

DELTA LEVEE SYSTEM INTEGRITY - EMERGENCY MANAGEMENT ELEMENT

Purpose:

This paper provides a description of the CALFED Bay-Delta Program's approach to emergency management for the Delta. The plan will build upon existing emergency management systems, identify pre-emergency measures and post-disaster recovery measures, and enhance integration of local, and regional emergency management agency actions to protect Delta resources in the event of a disaster.

Background:

The most recognizable threat to Delta islands and resources in the Delta is seen as inundation due to winter flood events. In addition, there are other potential disasters which threaten these same resources in the form of seismic events, fire, toxic spills, and failure of Delta levees during low flow periods. Approximately 20 islands have flooded since the 1960's, including McCormack-Williamson and Dead Horse islands which were also flooded during the storms of 1997, and several Delta islands were inundated more than once during this period. There are no reports of Delta levee failure and island inundation as a result of a seismic event. However, there are several active faults located sufficiently close to the Delta which present a potential threat to Delta islands and critical resources. There are numerous natural gas storage and pipeline facilities in the Delta where fires could originate in the event of a failure of such a facility. Although plans are in place to address fires at these facilities, fires on Delta islands with peat soils are extremely difficult to extinguish. Commercial shipping traffic regularly passes through the Delta and the cargo of some of these ships can be toxic to certain resources in the Delta. The inadvertent release of cargo such as fertilizer could potentially affect water quality in the Delta, particularly during low flow periods. Another potential threat to Delta water quality is the failure of Delta levees during low flow periods. This type of disaster can result in intrusion of salinity from the Bay, as occurred during the 1972 inundation of Brannan/Andrus Island. Delta resources are under constant threat from various potential disaster events.

The existing emergency management structure is designed to coordinate activities of multiple State, federal and local agencies with varying responsibilities to provide emergency assistance in the event of a disaster. The Standardized Emergency Management System (SEMS) provides a framework for coordinating state and local government emergency response in California using the incident command system and mutual aid agreements. SEMS is intended to facilitate priority setting, inter-agency cooperation, and the efficient flow of resources and information. However, only the Governor can declare a State of Emergency with the

Governor's Office of Emergency Services serving as the coordinator for State agency response. When the incident appears to potentially exceed the resources of the local responsible agency, on-site evaluations are conducted to determine what, if any, additional emergency support is warranted. Cities and/or counties can proclaim local disaster events and, in general, local or maintaining agencies are first in line for responsibility to address disaster events. Although certain agencies may have resources to provide initial emergency action, they could not provide a sustained effort during a large disaster event. The majority of local agencies do not have the resources to address disaster events, and existing agreements may provide a means for additional resources from surrounding communities and counties. The federal government provides financial assistance through the Federal Emergency Management Agency under declaration of a Presidential Disaster; however, other federal agencies may provide assistance and/or resources under existing authorities.

The overall focus of current emergency response activity is primarily on sites under eminent threat which can reduce opportunities to allocate resources to areas under less threatening conditions to prevent incidents from escalating beyond existing available resources. The overall existing emergency procedures and approach can potentially result in delays of initial resource allocation and funding which are critical to efficiently address most disaster events and reduce future resource needs by preventing additional damages.

Proposed Emergency Management Approach:

The recognition of the Delta as an area of national significance will continue to increase as public investment such as habitat restoration is implemented and public interest increases. The overall framework for implementation of the emergency management approach will provide the flexibility to protect these resources efficiently and in a timely manner as well as the ability to adapt to changing conditions. The Emergency Management Plan will build upon existing State, federal, and local agency emergency management responsibilities to protect Delta resources in the event of a disaster. An effective emergency management plan which identifies preventive measures and post-disaster recovery measures can enhance existing emergency activities to protect and recover areas with significant public investment and benefits in the Delta. This plan will be integrated with existing emergency management systems, and identify pre-emergency and post-disaster recovery measures. The implementation of the emergency management approach will address the following activities:

- Establish a Delta emergency management team consisting of existing state, federal, and local agency personnel among existing agencies with disaster related authorities and responsibilities. This team will enhance coordination

and implementation of emergency actions for protecting Delta resources consistent with Program objectives. The focus will be on local agency preparation, coordination, and responsibility to provide enhanced initial response efforts to prevent damages and recovery measures. However, the plan will provide flexibility within each agency for specific implementation of the emergency actions based on resource availability, type of disaster, and extent of disaster.

- Identify criteria and emergency actions consistent with Program objectives to ensure protection of Delta resources. Separate criteria will be needed for various types of disasters such as single island failure during a low Delta inflow period, multiple island failure during a high Delta inflow period, or toxic spill within Delta channels during a low Delta inflow period. In addition, criteria will be needed for emergency actions prior, during, and after a disaster event. Criteria such as stages or flows in certain Delta channels or seepage flows will determine specific emergency actions. Criteria for threatening situations such as imminent failure of Delta levees would identify equipment and manpower to prevent such failure. For example, stages in the Yolo Bypass or Delta Cross Channel could identify actions such as mobilization of equipment or materials and coordinated planning efforts to evaluate subsequent eventual actions. Criteria for post disaster situations such as after toxic spills would identify actions such as clean-up or other recovery actions. For example, criteria such as depth of flooding or salinity intrusion may identify post-emergency measures such as water management operations, and levee rehabilitation.
- Identify preventive measures to improve the efficiency of implementing emergency actions. Initial emergency actions and resources should be identified and available in advance of a disaster event enhance emergency assistance protecting life and property, preventing additional damages and reducing subsequent costs. Examples of preventive measures include identification of potential staging areas, advance collection and placement of materials, and identification of specific emergency actions.
- Identify recovery measures to prevent damages to adjacent areas and reduce long-term damages of affected areas. Examples of recovery measures include toxic spill clean-up, levee rehabilitation, and habitat restoration. Implementation of these measures to protect Delta resources will be consistent with Program objectives. For example, rehabilitation of Delta levees would incorporate habitat improvements consistent with Ecosystem Restoration Program Plan actions.