

State of California  
The Resources Agency  
DEPARTMENT OF WATER RESOURCES  
Division of Flood Management

# After Action Report

2004 Jones Tract Flood Incident



**Memorandum Report**

December 2004



# Memorandum

Date:

To: 1. Gary Bardini  
2. Leslie F. Harder, Jr.

From: Jay Punia, Chief  
Flood Operations Branch  
Department of Water Resources

Subject: After Action Report, 2004 Jones Tract Incident

This report presents a comprehensive review and analysis of the Department of Water Resources' (DWR) emergency response to the June 2004 levee breach at the Jones Tract, and serves as a planning document to improve DWR's flood emergency response readiness. Specifically, the report:

- Provides a summary of the incident including a chronology
- Describes the post-flood debriefing process
- Identifies successes and areas of improvement with DWR's emergency response
- Analyzes the effectiveness of the Standardized Emergency Management System (SEMS) implementation for this incident
- Makes recommendations for implementing improvements

According to the California Code of Regulations, Title 19, Section 2450, any State agency responding to an emergency for which the Governor proclaims a State of Emergency must complete and transmit an After Action Report to the Governor's Office of Emergency Services. This report meets this requirement.

If you have any questions, please contact me at (916) 574-2611.



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# Executive Summary

## Purpose and Scope

This After Action Report (AAR) covers the Department of Water Resources (DWR) emergency response actions, application of the Standardized Emergency Management System (SEMS), and recommends modifications to plans and procedures and training and exercise needs. An AAR serves to provide a source for documentation of response activities, identification of successes and problems during emergency operations, analysis of the effectiveness of the SEMS implementation and to provide a plan of action to improve emergency operations.

Specifically, this report is a review and analysis of DWR's emergency response to the 2004 Jones Track Flood Incident. This report includes a set of recommendations for improving DWR's response to a flood emergency for the upcoming 2004-2005 winter season and for future flood seasons. The following activities were carried out to develop this report:

- Two after action debriefings and several meetings were held with staff from the Flood Operations Center (FOC), the Incident Command Team (ICT) and DWR management, and participating DWR divisions
- Issues requiring further attention, improvement or corrections were identified

California Code of Regulations, Title 19, Section 2450, requires, in part, that any State agency responding to an emergency, for which the Governor proclaims a State of Emergency, must submit an AAR to the Governor's Office of Emergency Services (OES). This report meets that requirement.

## History of Event

On June 3, 2004, at approximately 7:50 a.m. a levee breach occurred on the west levee of the Upper Jones Tract in the southern region of the Delta in San Joaquin County. As the flooding began, State, federal and local agencies began mobilizing.

By 9:00 a.m., the State Federal Flood Operations Center had activated, implemented the "Delta Levee Failure Incident" response protocol, and begun coordinating with numerous State, federal and local agencies.

The San Joaquin Sheriffs Office established a command post on the eastern side of Upper Jones Tract adjacent to State Highway 4.

Evacuation of Upper Jones Tract and Lower Jones Tract began. DWR and other agencies determined that the Trapper Slough levee on the southern border of Upper Jones Tract was not at a high enough elevation to protect State Highway 4.

DWR established the following objectives for protecting lives and property:

- Protect Highway 4 from failure by Trapper Slough
- Prevent the failure of Jones Tract perimeter levees and adjacent levee islands
- Close the levee breach
- Minimize saltwater intrusion into the Delta

DWR and the U.S. Bureau of Reclamation (USBR) immediately took steps to try to protect water quality by restricting the flow of water exported south from their respective pumping plants and by releasing water from upstream reservoirs.

By the evening of June 4, 2004 an emergency request under Public Law 84-99 was made to the U.S. Army Corps of Engineers (Corps) to raise and armor the Trapper Slough Levee to protect State Highway 4 and to close the breach. Ultimately the Corps agreed to raise the Trapper Slough levee (with assistance from the California Department of Transportation (Caltrans) and materials provided by DWR), but denied the request for armoring the Trapper Slough levee and the closing of the breach. Governor Arnold Schwarzenegger declared a State of Emergency.

On June 5, 2004 a Unified Command had been established at the site of the Sheriff's command post. Sharing the command were staff from San Joaquin County, DWR, and Caltrans. Governor Arnold Schwarzenegger visited the flooded island. That same day an agreement was reached with Dutra Construction to close the breach.

On June 6, 2004 DWR established a command post at the site of the Unified Command and on June 8, 2004 took over control of the incident.

Raising of the Trapper Slough levee was completed on June 8, 2004 and, at the request of the Reclamation Districts 2038 and 2039, DWR began a flood fight to protect the island interior levees. Approximately 16 miles of levee were eventually lined with visquine or armored with rock to protect the inside of the island. California Department of Forestry (CDF) and California Conservation Corps (CCC) crews were deployed to carry out the flood fight to protect the island's interior.

Both the breach closure and protection of the interior levee slopes were completed on June 30, 2004. As a result there were no further problems due to high tides or winds.

On June 24, 2004 DWR awarded a contract for the dewatering of the island, and on July 12, 2004 operation of four 42-inch pumps began at a pump station constructed on Upper Jones Tract. By July 26th construction of another pump station was completed north of the Burlington Northern – Santa Fe Railroad (BNSF) line, and all 10 pumps (eight 42-inch and two 30-inch) were in operation. The maximum flow rate was approximately 350,000 gallons per minute (780 cubic feet per second).

On June 30, 2004 a Presidential Declaration of Emergency was declared which authorized the Federal Emergency Management Agency (FEMA) to reimburse the costs of responding to this emergency.

On July 12, 2004 the incident was officially closed by OES. Pumpout of the island and monitoring for potential future failures continued. As of December 14, 2004, dewatering of the Upper Jones Tract was essentially finished but pumping was expected to continue for a couple of days at Lower Jones Tract. An estimated 140,000 acre-feet of water had been removed from the island. The remaining water in drainage ditches and low-lying areas will be pumped by Reclamation District's pumps.

### **Debrief Process**

The debrief process was conducted in several steps. On August 10, 2004 DWR Director Lester Snow briefed the Senate Committee on Agriculture and Water Resources on the incident. On August 23, 2004 a debrief meeting was held at State OES headquarters for all DWR staff that participated in the incident. On September 1, 2004 a second debrief meeting included State, local, and federal agencies that participated in the Jones Tract incident. In addition, a questionnaire was distributed to all DWR staff members who participated in the incident. The results of these three debrief meetings and the responses to the questionnaires are reflected in this AAR.

### **Summary of Response—Successes and Issues**

DWR successfully met the objectives set at the outset of the breach for protecting lives and property. These four objectives were:

- Protect Highway 4 from failure by Trapper Slough
- Prevent the failure of Jones Tract perimeter levees and adjacent levee islands
- Close the levee breach
- Minimize saltwater intrusion into the Delta

DWR accomplished these objectives in spite of the fact that this levee breach occurred with no warning on a non-project levee outside of the normal flood season. Interagency cooperation was laudable during this event with a number of agencies, departments, and divisions working to meet the unusual demands of the emergency.

An objective to dewater the island was determined during the course of the event and was essentially completed on Upper Jones Tract by December 14, 2004. Pumping continued for a couple more days at Lower Jones Tract.

A number of issues had the potential to affect the quality and nature of DWR's flood response. Prime among these is the lack of clear direction and funding when a levee not constructed under the Corps' auspices (a non-project levee) fails. Until the Governor provided clear direction to DWR to respond to the flood fight the State's role in the flood fight and flood response was unclear. The source of funds available to conduct the response and the State's role in flood recovery were also unclear. Other significant issues are included in the table below along with recommendations. In addition, minor issues are addressed in the text of this report.

