

CALFED BAY-DELTA PROGRAM**Office Memorandum**

Date: March 14, 1996
To: Victor Pacheco
From: Michael Norris
Subject: Suggested revisions to the wording of Core Actions in the CALFED Bay-Delta Program Draft Alternatives package

As per your instructions, I have reviewed your corrections from yesterdays memo regarding a comparison between the latest proposed Delta Long-Term Levee Improvement Plan (that was prepared by the team of Bill Forsythe and Curt Schmutte from the Delta Levee Special Projects Planning unit) and the Core Actions listed in the February CALFED Bay-Delta Program Draft Alternatives package. I determined that some rewording would be necessary to some of them to incorporate the ideas of the Delta Long-Term Levee Improvement Plan. Also, the fifth Core Action to Provide Funding for Maintenance and Stabilization is proposed to be rolled up into the first Core Action to Monitor, Evaluate, Maintain, and Stabilize Existing Levees.

To summarize, there are five Core Actions in the Improvements to System Reliability section of the alternatives report and only one is proposed to remain worded the same and one is proposed to be eliminated through combination with another. Here is my suggested wording:

- *Core Action: Monitor, Evaluate, Maintain, and Stabilize Existing Levees and Provide Funding for Future Actions*

Many levees that protect land uses, infrastructure, and habitat in the Delta are inadequately maintained and stabilized against failures caused by overtopping, slippage, or collapse. Furthermore, information is lacking on the condition of most levees in the Delta and where maintenance is needed. It is widely accepted that efforts to maintain and stabilize these existing levees are necessary in the near term. Maintenance standards may differ among different types of levees and different facilities or land uses that are protected by the levees. Entities to perform or fund levee monitoring and evaluations and the actual maintenance and stabilization work could include local reclamation districts, the Department of Water Resources, the U.S. Army Corps of Engineers (Corps), and other agencies. Funding of such work, even though widely accepted as necessary, is uncertain as to source and amount. Thus a CALFED core action could be to promote and fund such work with the establishment of a Delta Long-Term Levee Improvement Plan. The Delta Long-Term Levee Improvement Plan will be comprised of a Subventions Program element and a Special Projects element. The Subventions Program element will provide levee maintenance and improvement funding

in some cases up to the Corps Public Law 99 (PL99) standard throughout the Delta. The Special Projects element will develop a prioritization scheme for work on highest priority sites anywhere within the Delta. High-priority sites would be determined through a prioritization matrix ranking scheme that is expected to include criteria such as the protection of public infrastructure facilities (e.g., highways, pipelines, railroads), private infrastructure (e.g., homes, marinas), navigation (e.g., project/direct agreement levee systems), water quality at Delta export locations (e.g., west Delta islands), local culture, recreation, and fish and wildlife benefits. Different weighting is likely to be assigned for different criteria and high-priority sites will likely be islands that score high under several different criteria.

Core Level of Implementation: *At a core level, this action would be undertaken at a priority level of funding to establish and implement the Delta Long-Term Improvement Plan. This work under the Delta Long-Term Improvement Plan could include the funding for flood control improvements, the purchase of easements for subsidence control, the investigation of techniques for the beneficial reuse of dredged materials, the establishment of an emergency levee management plan including the setting up of an insurance fund, and the establishment of a habitat corridor mitigation bank to be used to offset current and future impacts from the routine maintenance and stabilization work on levee systems that is done within the Subventions and Special Project Programs.*

- ***Core Action: Modify Agricultural Practices to Reduce Subsidence***

Soil tilling for intensive agricultural cropping causes peat oxidation and thereby Delta island subsidence where peat soils are predominant. Subsidence adjacent to levees is particularly threatening to levee stability. Ceasing agricultural practices and establishing wetland hydrologic conditions in peat-soil areas would reduce peat oxidation and resulting subsidence. Subsidence reduction could be achieved by providing incentives for voluntary participation by farmers in halting agriculture on peat soils or purchasing conservation easements that eliminate cropping practices. As an incentive, an increased 90/10 (state/local) Subventions cost-share percentage for levee maintenance work could be reserved for farmers who voluntarily set aside easements against the toes of levees as a subsidence reduction measure. Farmers who declined to go along with this arrangement could receive a lesser cost-share percentage of Subventions funding. Such a subsidence reduction program would also benefit Delta water quality by reducing discharge of dissolved organic carbon (DOC) in drainage from oxidized peat soils. Such a program would also increase the extent of wetland habitats in areas where subsidence is controlled.

