienced declines related to changes in Delta habitat include delta smelt, longfin smelt, Sacramento splittail, chinook salmon, striped bass, and American shad.
- Important wetlands habitats are inadequate to support production and survival of wildlife species in the Bay-Delta system.
- Populations of some species of plants and animals dependent on the Delta have declined.

Water Quality

- Water quality is often inadequate or is perceived as inadequate for drinking water needs.
- Delta water quality is often inadequate for agricultural needs.
- Delta water quality is often inadequate for industrial needs.
- Delta water quality is often inadequate for recreational needs.
- Water quality is often inadequate for environmental needs for the Bay-Delta system.

Water Supply Reliability

- Water supplies of the Bay-Delta system do not meet needs because of conflict among beneficial uses and because of system inadequacies.
- Bay-Delta system water supplies are uncertain with respect to short- and long-term needs.

Levee System Integrity

- Existing agricultural land use, economic activities and infrastructure in the Delta are at risk from gradual deterioration of Delta conveyance and flood control facilities as well as sudden catastrophic inundation of Delta islands.
- Water supply operations and facilities in the Delta are at risk from increased salinity intrusion which can result from sudden catastrophic inundation of Delta islands.
- Water quality in the Delta is at risk from increased salinity intrusion which can result from sudden catastrophic inundation of Delta islands.
- The existing Delta ecosystem is at risk from gradual deterioration of Delta conveyance and flood control facilities as well as sudden catastrophic inundation of Delta islands.

CALFED Mission Statement and Guiding Principles**CALFED BAY-DELTA PROGRAM
MISSION STATEMENT, OBJECTIVES
AND SOLUTION PRINCIPLES**

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.

CALFED developed the following objectives for a solution:

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

In addition, any CALFED solution must satisfy the following **solution principles**:

- **Reduce Conflicts in the System** Solutions will reduce major conflicts among beneficial uses of water.
- **Be Equitable** Solutions will focus on solving problems in all problem areas. Improvements for some problems will not be made without corresponding improvements for other problems.
- **Be Affordable** Solutions will be implementable and maintainable within the foreseeable resources of the Program and stakeholders.
- **Be Durable** Solutions will have political and economic staying power and will sustain the resources they were designed to protect and enhance.

Preliminary categories of solutions

Common elements. Following scoping, public comment, and agency review, CALFED concluded that Program alternatives would include a significant set of Program elements addressing Bay-Delta problems, generally referred to as *common programs*.

- levee system integrity
- water quality improvements
- ecosystem restoration
- water use efficiency measures
- water transfers
- watershed management

Variable elements

Conveyance -- In addition to the common elements, CALFED identified three preliminary alternatives to be further analyzed in Phase II. The preliminary alternatives represented three different approaches to conveying water through the Delta:

1. Use the existing conveyance system, with some minor changes in the south Delta.
2. Use enlarged channels within the Delta.
3. Use in-Delta channel modifications and constructs a conveyance channel to move some water around the Delta.

Storage -- Each of these alternatives also included consideration of new ground and surface water storage options.

Phase II -- Further development of alternatives and choice of preferred alternative.
(October 1996 to current -- projected completion in December 1999)

Activities. In Phase II, CALFED is:

- developing a preferred program alternative
- conducting comprehensive programmatic environmental review
- developing an implementation plan.

Schedule.

March 1998	CALFED released a draft programmatic environmental impact statement/ environmental impact report and an interim report on the development of a preferred program alternative.
December 1998	CALFED will release a draft report on development of a preferred program alternative.
Spring 1999	CALFED will release a Revised Draft Programmatic EIS/EIR, followed by a public comment period on the Revised Draft Programmatic EIS/EIR. Public hearings will be included in the public comment period.
Late 1999	CALFED lead agencies will certify the Final Programmatic Environmental Impact Statement/Environmental Impact Report (EIS/EIR).

Phase III -- Implementation of adopted program (preferred alternative).
(projected for 2000 to about 2030).

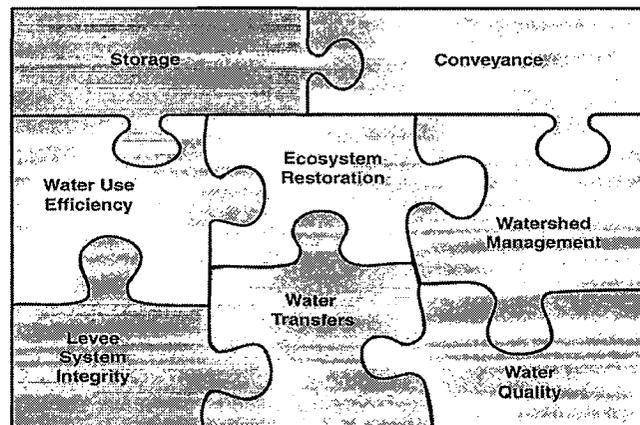
Activities.