**Table EX 1: Recommended Pre-Event Flood Emergency Actions**

Issue	Category/Sub	Title	Recommended Action	Response
A1	Policy 1	DWR Responsibility for Flood Fight on Non-project Levees	Develop a clear policy and plan specifying DWR's <b>flood fight responsibility</b> on non-project levees. The policy should provide a funding mechanism for any specified flood response.	L – Exec S – DFM
A2	Policy 2	Repair of Flood Damage from Non-project Levee Failure	Develop a clear policy specifying DWR's authority to <b>repair flood damage and assist in the recovery</b> of flood damaged areas (including dewatering of flooded areas) from non-project levees. The policy should provide a funding mechanism for any repair and recovery work.	L – Exec S – DFM
A3	Staffing 1	Annual Staff Assignments	Organize 2004-2005 Department-wide, cross-division, flood response teams for both the FOC and Regional ICTs. Annually update DWR flood emergency response assignments for both the FOC and ICT, clearing the assignments with managers and supervisors.	L – EPM S – DFM
A4	Equipment 1	Emergency Voice / Data Telecommunications Plan	Develop and annually review an emergency telecommunications plan. Execute an annual or multi-year services contract to provide rapid, effective telecommunications in remote areas in the event normal telecommunications services are inadequate.	L – DFM, DTS
A5	Training 1	SEMS Specific Duties	Annually conduct SEMS, FOCIS, and section-specific training for flood response teams in the FOC and ICP. The training will be for flood response teams and for DWR managers and personnel likely to have a flood response role. Conclude annual training/briefings with an emergency management exercise.	L – EPM S – Training Office, DFM
A6	Policy 3	Authorize Flood Management Emergency Expenditures	Authorize the Division of Flood Management to expend funds during major flood emergencies for the necessary contracts and equipment required to respond quickly and institute corresponding emergency business practices.	L – DMS S – DFS, Exec, DFM

Issue: Recommended actions in order of priority (A1, A2, A3 etc.)

Category/Sub: The four categories are Policy, Staffing, Equipment and Training. Category items are subcategorized in order of priority (Policy 1, Policy 2, etc.)

Response: Responsible parties listed by L (Lead) and S (Support)

**Table EX 1: Recommended Pre-Event Flood Emergency Actions (continued)**

Issue	Category/Sub	Title	Recommended Action	Response
A7	Policy 4	Interagency Agreements	Execute and update as needed interagency agreements with all applicable agencies to enable immediate flood fight response. Annually review existing agreements.	L – Exec S – DFM
A8	Policy 5	Compensation	Institute a method to fairly compensate applicable managers and supervisors who work extended flood (and other disasters) response hours.	L – DMS S – Exec
A9	Equipment 2	Flood Fight Materials	Restock and expand flood fight materials expended during the flood fight. Provide mechanisms to reimburse DFM for stockpiled materials utilized in the flood fight.	L – DFM S – DMS
A10	Policy 6	DWR Business Processes	Establish streamlined or specialized business processes to use in a flood emergency. Streamline normal business processes such as Travel Expense Claims and invoice payment. Train line staff and managers in applicable Divisions in SEMS and emergency response roles and responsibilities.	L – DMS S – DFS, Exec, DFM
A11	Equipment 3	DWR Incident Command Post	Provide an adequately supplied mobile emergency response office(s) to enable rapid setup of an easily recognized DWR ICP. Trailers equipped with computers, office equipment and supplies are needed for an effective initial field response--and if necessary a larger incident command post by DWR.	L – DMS S – DFM
A12	Training 2	Interagency Coordination	Build upon key relationships with CDF, CCC, OES, locals, and other agencies by annually conducting discussions with key personnel.	L – DFM
A13	Policy 7	Mission Tasking by OES	Follow pre-established OES mission tasking procedures unless otherwise directed by the Governor's Office or designee. Train DWR managers in mission tasking.	L – DFM

Issue: Recommended actions in order of priority (A1, A2, A3 etc.)

Category/Sub: The four categories are Policy, Staffing, Equipment and Training. Category items are subcategorized in order of priority (Policy 1, Policy 2, etc.)

Response: Responsible parties listed by L (Lead) and S (Support)

**Table EX 2: Recommended Actions During Flood Emergencies**

Issue	Category/Sub	Title	Recommended Action	Response
E1	Staffing 2	Emergency Staff Assignments	Direct all personnel assignments during an event from the FOC. Assign an individual to deploy staff at both the FOC and ICP.	L – DFM
E2	Staffing 3	SEMS Reports	Each section will designate an individual whose entire function is to keep a real time log of the information flow in their section. This real time log will allow the quick and accurate writing of official SEMS reports in FOCIS. Provide annual FOCIS training.	L – DFM
E3	Staffing 4	Numbers of Staff Assigned	Notify key staff in all affected divisions of any potential event. Provide sufficient numbers of staff early in a major flood event. Continue staffing at sufficient levels to ensure adequate flood emergency response. Conduct an emergency meeting of all DFM staff to notify of major event and review staffing assignments. Distribute Flood Alert and Mobilization Memoranda via email to all DWR staff.	L – DFM
E4	Training 3	Communication Between FOC and ICP	Encourage peer-to-peer communications during events within sections and between section chiefs at the FOC and ICPs. Daily assign a messenger to transport materials from ICP(s) to FOC.	L – DFM
E5	Equipment 4	Workspace Assignments	Provide an assigned workspace in the FOC for Incident Command Personnel.	L – DFM S – DMS
E6	Policy 8	CDF Transition Team	Request CDF assistance to assist in initial setup of an ICP.	L – DFM S – EPM
E7	Staffing 5	Staffing Rotation and Duration	Rotate teams on an eight day sequence, providing a one day overlap between teams.	L – DFM S – Exec
E8	Staffing 6	Public Information Officers (PIO) at the FOC and ICP	Have PIO coverage at both the FOC and ICP at all times. Train and utilize PIOs from various Divisions to allow for adequate coverage without putting undue burden on the PAO.	L – DFM S – PAO
E9	Policy 9	Environmental Issues and Health/Safety	Be proactive and aware of the role/responsibility of DWR with respect to environmental/health/safety issues such as water quality and toxics. Be aware of other responding agencies roles and verify that necessary actions are being performed regardless of responsibility.	L – DFM S – DES

Issue: Recommended actions in order of priority (A1, A2, A3 etc.)

Category/Sub: The four categories are Policy, Staffing, Equipment and Training. Category items are subcategorized in order of priority (Policy 1, Policy 2, etc.)

Response: Responsible parties listed by L (Lead) and S (Support)

# Chapter One – Introduction

## 1.1 Purpose and Scope

This AAR covers DWR emergency response actions, application of the SEMS, modifications to plans and procedures and training and exercise needs. An AAR serves to provide a source for documentation of response activities, identification of successes and problems during emergency operations, analysis of the effectiveness of the SEMS implementation and to provide a plan of action to improve emergency operations.

Specifically, this report is a review and analysis of the DWR emergency response to the 2004 Jones Tract Flood Incident. This report includes a set of recommendations for improving DWR's response to flood emergencies. The following activities were carried out to develop this report:

- Two after action debriefings and several meetings were held with staff from the FOC, the Incident Command Team and DWR management, and participating DWR divisions
- Issues requiring further attention, improvement or corrections were identified

California Code of Regulations, Title 19, Section 2450, requires, in part, that any State agency responding to an emergency, for which the Governor proclaims a State of Emergency, must submit an AAR to the Governor's OES. This report meets this requirement.

## 1.2 History of Event

On June 3, 2004, at approximately 7:50 a.m. a levee breach occurred on the west levee of the Upper Jones Tract in the southern region of the Delta in San Joaquin County. The break occurred approximately 1/4 mile north of the Woodward Island ferry exposing the tract to flooding from Middle River. As the flooding began, State, federal and local agencies began mobilizing.

By 9:00 a.m. the State Federal Flood Operations Center had activated, implemented the "Delta Levee Failure Incident" response protocol and begun coordinating with numerous State, federal and local agencies.

The San Joaquin Sheriffs Office established a command post on the eastern side of Upper Jones Tract adjacent to State Highway 4.

Evacuation of Upper Jones Tract and Lower Jones Tract began. DWR and other agencies determined that the Trapper Slough levee on the southern border of Upper Jones Tract was not at a high enough elevation to protect State Highway 4. Other immediate concerns were the BNSF embankment that acted as the barrier between Upper Jones Tract and Lower Jones Tract, the Mokelumne River Aqueduct operated by

East Bay Municipal Utility District (EBMUD), and the Kinder-Morgan gasoline pipeline. All three facilities crossed the Jones Tract in approximately the same location.

DWR established the following objectives for protecting lives and property at Jones Tract:

- Protect Highway 4 from failure by Trapper Slough
- Prevent the failure of Jones Tract perimeter levees and adjacent levee islands
- Close the levee breach
- Minimize saltwater intrusion into the Delta

DWR and the USBR immediately took steps to try to protect water quality in the southern Delta and their pumping plants. Additional water was released from upstream reservoirs. Export pumping was reduced at the Bureau's Tracy Pumping plant. DWR ceased pumping from the Harvey O. Banks Delta Pumping Plant.

