

CALFED BAY-DELTA PROGRAM

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.

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Levee System Integrity Common Program

Considerations

Through public input in Phase I, Californians shared with the CALFED Bay-Delta Program their concerns about levee stability, including the following:

- Levees should be improved to provide a high standard of stability.
- Reliable, long-term funding is needed for regular levee maintenance.
- A single regional authority should coordinate stabilization and maintenance of Delta levees and emergency management.
- North Delta flood protection measures are badly needed.

In addition to these public concerns, the Program has identified several system integrity issues that require further analysis. For example, providing better subsidence control and flood protection could disrupt natural habitats and other land uses. Also, it might prove prohibitively expensive to bring the entire Delta up to a common high level of flood protection.

Introduction

The CALFED Bay-Delta Program Alternatives share common programs for water use efficiency, ecosystem restoration, water quality protection, and levee improvement. (The alternatives differ according to the conveyance and storage elements.) This fact sheet summarizes the levee system integrity common program.

Importance of Levee System Integrity

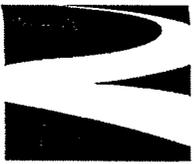
Many Bay-Delta stakeholders would suffer if a Delta levee failed and islands were inundated. Terrestrial habitats and agricultural tracts could be flooded. An inrush of salt water from the Bay would poison habitats for some fish and greatly compromise in-Delta and export water quality. Valuable infrastructure, from highways to homes, could be damaged.

Unfortunately, the risk of levee failure is high. The condition of many Delta levees, built largely in the last century, is declining. At the same time, the peat soil, of which many islands are made, has subsided, causing the islands to sink and increasing the vulnerability of the levees. Without significant repair and reconstruction, catastrophic levee breaks are likely should a major flood or earthquake occur.

Elements of the Levee Program

A long-term Levee Protection Plan would address levee maintenance, levee stabilization improvements, subsidence reduction, emergency management, beneficial reuse of dredged materials, and establishment of habitat corridors for mitigation of any negative impacts.

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Prioritization of Delta Islands

Among the criteria used to prioritize islands would be protection of public infrastructure (e.g. pipelines and railroads); protection of private infrastructure (e.g. marinas); maintenance of water quality for all users; and preservation of cultural, recreational, and natural resources.

To carry out this plan, Delta islands would be prioritized, a strategic plan devised, and stable funding sources identified. Levee subsidence control work would proceed in stages over time, and information on the effectiveness of early stages would be used to help guide the later stages.

As a subsidence control measure or as mitigation for the disruption caused by construction work along levees, land adjacent to the levees could be set aside for natural habitat corridors.

Potential Implementation Measures

Levee Maintenance Plan

Funds could be earmarked from a reliable, long-term source to improve levee maintenance. A uniform high standard should be set for levee stability. In conjunction with levee maintenance work, channels could be dredged, not only to help move water more efficiently, but also to increase capacity in order to reduce flood impacts.

Stabilization of Levees on the Highest Priority Western Delta Islands

Because western Delta islands are the first line of defense against saltwater intrusion, early efforts to protect those islands could make both fish populations and water quality significantly more secure.

High Priority Buffer Zones

To protect islands with deep peat soils, Delta landowners could be offered incentives to set aside strips of land as buffers along the levees on those islands. In addition to helping slow subsidence, the conversion of land from agricultural or other use to buffer zones could reduce the need for in-Delta irrigation water and decrease discharges into the Delta. More aggressive long-term subsidence reversal programs would be included for some islands.

Restoration of Highest Priority Habitats

When buffer zones are created or levee banks shored up, new natural habitats could be integrated.

Emergency Levee Management Plan

It may be possible to improve the coordination among agencies for responding to Delta floods. In particular, plans could be developed to ensure that adequate materials and equipment will be immediately available should disaster strike. A stable, long-term funding source would be needed for emergency management.