- Implementation (of Stage 1 actions) begins.
- Additional site-specific environmental review and permitting, as necessary.

Elements of the Draft Program (Preferred Alternative)

Level of Description. The description of the alternative is programmatic in nature, intended to help agencies and the public make decisions on the broad methods to meet Program purposes. The alternative is not intended to define the site-specific actions that will ultimately be implemented.

Program elements. The preferred program alternative for the CALFED solution is assembled from hundreds of programmatic actions. To help organize the discussion of the alternative, the actions are grouped under each of the eight program elements pictured below. These actions will be implemented in stages, utilizing adaptive management, over the next 30 years.



- **Long-Term Levee Protection Plan** - Provides significant improvements in the reliability of the Delta levees to benefit all users of Delta water and land.
- **Water Quality Program** - Makes significant reductions in point and non-point pollution for the benefit of all water uses and the Bay-Delta ecosystem.
- **Ecosystem Restoration Program** - Provides significant improvements in habitat, restoration of some critical flows, and reduces conflict with other Bay-Delta system resources.
- **Water Use Efficiency Program** - Provides support and incentives at the local level through expanded planning, technical, and financial assistance for efficient use of water for agricultural, urban, and environmental purposes.
- **Water Transfer Program** - Provides a framework of actions, policies and processes to facilitate, encourage, and streamline an active yet protective water market which will allow water to move between users, including environmental uses, on a voluntary and compensated basis.
- **Watershed Program** - Promotes locally-led watershed management activities and protections relevant to achieving the CALFED purpose through financial and technical assistance.

- **Storage** - Recognizes potential water supply and environmental benefits of new or expanded groundwater and surface storage. New storage will be included in the preferred program alternative as necessary to meet CALFED's goals, considering appropriate implementation of nonstructural programs and demonstrated willingness to pay by potential beneficiaries. During Stage 1, CALFED will evaluate and determine the appropriate mix of these water management tools.
- **Delta Conveyance** - Provides a basic strategy for using through Delta channels to meet CALFED purposes. Modifications to this through Delta conveyance strategy will only be made after thorough assessment of a variety of factors. For example, inability to meet CALFED program goals for drinking water quality or fishery recovery using the basic strategy would warrant making a decision to move forward with modifications to this strategy including an isolated facility to carry a portion of export water around the Delta.

Adaptive management. All of these will employ an adaptive management approach with careful monitoring of performance to help modify (adapt) future actions as more is learned about the system and how it responds. The implementation of the preferred program alternative is supported by an Assurances Plan, Financing Plan, and a Comprehensive Monitoring, Assessment and Research Program.

Implementation of the Bay-Delta Program

Program implementation during Phase III will be guided by the implementation plan. The plan focuses on the early years of implementation when needed actions are better known, but it also provides a long-term vision for continuing implementation over the next several decades.

Parts of the Draft Implementation Plan:

- **Actions and Assurances for 1998-99** - CALFED agencies will use their existing authorities to pursue ongoing actions which are consistent with the CALFED framework.
- **Stage 1 Actions** - A list of proposed actions for the first seven years of implementation following the Record of Decision and Certification of the EIS/EIR.
- **Water Operations** - Draft concept for water operations criteria for the first seven years of implementation.
- **Assurances and Governance Plan** - Set of tools and mechanisms to assure that the Program will be implemented and operated as agreed.
- **Financing Plan** - Plan for funding the implementation of the preferred alternative including financing principles, cost allocation and cost sharing considerations, and Program element cost estimates.
- **Comprehensive Monitoring, Assessment and Research Program** - Plan for monitoring and research that provides the data and necessary information to evaluate the performance of completed actions for use in supporting the adaptive management of future actions.
- **Adaptive Management** - Plan to constantly monitor the Bay-Delta system and adjust future implementation as we learn more about the system and how it responds to our efforts.
- **Long-Term Implementation** - A general vision (subject to adaptive management and the conditional decisions) for the 30-year Program implementation.
- **Draft Stage 1 Environmental Compliance Strategy** - Framework for efficient processing of information needed for conforming with the regulatory procedures of the different agencies and their protocols, guidelines and time lines.