By the evening of June 4, 2004 an emergency request under Public Law 84-99 was made to the Corps to raise and armor the Trapper Slough Levee to protect State Highway 4 and to close the breach. Ultimately the Corps agreed to raise the Trapper Slough levee (with assistance from Caltrans and materials provided by DWR), but denied the request for armoring the Trapper Slough levee and the closing of the levee breach. Governor Arnold Schwarzenegger declared a State of Emergency.

On June 5, 2004 a Unified Command had been established at the site of the Sheriff's command post. Sharing the command were staff from San Joaquin County, DWR, and Caltrans. Governor Arnold Schwarzenegger visited the flooded island. That same day an agreement was reached with Dutra Construction to close the breach.

On June 6, 2004 DWR established a command post at the site of the Unified Command and on June 8, 2004 took over control of the incident. San Joaquin County and the California Highway Patrol (CHP) remained in support of the incident. Staff from the Division of Flood Management, Bay-Delta Office and other DWR divisions eventually made up the ICT until July 15, 2004 when the ICP closed. Members of the Department of Boating and Waterways, CDF and Caltrans were also integrated into the command as agency representatives. Liaison efforts with surrounding growers and agencies were taking place and flood fight materials and other resources began to arrive at the site. CDF and CCC hand crews were deployed to carry out the flood fight to protect the island's interior.

Raising of the Trapper Slough Levee was completed on June 8, 2004 and, at the request of the Reclamation Districts 2038 and 2039, DWR began a flood fight to protect the inside of the island from the rising flood waters. Approximately 16 miles of levee were eventually lined with visquine or armored with rock to protect the island interior levees.

Dutra Construction completed closing the breach on June 30, 2004, approximately 20 days ahead of schedule. This occurred on the same day as the completion of protecting the island's interior levees. The closure occurred several days before an astronomical high tide was due. This high tide would have resulted in a rise of the island water surface elevation to its highest level since the day of the breach. As a result of the closure and completion of the protection efforts, there were no problems due to the high tidal period or winds.

Following negotiations with local agencies on June 24, 2004, DWR opened bids and awarded a contract for the dewatering of the island. That effort began on July 12, 2004 with the startup of four 42-inch pumps at a pump station constructed on Upper Jones Tract just south of the BNSF railroad line. By July 26, 2004 another pump station had been constructed north of the BNSF line and all 10 pumps (eight 42-inch and two 30-inch) were in operation. The maximum flow rate was approximately 350,000 gallons per minute (approximately 780 cubic feet per second). By July 26, 2004 the water level had been reduced by about 18 inches.

On June 30, 2004 a Presidential Declaration of Emergency was declared which authorized the FEMA to reimburse the costs of responding to this emergency.

On July 12, 2004 the incident was officially closed by OES. Pumpout of the island and monitoring for potential future failures continued. As of December 14, 2004, dewatering of the Upper Jones Tract was essentially finished but pumping was expected to continue for a couple of days at Lower Jones Tract. An estimated 140,000 acre-feet of water had been removed from the island. The remaining water in drainage ditches and low-lying areas will be pumped by District pumps.

### **1.3 Date/Time of Proclamations/Declarations**

Almost immediately after the levee was breached on June 3, 2004, San Joaquin County declared a State of Emergency. On June 4, 2004, the DWR Director declared the Department to be under an emergency and mobilized. The Governor followed with the proclamation of a State of Emergency on June 4, 2004. On June 30, 2004 the President proclaimed a State of Emergency at the federal level. The Presidential proclamation allowed the State to submit claims for federal reimbursement of emergency costs by FEMA.

The four declarations are listed in bullet form below. Copies of the declarations are included in Appendix A of this report.

- June 3, 2004 – San Joaquin County proclaims a State of Emergency
- June 4, 2004 – Flood Mobilization Memorandum
- June 4, 2004 – Governor proclaims a State of Emergency
- June 30, 2004 – President proclaims a State of Emergency

