

**Agenda Item: 9-6B**

**Meeting Dates: February 9 and 10, 2005**

**JOINT MEETING WITH BAY-DELTA PUBLIC ADVISORY COMMITTEE**

**UPDATE ON COMPREHENSIVE PROGRAM EVALUATION  
LEVEES IN THE SACRAMENTO-SAN JOAQUIN DELTA**

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**Summary:** Department of Water Resources staff will present a preliminary outline for the Comprehensive Program Evaluation being developed for levees in the Sacramento-San Joaquin Delta.

**Recommended Action:** This is an information item only. No action will be taken.

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**Background**

There are approximately 1,000 miles of levees protecting islands and tracts in the Sacramento-San Joaquin Delta. The vast majority of these levees are non-project (local) levees which were constructed and enlarged over the last 130 years without the benefit of significant engineering or quality control. Many of the levees started out as 3 to 5-foot-high dikes of peat, and have been continually enlarged by adding dumped or dredged organic and mineral soils as the surfaces of the islands being protected subsided. The levees are considered relatively fragile, commonly constructed on very soft foundations and subject to deterioration over time. During the last century, there have been more than 140 levee failures leading to island inundations. In many cases, the flooding of the islands has been extremely costly to both local residents and farmers, and to the State as a whole. California has an immense interest in the maintaining Delta levees, not only because 80 percent of the drinking water of the State flows through the Delta, but also because there are critical environmental, agricultural, and recreational benefits in the region.

**Future Risks**

Delta islands are continuing to subside, requiring continued enlargement of the levee system and placing added risk of failure, along with increased consequences of failure. The recent 2004 dry weather failure of a levee along Middle River and the flooding of Jones Tract induced damages that will exceed more than \$100 million. Moreover, a future earthquake has the potential of creating extensive levee failures and multiple island inundations. Such an event would have a devastating impact to California.

## **Preliminary Outline of Objectives and Draft Implementation Process**

### **Objectives of a Comprehensive Program Evaluation**

Comprehensive Program Evaluation of Delta levees would have the following objectives:

- Evaluation of ongoing and future risk of levee failure over the next 50 years (flooding, subsidence, earthquake).
- Evaluation of probable consequences following levee failures (water quality, ecosystem, land use, and water conveyance).
- Identification of levee maintenance and upgrades that could reduce the risk of levee failure, and estimates of costs for different levels of maintenance and levee upgrades.
- Evaluation of levels of risk reduction using different levels of levee maintenance and upgrades.
- Evaluation of alternative risk reduction plans.

### **Implementation Process**

1. Scoping Process for Project Plan
  - DWR lead
  - CALFED Subcommittee involvement
  - Independent Technical Review Board
2. Develop Proposed Project Plan
3. Obtain DWR and CALFED executive concurrence on Proposed Project Plan
4. Obtain public comments on Proposed Project Plan and Finalize
5. Implement RFQ/RFP process and complete contracts for following services:
  - Risk/Hazard Analysis
  - Environmental Consultant for Impacts
  - Engineering Consultant for Levee Maintenance/Upgrades
  - Individual Technical Review Board members
6. Carry out Comprehensive Program Evaluation over 2 Years
  - Iterative Process
  - Program Milestone Reviews
  - Continued participation by CALFED Subcommittee and Independent Technical Review Board

7. Prepare Draft Report
8. Obtain public comments on Draft Report
9. Finalize Report

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