Core Level of Implementation: *At a core level, this action could be applied to a zone, up to 400-feet in width for example, along the interior toes of levees on islands dominated by peat soils. This zone immediately adjacent to the levee toes is most critical for halting subsidence that threatens levee stability. The core level of implementation would focus on cooperative partnerships with landowners to voluntarily cease*

agricultural practices on peat soils near levee toes.

- Core Action to Investigate Techniques for Beneficial Reuse of Dredged Materials could remain worded the same as it was in the February draft alternatives report except that consideration should be given on whether or not it is alright to reference the Long Term Maintenance Strategy (LTMS) dredge disposal work that is ongoing or the request to review the reasoning for a study on the use of dredged materials within the Delta that was recently sent out by the Delta Protection Commission.
- ***Core Action: Establish an Emergency Levee Management Plan***

Currently, funding and clear authority does not exist regarding the roles and responsibilities of various federal, state, and local agencies in responding to levee failures. Agency responses could consist of immediate actions at the time of the emergency to block or control a levee break and longer term actions to recover or rehabilitate a flooded island. Agencies with possible roles in responding to emergencies could include the U.S. Army Corps of Engineers, Federal Emergency Management Agency, Department of Water Resources, and local reclamation districts. An emergency management plan would provide funding and clearly identify the responsibilities of each of these and other agencies in responding to levee failures, both immediate and for longer term recovery. In addition, an insurance fund would be set up to recover flooded islands or islands that suffer levee damage, to pay reclamation districts quickly for state and/or federal Disaster Assistance claims pending reimbursement by the Office of Emergency Services (OES) and/or FEMA, and to consider making payments to reclamation districts for prior Disaster Assistance claims that were denied for eligibility by OES and/or FEMA from the three Presidential flood disasters of the 1980s.

Core Level of Implementation: *At a core level, an emergency management plan would be established for the islands in the Delta.*

- ***Core Action: Establish Habitat Corridors as Mitigation for Impacts From Maintenance and Stabilization of Existing Levees***

Routine maintenance and stabilization of existing levees by Delta landowners participating in the DWR Subventions and Special Projects Program often results in habitat destruction. Delta landowners will attempt to avoid habitat destruction when performing levee maintenance by using new techniques such as those described in the Core Action entitled Improve Riparian Habitat by Modifying Levee Maintenance Practices. In some cases, Delta landowners can create adjacent habitat concurrent with their levee maintenance work such as creating riverside berms while installing bank protection and using other techniques such as those described in the Core Action entitled Include Riverine Elements at Channel Edges by Modifying Levee Protection Practices. In cases where it is neither possible to avoid the destruction of some habitat nor is it possible to create adjacent off-setting habitat while performing levee maintenance work, Delta landowners will have the option of mitigating for habitat losses by applying for

credits to be drawn against a habitat corridor mitigation bank set up by the DWR Special Projects element. The Special Projects element will undertake terrestrial and aquatic habitat improvement projects in areas that have been determined important for creating habitat corridors. The program will create high quality habitat corridors by utilizing State owned land where they are available, and purchasing land and conservation easements along critical alignments that are not currently owned by the State. The habitat created will be used to set up bank credits which can be used to offset current and future impacts of the Subventions and Special Projects elements of the Delta Long-Term Levee Improvement Plan.

***Core Level of Implementation:** At a core level, this action would be undertaken to begin funding the purchase of the aforementioned habitat corridors based on a prioritization mapping scheme.*

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