**Figure 1: Jones Tract Levee Failure Emergency Response Map**

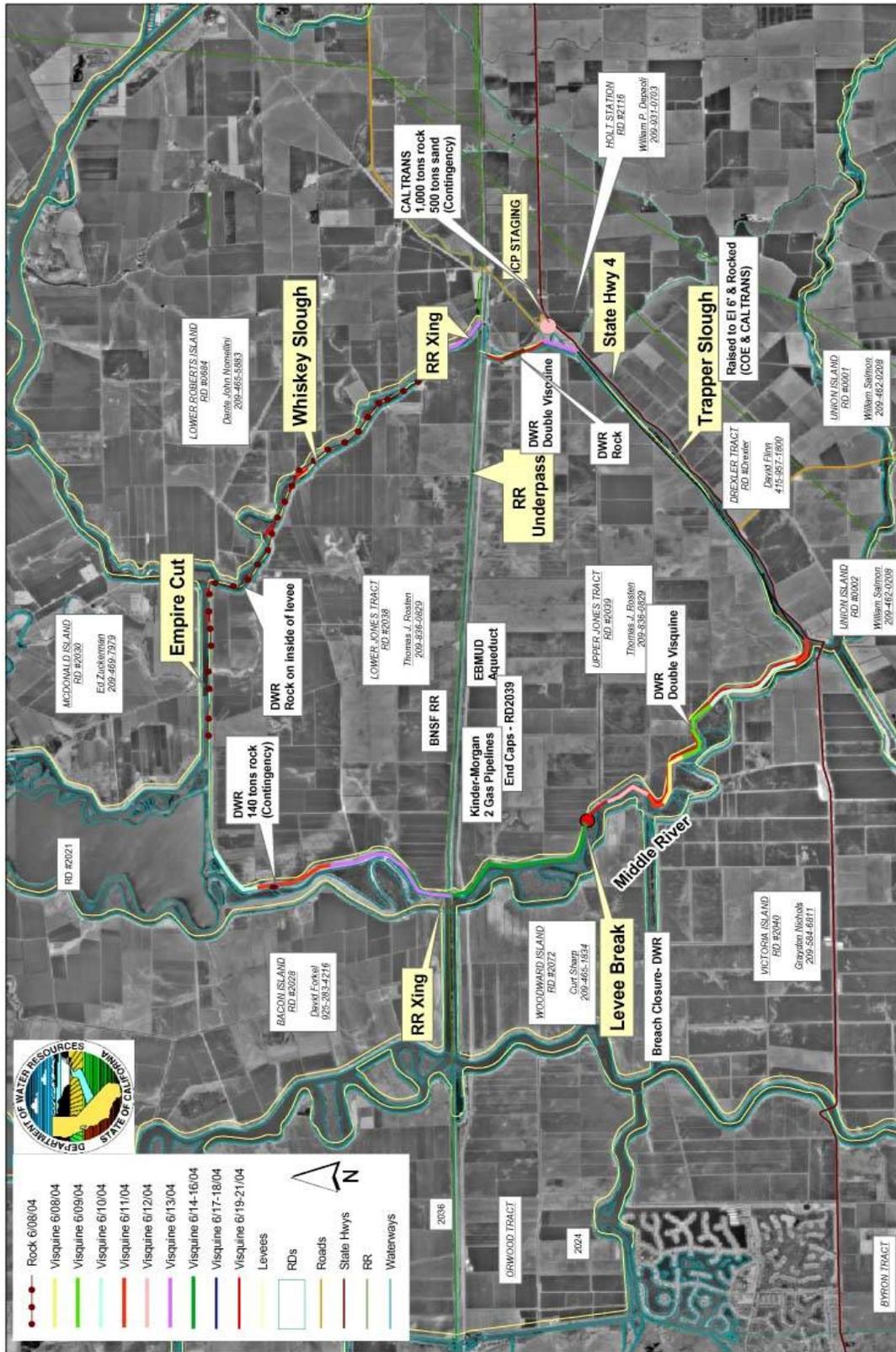


Figure 2: Jones Tract Graphical Timeline June 3-6, 2004

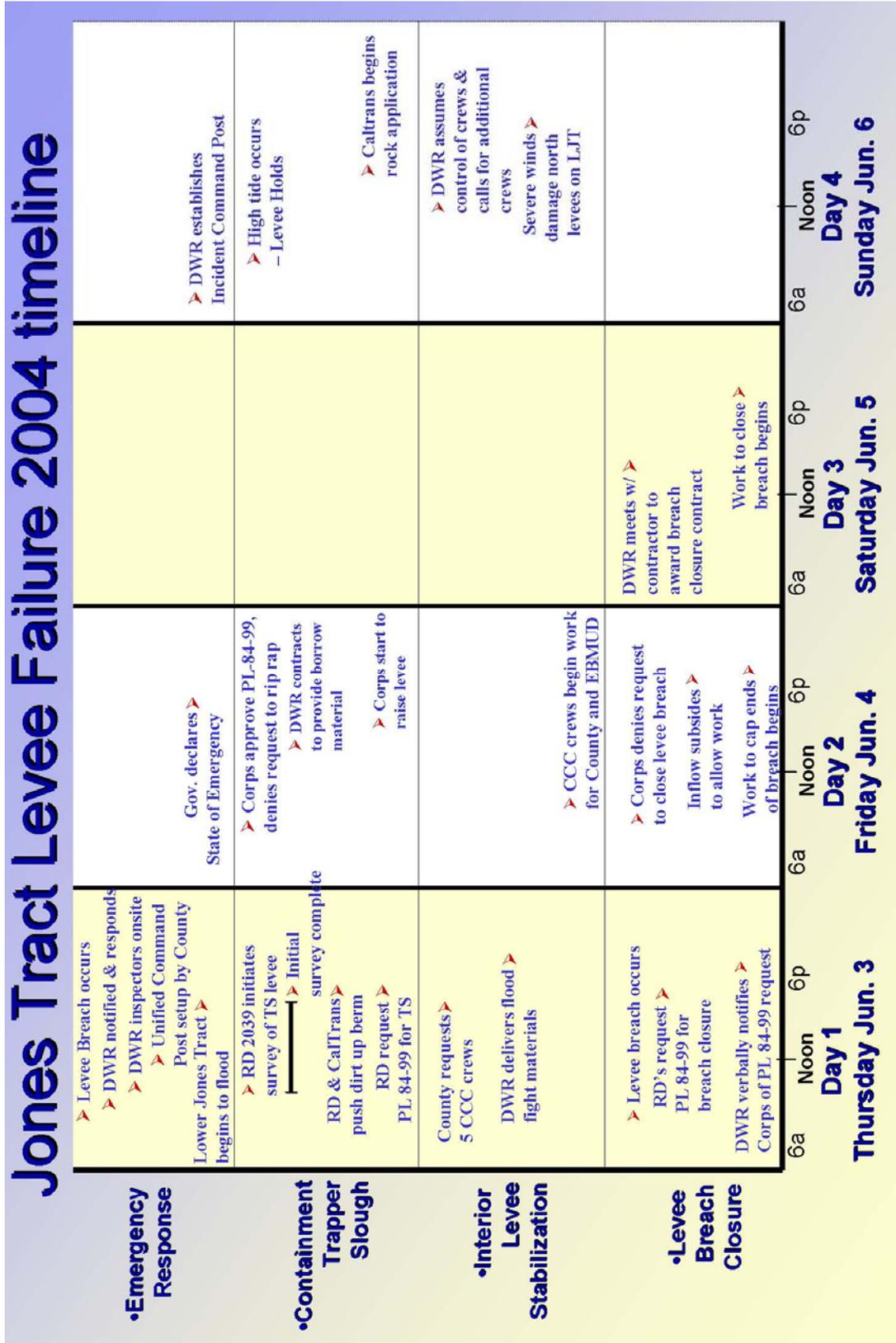
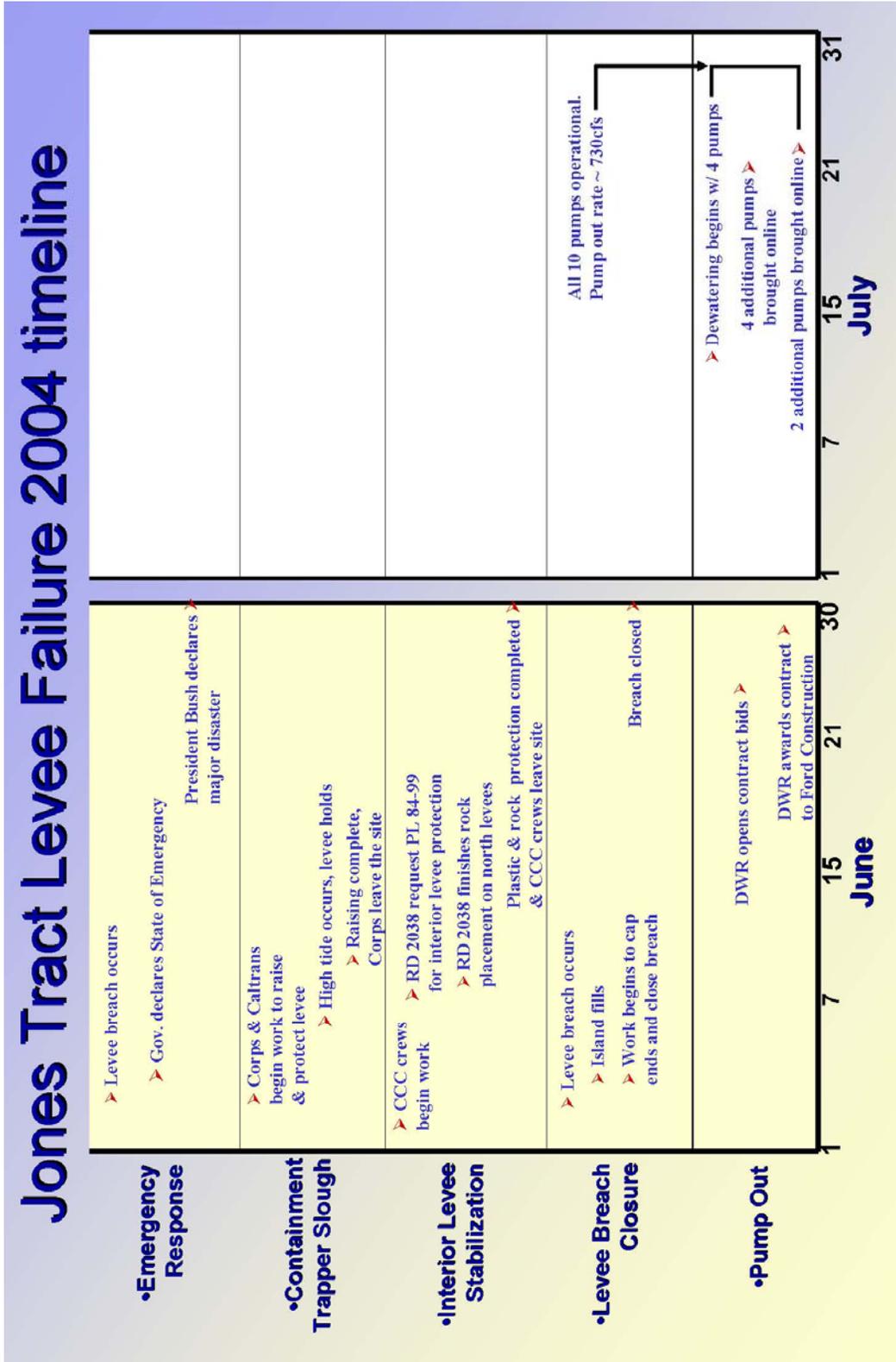


Figure 3: Jones Tract Graphical Timeline June -July, 2004



## **Chapter Two – Discussion of Response at Designated SEMS Levels**

The following is a summary of the response, conclusions on the response, and recommendations for improvement at designated SEMS levels.

### **2.1 Incident Command Team**

Initially, DWR was part of a Unified Command established on June 5, 2004 by San Joaquin County, DWR, and Caltrans. A DWR ICT was established at the site on June 6, 2004 and took over sole command of the incident on June 8, 2004.

At the beginning the ICT was composed of staff from the Bay-Delta Office and the Division of Flood Management. By the end of the first week, a number of the original ICT personnel were recalled by their parent organizations and new staff had to be recruited. Initially there was the expectation that the inside slopes of the levees surrounding Upper Jones Tract and Lower Jones Tract would not require wave wash protection. By June 10, 2004, changing site and weather conditions necessitated slope protection and extended the need for a full ICT.

