

LEVEE PROGRAM
COMPONENT UPDATE

May 21, 1998

Program Background and Description

The CALFED Levee System Integrity Program will develop and implement a Long-Term Levee Protection Plan to reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic breaching of Delta levees. **The Long-Term Levee Protection Plan will be an appendix to CALFED's EIS/EIR.**

The Levee Program will reconstruct and maintain Delta levees, develop subsidence control measures and emergency management procedures, and quantify seismic risk to Delta levees. The Levee Program will build upon a foundation of existing state, federal, and local agency programs. Its focus is to supplement and improve these existing programs where deficiencies are identified. Ecosystem restoration and conveyance improvements will be integrated with levee improvements to protect existing Delta physical characteristics and processes. This integration will provide opportunities to address multiple problems in the Delta and to coordinate with other program actions.

Levee reconstruction and maintenance is often in conflict with terrestrial and aquatic habitat resources on or around levees. Controlling levee and channel vegetation is routinely delayed or precluded due to impacts to endangered species. CALFED will separate these resources where possible to reduce conflicts. Habitat will be relocated outside the levee's structural cross-section to enable both to function independently.

Over the past decade and particularly since 1992, with the listing of delta smelt and winter run Chinook Salmon, it has become increasingly difficult to dredge channels and to conduct levee work involving dredging materials from adjacent channels. As a result, dredging in the Delta has nearly ceased and dredges, barges, tugs and experienced people have been leaving the Delta. Without a significant local dredging capability, effective response to levee emergencies is severely limited. Permitting agencies want additional information before issuing permits. CALFED will develop a comprehensive research and monitoring program to empower regulatory decision makers. CALFED will also institute a permit coordination program to improve the efficiency of the permit process.

Actions to control subsidence can be implemented in conjunction with ecosystem restoration activities and provide an opportunity to continue investigating methods for reversing subsidence. Creating habitat corridors can be implemented in conjunction with levee setbacks for Delta channel conveyance improvements. A comprehensive emergency management plan will be implemented that coordinates emergency response measures while protecting Delta ecosystem resources to the greatest extent possible.

Program Goals

Actions under the Levee System Integrity Program will be closely integrated with the Ecosystem Restoration Program Plan and Delta conveyance actions to simultaneously increase system integrity, increase ecosystem quality, and protect water quality and water supply reliability.

The Program includes five Elements. The goal of each Element is as follows:

Delta Levee Base Level Protection Plan

The goal of this Plan is to build upon existing programs to improve all Delta levees to meet the U. S. Army Corps of Engineers PL 84-99 standard.

Delta Levee Special Improvement Projects

The goal of this element is to provide additional flood protection separate from the Delta Levee Base Level Protection Plan for Delta islands that protect many public benefits such as water quality, the ecosystem, life and personal property, agricultural production, cultural resources, recreation, and local and state-wide infrastructure.

Delta Island Subsidence Control Plan

The goal of this plan is to reduce the risk of Delta levee failures due to subsidence.

Delta Levee Emergency Management Plan

The goal of this plan is to enhance existing emergency management response capabilities and to protect critical Delta resources in the event of a disaster.

Delta Levee Seismic Risk Assessment

The goal of the assessment is to identify the risk to Delta resources from catastrophic seismic events and develop recommendations to improve the seismic stability of Delta levees.

Stakeholder involvement

The following stakeholders/agencies attend the Levees and Channels Technical Team:

- North Delta Water Agency
- Central Delta Water Agency
- South Delta Water Agency
- Reclamation Districts
- Central Valley Flood Control Association
- Natural Heritage Institute
- Metropolitan Water District of Southern California
- San Luis and Delta Mendota Water Agencies
- USGS
- Corps of Engineers
- DFG
- DWR
- Delta Protection Commission

CALFED staff is preparing a mailer to be sent to other stakeholders to inform them of the Levees and Channels Technical Team.

Background

- 1100 Miles of Levees
- 85% Non-Project Levees
- Islands Below Sea Level
- Subsidence
- Levee Maintenance-AB 360

Program Elements and Support Tasks

- Base Level Protection Plan
- Special Projects
- Subsidence Control
- Emergency Response
- Seismic Risk Assessment

Support Tasks

Develop: Monitoring, Assurances, & Implementation Plans

Levee Program Goals

- Rehab Levees to (PL84-99) Criteria
- Develop Adequate and Reliable Funding
- Develop a Long-Term Strategy to Comply with Environmental Regulations
- Develop Subsidence Control BMP's
- Improve Emergency Response System
- Quantify Seismic Risk

Levee Program Costs

<u>Program Element</u>	<u>Cost *</u>
Base Level Protection	500
Special Projects	360
Subsidence Control	80
Emergency Response	<u>60</u>
Total	1,000

• Cost in Millions of 1998 Dollars over 30 Years

Ten Year Funding Summary

LEVEE PROGRAM 10 YEAR FUNDING SUMMARY				
Funding in millions (1998 \$)				
Year(s)	Base Level Protection Plan & Emergency Res. Funding / Year	Special Projects Funding / Year	Subsidence Control Funding / Year	Total Funding
1	\$20*	\$10	\$0	\$30
2	\$12	\$12	\$1	\$25
3	\$14	\$12	\$1	\$27
4	\$18	\$12	\$1	\$31
5	\$20	\$12	\$2	\$34
6-10	\$20	\$12	\$3	\$35
Totals	\$184	\$118	\$20	\$322

* Includes \$10 million to start the Emergency Response Fund

LONG-TERM STRATEGY TO COMPLY WITH ENVIRONMENTAL REGULATIONS

The key is to prevent conflicts between levee habitat and maintenance where possible

- Long history of conflicts
- Habitat should be separated from the levees whenever possible
- Implement mitigation and enhancement on a Delta-wide basis
- ERPP provides Enhancement, Levee Program provides Mitigation
- Provide monitoring to assist in adaptive management – Take corrective action
- Permit coordination process

Subsidence Control

- ***Levee Vs ERPP Actions***
(Phase I & II Reports)
- ***Levee Integrity***
 - *Landside Berms*
 - *Develop and Implement BMP's*

Emergency Response

- ***AB360 (Current)***
 - *\$200,000/Yr, \$50,000/Site*
- ***AB 2105 (Proposed)***
 - *DWR to Administer*
 - *\$10M Revolving Fund*
 - *\$2M Projected Annual Investment*

Seismic Risk Assessment

- ***Blue Ribbon Panel Formed to Quantify Seismic Risk to Delta Levees***
- ***Report Due July 1, 1998***
- ***Presentations to MT, PG, & BDAC***

LEVEE PROGRAM ASSURANCE SUMMARY

1. ***Common Pool***
 - *No Consensus on 100%*
2. ***A Reliable and Adequate Funding Stream***
3. ***Effective Environmental Documentation and Permit Coordination***
4. ***Authority to Implement the Plan***
5. ***Maintain the Tax Base for the RD's***

MAINTAIN COMMON POOL IN THE DELTA

Local Delta interests Insist on a 100% common pool
Two reasons - Assures Common Interest in

- *maintaining Delta levees*
- *maintaining water quality for Delta water users*

Other stakeholders feel that Dual Conveyance

- *maintains the "Common Interest" (because a vital portion of exports still goes through the Delta)*
- *improves export water quality by significantly lowering TDS and bromides*
- *reduces fish entrainment*
- *offers operational flexibility (security against seismic levee failure and general flexibility)*
- *maintains acceptable in-Delta water quality*

Issues and Concerns

- ***Common Pool - Levee Maintenance***
- ***Suisun Marsh Levees***
- ***Scope of Subsidence Control (Levees Vs ERPP)***