The ICT and the FOC began to assign/recruit replacement and additional staff for the ICT's general staff. Eventually staff was assigned to the ICT primarily from the Bay-Delta Office, Division of Flood Management, Division of Engineering (DOE), Division of Operations & Maintenance and the San Joaquin District. The Divisions of Fiscal Services, Environmental Services and Safety of Dams, along with the Public Affairs Office and Central District, also provided staff.

The ICT was in the field from June 6, 2004 to July 15, 2004. Staff rotation became a problem by the end of June. Although the proximity of the incident to Sacramento allowed for periodic breaks by assigned staff, coordination difficulties in assigning staff and consistency remained a problem.

The primary missions of the ICT were to install wave wash protection on the land side of the interior levees, maintain the crest elevation of Trapper Slough and close the breach. DOE staff assigned to the Operations Section of the ICT were responsible for the latter and generally the ICT was not directly involved.

### **2.2 Flood Operations Center**

The FOC activated immediately upon notification of the breach. The FOC initiated the "Delta Levee Failure Incident" protocol and mobilized to support the incident. Because the levee failed so quickly the FOC did not issue a Flood Alert letter but immediately issued a Flood Mobilization letter. A request for assistance under Public Law 84-99 was prepared and submitted to the Corps. Many of the pre-established FOC Emergency Response Team members were immediately activated, and personnel from many divisions with varying levels of SEMS training were also recruited to staff the FOC and assume assigned SEMS roles throughout the event. Several FOC Team members were assigned to the ICP.

### **2.3 FOC Management/DWR Executive**

The FOC Management Section worked closely with DWR Executive providing information and recommendations. The FOC Management was the direct liaison to the Governor's OES and the Corps, while DWR Executive worked directly with the Department of Finance, Resources Agency, Governor's Office and the Legislature.

The FOC Management convened daily conference calls with the responding State, federal and local agencies, including the ICT at Jones Tract. The ICT briefed FOC Management frequently throughout the day, depending upon the level of activity.

### **2.4 Local Agencies**

DWR dealt with a number of local agencies during the response, especially with Reclamation Districts 2038 and 2039. These districts had jurisdictional responsibilities for the levees surrounding Upper Jones Tract and Lower Jones Tract.

### **2.5 Operational Area**

The primary Operational Area (OA) involved was San Joaquin County. From the beginning, the OA provided vital support to the incident, including command post facilities. The ICT stayed in close contact with the San Joaquin County OES and related agencies. The San Joaquin County Sheriff's Office, with assistance from the CHP, provided traffic control and security in the area of the incident. Although not the primary OA, Contra Costa County provided additional support in the form of boat patrols on Middle River and helicopter reconnaissance flyovers.

### **2.6 Regional Emergency Operations Center (REOC)**

The Governor's Office of Emergency Services State Operations Center (SOC) and the Inland Region (REOC) supported the incident by requesting federal assistance, coordinating State resources and providing assistance to the San Joaquin County Operational Area. OES provided an agency representative to the FOC as well as field support to the ICP, including staff and critical communications equipment.

### **2.7 Other State Agencies**

Numerous State agencies participated in or supported the incident response. A summary of their response roles is given below:

- Caltrans: Assisted the Corps of Engineers in raising the Trapper Slough levee by providing rock for wave wash protection and performing surveys to install vertical controls for the levee raising operation.

- CDF: Provided labor crews to install wave wash protection and provided a Command Team to advise and assist in the organization and startup of DWR's ICT. The Department of Corrections was also involved in the provision and oversight of crews.
- CCC: Provided labor crews to work in the staging area, install wave wash protection and install a sandbag wall on Trapper Slough.
- CHP: Provided traffic control and security in the incident area in cooperation with the San Joaquin County Sheriff's Office. The CHP also assisted in reconnaissance efforts by conducting numerous flyovers of the incident area.
- Department of Boating and Waterways: Provided an air boat and crew for use on the inside of the island, providing a method for flood fight staff and others to assess the status of levees and the installation of wave wash protection.
- Central Valley Regional Water Quality Control Board: Provided regulatory guidance and assistance during recovery efforts, particularly regarding the pump out phase.
- The Department of Fish and Game: Supplied air boats for use inside the island, patrolled the area for illegal fishing activity, and conducted assessments for fish loss.
- California Department of Health Services: Provided support in conducting water quality monitoring.

## **2.8 Federal Agencies**

The Corps, upon request by the State for assistance under Public Law 84-99, issued an emergency contract to raise the elevation of the Trapper Slough Levee. The USBR coordinated with DWR on water releases from upstream reservoirs and restricting export pumping from the southern Delta to protect water quality. The National Weather Service provided monitoring equipment, and localized tide, wind and weather forecasts and warnings. The U.S. Coast Guard was involved due to waterway issues in the Delta and surrounding Jones Tract. The Environmental Protection Agency and the U.S. Geological Survey were involved in water quality issues regarding the water that flooded the island.



## **Chapter Three – Debrief Process**

### **3.1 Introduction**

DWR participated in an informational hearing conducted by the Senate Committee on Agriculture and Water Resources and conducted two debriefing sessions. In addition, a questionnaire was distributed to determine which parts of the system responded successfully to the emergency and which parts of the system can be improved upon for future flood emergencies the State responds to.

The comments received were compiled for this AAR. The results and recommended actions are included in Chapters Four and Chapter Five of this report.

### **3.2 Legislative Hearing**

The Senate Committee on Agriculture and Water Resources held an informational public hearing on August 10, 2004 at the State Capitol regarding the Jones Tract Levee Incident. The purpose of the hearing was to find out what impediments or constraints occurred between federal, State, and local agencies responding to the June 3, 2004 emergency and what steps should be taken now to address these issues before another levee breach happens with more drastic results. Presentations were made by the DWR Director, San Joaquin County, the Corps, OES, and Reclamation Districts 2038 and 2039 representatives.

It was expressed by various individuals that within the existing structure of emergency response and funding options, the emergency response to the Jones Tract Levee breach was effective and accomplished its primary goal of protecting adjoining islands from flooding. Various local, State and federal agencies worked together and provided a very timely and effective response. It was acknowledged that there is no clear policy for closing a breach on non-project levees, repairing damaged non-project levees, and for dewatering flooded islands. Legislation or a policy clarifying the role of State, federal and local agencies in repairing damage to non-project levees would expedite the response in the future.

DWR Director Lester Snow explained that there were no material delays in responding to the emergency situation. The objectives of the response were met. The Trapper Slough levee was raised protecting Highway 4; the inside of the island was protected thereby preventing damage to adjacent islands; the breach was closed; and pumping of the island was underway. These objectives were achieved by the efforts of numerous State, federal and local agencies working as a team, each bringing their particular skills to the event.

The local reclamation district representatives made it very clear that the levee breach repair work, dewatering of the flooded island and repair of the damaged levee was beyond their capacity to fund.

The committee concluded that there are policy issues related to the repair of non-project levees and dewatering of flooded islands that needs to be resolved by either legislation or policy clarification.

### **3.3 DWR Debriefs**

On August 23, 2004, DWR and OES held an After Action Debriefing in Sacramento. All DWR employees who participated in the response were invited to attend this debrief. In addition, several meetings were conducted with key ICP staff involved in the response.

### **3.4 Local Agency Debrief**

Another debriefing session was held on September 1, 2004 in Stockton with local, State, and federal agencies involved in emergency operations. Attending were representatives of DWR, OES, the Corps, Reclamation Districts 2038 and 2039, San Joaquin County OES and Sheriff's Department, Caltrans, CDF, and CCC. A facilitated discussion allowed each group attending to present successes and items to be improved upon.

### **3.5 Questionnaire**

A questionnaire was distributed to all DWR employees who participated in the flood incident. These employees were from multiple divisions, including the Division of Flood Management, Division of Planning and Local assistance, Division of Environmental Services, Division of Engineering, Division of Management Services and Division of Fiscal Services. The questionnaire asked "What went well?" and "What could have been improved?" in eight separate categories. These categories were: staffing and support, communications and information, overall FOC Operations, overall ICP Operations, how could your specific role and functions be improved, relationships and interagency coordination, training and preparedness, and other. A copy of the questionnaire is located in Appendix C of this report.

## Chapter Four – Recommendations Table

The principal findings and recommendations of this report are presented in two summary tables. Table 1 presents those items that should be accomplished in advance of the next flood emergency. Table 2 presents those items that should be carried out during the next flood emergency. These measures, if carried out, will enable DWR to respond quickly and effectively during the next flood emergency.

Within each table, recommendations are ranked in order of urgency or importance to accomplish the recommended activity. Table 1 presents actions that must be accomplished in advance of the event, ranked in order of importance (A-1, A-2, A-3, etc.). Table 2 presents those actions that must be taken during the event, ranked in order of priority (E-1, E-2, E-3, etc).

In addition, recommendations are broken into four category types: Policy, Equipment, Staffing and Training. All of the recommendations within a specific category are also numbered.

**Table 1: Recommended Pre-Event Flood Emergency Actions**

Issue	Category/Sub	Title	Recommended Action	Response
A1	Policy 1	DWR Responsibility for Flood Fight on Non-project Levees	Develop a clear policy and plan specifying DWR's <b>flood fight responsibility</b> on non-project levees. The policy should provide a funding mechanism for any specified flood response.	L – Exec S – DFM
A2	Policy 2	Repair of Flood Damage from Non-project Levee Failure	Develop a clear policy specifying DWR's authority to <b>repair flood damage and assist in the recovery</b> of flood damaged areas (including dewatering of flooded areas) from non-project levees. The policy should provide a funding mechanism for any repair and recovery work.	L – Exec S – DFM
A3	Staffing 1	Annual Staff Assignments	Organize 2004-2005 Department-wide, cross-division, flood response teams for both the FOC and Regional ICTs. Annually update DWR flood emergency response assignments for both the FOC and ICT, clearing the assignments with managers and supervisors.	L – EPM S – DFM
A4	Equipment 1	Emergency Voice / Data Telecommunications Plan	Develop and annually review an emergency telecommunications plan. Execute an annual or multi-year services contract to provide rapid, effective telecommunications in remote areas in the event normal telecommunications services are inadequate.	L – DFM, DTS
A5	Training 1	SEMS Specific Duties	Annually conduct SEMS, FOCIS, and section-specific training for flood response teams in the FOC and ICP. The training will be for flood response teams and for DWR managers and personnel likely to have a flood response role. Conclude annual training/briefings with an emergency management exercise.	L – EPM S – Training Office, DFM
A6	Policy 3	Authorize Flood Management Emergency Expenditures	Authorize the Division of Flood Management to expend funds during major flood emergencies for the necessary contracts and equipment required to respond quickly and institute corresponding emergency business practices.	L – DMS S – DFS, Exec, DFM

Issue: Recommended actions in order of priority (A1, A2, A3 etc.)

Category/Sub: The four categories are Policy, Staffing, Equipment and Training. Category items are subcategorized in order of priority (Policy 1, Policy 2, etc.)

Response: Responsible parties listed by L (Lead) and S (Support)

**Table 1: Recommended Pre-Event Flood Emergency Actions (continued)**

Issue	Category/Sub	Title	Recommended Action	Response
A7	Policy 4	Interagency Agreements	Execute and update as needed interagency agreements with all applicable agencies to enable immediate flood fight response. Annually review existing agreements.	L – Exec S – DFM
A8	Policy 5	Compensation	Institute a method to fairly compensate applicable managers and supervisors who work extended flood (and other disasters) response hours.	L – DMS S – Exec
A9	Equipment 2	Flood Fight Materials	Restock and expand flood fight materials expended during the flood fight. Provide mechanisms to reimburse DFM for stockpiled materials utilized in the flood fight.	L – DFM S – DMS
A10	Policy 6	DWR Business Processes	Establish streamlined or specialized business processes to use in a flood emergency. Streamline normal business processes such as Travel Expense Claims and invoice payment. Train line staff and managers in applicable Divisions in SEMS and emergency response roles and responsibilities.	L – DMS S – DFS, Exec, DFM
A11	Equipment 3	DWR Incident Command Post	Provide an adequately supplied mobile emergency response office(s) to enable rapid setup of an easily recognized DWR ICP. Trailers equipped with computers, office equipment and supplies are needed for an effective initial field response--and if necessary a larger incident command post by DWR.	L – DMS S – DFM
A12	Training 2	Interagency Coordination	Build upon key relationships with CDF, CCC, OES, locals, and other agencies by annually conducting discussions with key personnel.	L – DFM
A13	Policy 7	Mission Tasking by OES	Follow pre-established OES mission tasking procedures unless otherwise directed by the Governor's Office or designee. Train DWR managers in mission tasking.	L – DFM

Issue: Recommended actions in order of priority (A1, A2, A3 etc.)

Category/Sub: The four categories are Policy, Staffing, Equipment and Training. Category items are subcategorized in order of priority (Policy 1, Policy 2, etc.)

Response: Responsible parties listed by L (Lead) and S (Support)

**Table 2: Recommended Actions During Flood Emergencies**

Issue	Category/Sub	Title	Recommended Action	Response
E1	Staffing 2	Emergency Staff Assignments	Direct all personnel assignments during an event from the FOC. Assign an individual to deploy staff at both the FOC and ICP.	L – DFM
E2	Staffing 3	SEMS Reports	Each section will designate an individual whose entire function is to keep a real time log of the information flow in their section. This real time log will allow the quick and accurate writing of official SEMS reports in FOCIS. Provide annual FOCIS training.	L – DFM
E3	Staffing 4	Numbers of Staff Assigned	Notify key staff in all affected divisions of any potential event. Provide sufficient numbers of staff early in a major flood event. Continue staffing at sufficient levels to ensure adequate flood emergency response. Conduct an emergency meeting of all DFM staff to notify of major event and review staffing assignments. Distribute Flood Alert and Mobilization Memoranda via email to all DWR staff.	L – DFM
E4	Training 3	Communication Between FOC and ICP	Encourage peer-to-peer communications during events within sections and between section chiefs at the FOC and ICPs. Daily assign a messenger to transport materials from ICP(s) to FOC.	L – DFM
E5	Equipment 4	Workspace Assignments	Provide an assigned workspace in the FOC for Incident Command Personnel.	L – DFM S – DMS
E6	Policy 8	CDF Transition Team	Request CDF assistance to assist in initial setup of an ICP.	L – DFM S – EPM
E7	Staffing 5	Staffing Rotation and Duration	Rotate teams on an eight day sequence, providing a one day overlap between teams.	L – DFM S – Exec
E8	Staffing 6	Public Information Officers (PIO) at the FOC and ICP	Have PIO coverage at both the FOC and ICP at all times. Train and utilize PIOs from various Divisions to allow for adequate coverage without putting undue burden on the PAO.	L – DFM S – PAO
E9	Policy 9	Environmental Issues and Health/Safety	Be proactive and aware of the role/responsibility of DWR with respect to environmental/health/safety issues such as water quality and toxics. Be aware of other responding agencies roles and verify that necessary actions are being performed regardless of responsibility.	L – DFM S – DES

Issue: Recommended actions in order of priority (A1, A2, A3 etc.)

Category/Sub: The four categories are Policy, Staffing, Equipment and Training. Category items are subcategorized in order of priority (Policy 1, Policy 2, etc.)

Response: Responsible parties listed by L (Lead) and S (Support)

## Chapter Five – Issues and Recommendations

Issues and recommendations resulting from the debriefing process are presented on the following sheets. The issues are numbered in the following way:

Items to be accomplished in advance of the next flood emergency, numbered in order of priority (A1, A2, A3, etc.)

Items to be accomplished during flood emergencies, numbered in order of priority (Equipment 1, Equipment 2, Equipment 3, etc.)

Items are presented according to category. The four categories are policy, equipment, staffing, and training. Within each category, items are ranked. For example, policy items are numbered Policy 1, Policy 2, Policy 3, etc.

Responsible parties are listed, showing those parties that have lead responsibility for completing the task, and those that are a party to the tasks' completion.

The discussion presents the major comments received according to the issue and the resulting recommendations.

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**ISSUE NUMBER: A1**

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**ISSUE TITLE: DWR Responsibility for Flood Fight on Non-project Levees**

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**Category: Policy 1**

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**Discussion:** A clear policy specifying DWR's flood fight authority on non-project levees is needed. A State plan and policies are needed for responding to non-federal levee failures in the Delta and for allocating responsibilities. Lack of such a plan and policies affected decision-making during the initial flood fight.

**Recommendations:** Develop a clear policy and plan specifying DWR's flood fight responsibility on non-project levees. The policy should provide a funding mechanism for any specified flood response.

**Responsible Parties:** **Lead:** DWR Executive  
**Support:** DFM

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**ISSUE NUMBER: A2**

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**ISSUE TITLE: Repair of Flood Damage from Non-project Levee Failure**

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**Category: Policy 2**

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**Discussion:** A clear policy specifying DWR's authority to repair flood damage (including dewatering of flooded areas) from non-project levees is needed.

**Recommendations:** Develop a clear policy specifying DWR's authority to repair flood damage and assist in the recovery of flood damaged areas (including dewatering of flooded areas) from non-project levees. The policy should provide a funding mechanism for any repair.

**Responsible Parties:** **Lead:** DWR Executive  
**Support:** DFM

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**ISSUE NUMBER: A3**

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**ISSUE TITLE: Annual Staff Assignments**

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**Category: Staffing 1**

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**Discussion:** The FOC and the ICP scrambled to locate personnel to assign to the event and needed to obtain approval from sometimes reluctant supervisors leading to confusion, understaffing, and competition for individuals.

**Recommendations:** Organize 2004-2005 flood response teams for both the FOC and ICP. Annually update DWR flood emergency response assignments for both the FOC and ICT, clearing the assignments with managers and supervisors.

**Responsible Parties:** **Lead:** Emergency Preparedness Manager  
**Support:** DFM

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**ISSUE NUMBER: A4**

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**ISSUE TITLE: Emergency Voice / Data Telecommunications Plan**

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**Category: Equipment 1**

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**Discussion:** Poor cellular phone coverage and lack of computer/Internet access led to confusing and inefficient communications, and prevented the ICP from receiving or sending electronic documents. Of prime concern was the inability to communicate from the field by phone and to submit and read FOCIS reports from the ICP due to limited Internet access.

**Recommendations:** Develop and annually review an emergency telecommunications plan. Execute an annual or multi-year services contract to provide rapid, effective telecommunications in remote areas in the event normal telecommunications services are inadequate.

**Responsible Parties: Lead: DFM, DTS**

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**ISSUE NUMBER: A5**

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**ISSUE TITLE: SEMS Specific Duties**

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**Category: Training 1**

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**Discussion:** Personnel who either played a key role in flood response or were assigned to the ICP and the FOC were not trained in their SEMS specific duty leading to lack of communication.

**Recommendations:** Annually conduct SEMS, FOCIS, and section-specific training for flood response teams in the FOC and ICP. The training will be for flood response teams and for DWR managers and personnel likely to have a flood response role.

**Responsible Parties:** **Lead:** Emergency Preparedness Manager  
**Support:** Training Office, DFM

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**ISSUE NUMBER: A6**

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**ISSUE TITLE: Authorize Flood Management Emergency Expenditures**

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**Category: Policy 3**

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**Discussion:** Water Code Section 128 provides authority for DWR to carry out an emergency response, but there is no funding absent a Governor's decision. DWR did not have access to emergency funds to immediately cover the expenses of the response to the Jones Tract Flood Incident. This created uncertainty and complications in securing necessary contracts and assurance that costs incurred would be adequately covered. Without access to emergency funds in the future, DWR could face critical delays in executing an effective disaster response.

**Recommendations:** Authorize the Division of Flood Management to expend funds during major flood emergencies for the necessary contracts and equipment required to respond quickly. Work to establish an emergency funding mechanism with appropriate controls, possibly similar to the emergency fund utilized by CDF.

**Responsible Parties: Lead: DMS**

**Support: DFS, DWR Executive, DFM**

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**ISSUE NUMBER: A7**

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**ISSUE TITLE: Interagency Agreements**

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**Category: Policy 4**

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**Discussion:** Interagency agreement allowing immediate response needs to be formalized. Agreements with applicable agencies would have avoided a potential delay to the flood fight while contracts were being executed. Examples of agencies are: CDF, CCC, Boating and Waterways, and Caltrans.

**Recommendations:** During the 2004-2005 water year, execute interagency agreements with all applicable agencies to enable immediate flood fight response.

**Responsible Parties:** **Lead:** DWR Executive  
**Support:** DFM

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**ISSUE NUMBER: A8**

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**ISSUE TITLE: Compensation**

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**Category: Policy 5**

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**Discussion:** Senior Engineers, Supervising Engineers and other applicable managers and supervisors who worked extensive hours (up to fourteen hours per day) for days or weeks at a time were not compensated for their effort. Rank-and-file staff is compensated at a rate of time and one half for their extraordinary effort, leading to a disparity between the supervisory/management classifications and support staff.

**Recommendations:** Institute a method to fairly compensate Senior Engineers, Supervising Engineers and other applicable managers and supervisors who work extended flood response hours.

**Responsible Parties: Lead:** DMS  
**Support:** DWR Executive

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**ISSUE NUMBER: A9**

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**ISSUE TITLE: Flood Fight Materials**

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**Category: Equipment 2**

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**Discussion:** Pre-positioned flood materials were expended during the Jones Tract flood fight, leaving exposure for a future flood.

**Recommendations:** Restock and expand flood fight materials expended during the flood fight. Provide mechanisms to reimburse DFM for stockpiled materials utilized in the flood fight.

**Responsible Parties: Lead:** DFM  
**Support:** DMS

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**ISSUE NUMBER: A10**

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**ISSUE TITLE: DWR Business Processes**

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**Category: Policy 6**

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**Discussion:** Business processes set up for the normal course of work were cumbersome and in some cases slowed down or hindered flood response.

**Recommendations:** Institute streamlined or specialized business processes to use in a flood emergency. Authorize the Division of Flood Management to expend funds during major flood emergencies for the necessary contracts and equipment required to respond quickly. Streamline normal business processes such as Travel Expense Claims, purchasing, contracting and bill payment. Train personnel in applicable Divisions in SEMS and emergency response.

**Responsible Parties: Lead: DMS**

**Support: DFS, DWR Executive, DFM**

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**ISSUE NUMBER: A11**

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**ISSUE TITLE: DWR Incident Command Post**

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**Category: Equipment 3**

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**Discussion:** It was difficult to physically locate DWR's ICP during the first days of the event. This difficulty added to the confusion onsite. The ICP lacked basic communication equipment such as facsimiles, copy machines and telephones.

**Recommendations:** Provide an adequately supplied mobile emergency response office to enable rapid setup of an easily recognized DWR ICP. Trailers equipped with computers, office equipment, and supplies and assigned locations for each SEMS section are needed for an effective initial field response by DWR.

**Responsible Parties: Lead: DMS**  
**Support: DFM**

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**ISSUE NUMBER: A12**

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**ISSUE TITLE: Interagency Coordination**

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**Category: Training 2**

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**Discussion:** Lack of understanding of other agencies mission and roles led to inefficiencies.

**Recommendations:** Expand existing relationships with CDF, CCC, OES, and other agencies at the key staff level by annually conducting preseason startup meetings. Train DWR staff and management to understand these relationships.

**Responsible Parties: Lead: DFM**

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**ISSUE NUMBER: A13**

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**ISSUE TITLE: Mission Tasking by OES**

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**Category: Policy 7**

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**Discussion:** A change in mission tasking procedures was implemented with little notice during the event. This led to confusion and uncertainty about the process amongst staff and managers.

**Recommendations:** Follow pre-established OES mission tasking unless otherwise directed by the Governor's Office or designee. Train DWR staff and managers in mission tasking procedures.

**Responsible Parties: Lead: DFM**

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**ISSUE NUMBER: E1**

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**ISSUE TITLE: Emergency Staff Assignments**

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**Category: Staffing 2**

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**Discussion:** Staff assignments were confusing. Recruiting and retaining staff was unpredictable.

**Recommendations:** Direct all personnel assignments during an event from the FOC. Assign a specific position to execute staff assignments.

**Responsible Parties: Lead: DFM**

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**ISSUE NUMBER: E2**

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**ISSUE TITLE: SEMS Reports**

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**Category: Staffing 3**

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**Discussion:** Rapid pace, quick decisions, and volumes of information resulted in late or sketchy transmission of reports.

**Recommendations:** Each section will designate an individual whose entire function is to keep a real time log of the information flow in their section. This real time log will allow the quick and accurate writing of official SEMS reports in FOCIS. Annually train staff at all levels in the use of FOCIS. Applies to ICP(s) and FOC.

**Responsible Parties: Lead: DFM**

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**ISSUE NUMBER: E3**

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**ISSUE TITLE: Numbers of Staff Assigned**

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**Category: Staffing 4**

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**Discussion:** Inadequate numbers of pre-trained staff at the onset of the event led to confusion and some inefficiency.

**Recommendations:** Notify key staff in all affected divisions of any potential event. Provide sufficient numbers of staff early in a major flood event. Continue staffing at sufficient levels to insure adequate and consistent flood emergency response. Conduct an emergency meeting of all DFM staff to notify of major event and review staffing assignments. Distribute Flood Alert and Mobilization Memoranda via email to all DWR staff and post on Aquanet.

**Responsible Parties: Lead: DFM**

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**ISSUE NUMBER: E4**

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**ISSUE TITLE: Communication Between FOC and ICP**

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**Category: Training 3**

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**Discussion:** Lack of communication between the ICP and the FOC sections over policy, equipment, and personnel onsite led to confusion.

**Recommendations:** Institute periodic conversations during the event between section chiefs at the FOC and the ICP. Daily assign a messenger to transport materials between the ICP and the FOC

**Responsible Parties: Lead: DFM**

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**ISSUE NUMBER: E5**

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**ISSUE TITLE: Workspace Assignments**

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**Category: Equipment 4**

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**Discussion:** ICP personnel needed designated desk space in order to accomplish assigned tasks.

**Recommendations:** Provide assigned workspace for ICP personnel. This role will be carried out by the Logistics Section.

**Responsible Parties: Lead: DFM**  
**Support: DMS**

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**ISSUE NUMBER: E6**

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**ISSUE TITLE: CDF Transition Team**

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**Category: Policy 8**

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**Discussion:** Although the goals and objectives of the disaster response were skillfully achieved, there was some level of confusion and delay in the establishment of a fully functional ICP. Given the extended length of time between flood events, DWR does not act as a first responder or maintain primary responsibility in disasters on a regular basis. With extensive experience and expertise in the SEMS/Incident Command System, CDF has offered its services to activate specialized strike teams to establish ICPs at the beginning of an event and to assist DWR with ongoing ICP operations as necessary. This will ensure immediate and efficient disaster response. CDF would remain at the ICP until such a time when DWR could effectively assume control, and possibly remain for an extended period in a support/mentoring role.

**Recommendations:** Request CDF assistance to assist in initial setup of an ICP.

**Responsible Parties: Lead: DFM**

**Support: Emergency Preparedness Manager**

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**ISSUE NUMBER: E7**

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**ISSUE TITLE: Staffing Duration and Rotation**

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**Category: Staffing 5**

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**Discussion:** Given the staffing difficulties experienced in the Jones Tract event, staff at the ICP and FOC were sometimes working for extended periods of time with little relief. Although it is important to keep experienced and knowledgeable individuals onsite, this can create situations of burnout. By having teams set up with the ability to rotate regularly, DWR would be able to ensure that there is capable, experienced staff on-hand and could provide much needed relief for everyone involved.

**Recommendations:** Rotate teams on an eight-day sequence, providing a one-day overlap for team transition and turnover.

**Responsible Parties:** **Lead:** DFM  
**Support:** DWR Executive

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**ISSUE NUMBER: E8**

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**ISSUE TITLE: Public information Officers (PIO) at the FOC and ICP**

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**Category: Staffing 6**

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**Discussion:** During the early stages of the event there was a great need for PIO coverage at both the FOC and ICP. The number of PIO staff available was not sufficient to satisfy the demands for information and media attention. Although every attempt was made to accommodate the media at the flood site, it was largely a reactionary approach.

**Recommendations:** Have PIO coverage at both the FOC and ICP at all times. In many cases the Office of Public Affairs serves as the first point of contact with the news media and public so it is necessary to involve them immediately. Train and utilize PIOs from various divisions to allow for adequate coverage without putting undue burden on the Public Affairs Office. Consider taking a proactive approach with the media by anticipating their needs and planning accordingly so the PIOs do not have to continually react to media demands (create a predetermined media area, pre-establish time and place for daily media briefings, identify public/private property ahead of time to prevent issues with landowners, prepare a daily written update to provide to the media, prepare and update maps, etc.). Use the Internet to post updates directly to DWR's Aquanet website.

**Responsible Parties: Lead:** DFM  
**Support:** Public Affairs Office

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**ISSUE NUMBER: E9**

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**ISSUE TITLE: Environmental Issues and Health/Safety**

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**Category: Policy 9**

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**Discussion:** DWR encountered numerous environmental and regulatory issues during the course of the event (health and safety of staff working in and around floodwaters, water quality related to pump out, contaminants in the fill used to raise Trapper Slough, etc.). Given the number of initial responding agencies, there was some confusion regarding what actions were actually being taken and who was ultimately responsible for handling some of these issues.

**Recommendations:** Be proactive and aware of the role/responsibility of DWR with respect to environmental/health/safety issues such as water quality and toxics. Increase communications and be aware of other responding agencies roles to verify that necessary actions are being performed regardless of responsibility. Involve the Division of Environmental Services (DES) as necessary from the beginning of any event to ensure that environmental and regulatory issues are appropriately identified and addressed. The Safety Officer should be directly involved in communications with other agencies and DES to ensure procedures are followed. All pertinent information should be compiled and reported to the ICP and FOC for inclusion into status reports.

**Responsible Parties: Lead: DFM**  
**Support: DES**



# **APPENDICES**

## **Appendix A**

### **Declarations—State and Federal Along with Flood Mobilization Memorandum**



## Memorandum

Date: June 4, 2004

To: Division/District Chiefs

From: Department of Water Resources

Subject: Flood Mobilization

Current flood conditions, forecasted high tides and winds on the Upper and Lower Jones Tract in San Joaquin County necessitate the mobilization of the Department to prepare river forecasts, manage flood-related information, provide technical assistance and fight floods on a time basis of up to 24 hours per day, as needed. In accordance with established procedures, as set forth in the Flood Emergency Operations Manual, I declare the Department to be under an emergency and mobilized as of June 4, 2004.

Personnel requested by the State-federal Flood Operations Center shall be available for duty in the Center or in the field as called upon, and are temporarily relieved of other duties until dismissed by the Flood Operations Center Director.

The Chief of the Division of Fiscal Services shall take steps to obtain the necessary funds for materials, emergency equipment, and for salaries of personnel who have been working and are continuing to work on flood operations.



Lester A. Snow  
Director

cc: (See attached list.)



EXECUTIVE DEPARTMENT  
STATE OF CALIFORNIA

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PROCLAMATION  
by the  
Governor of the State of California

I, ARNOLD SCHWARZENEGGER, Governor of the State of California, find that conditions of extreme peril to the safety of persons and property exist within the County of San Joaquin, State of California, as a result of a levee break that occurred on June 3, 2004, and ongoing flooding. Upon the request of the Director of Emergency Services for the County of San Joaquin who has declared a local disaster, and because the magnitude of this disaster exceeds the capabilities of the services, personnel, and facilities of the county, I find the County of San Joaquin to be in a state of emergency, and under the authority of the California Emergency Services Act, set forth at Title 2, Division 1, Chapter 7 of the California Government Code, commencing with section 8550, I hereby proclaim that a State of Emergency exists within San Joaquin County.

Pursuant to this proclamation, I hereby direct all agencies of the state government, as necessary, to utilize and employ state personnel, equipment and facilities for the performance of any and all activities to alleviate this emergency including repairs to transportation facilities caused by flood damage and/or repair activities and, furthermore, direct the implementation of state disaster assistance programs in accordance with state law. Furthermore, I specifically authorize the State Director of Emergency Services to take all necessary action authorized by the Emergency Services Act (Government Code section 8550, et seq.) to alleviate this emergency.

I FURTHER DIRECT that as soon as hereafter possible, this proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this proclamation.

**IN WITNESS WHEREOF** I have here unto set my hand and caused the Great Seal of the State of California to be affixed this the fourth day of June 2004.



/s/ Arnold Schwarzenegger

Governor of California

\* \* \*



Federal Register Notice

Billing Code 9110-10-P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[FEMA-1529-DR]

California; Major Disaster and Related Determinations

AGENCY: Federal Emergency Management Agency, Emergency Preparedness and Response Directorate, Department of Homeland Security.

ACTION: Notice.

SUMMARY: This is a notice of the Presidential declaration of a major disaster for the State of California (FEMA-1529-DR), dated June 30, 2004, and related determinations.

EFFECTIVE DATE: June 30, 2004.

FOR FURTHER INFORMATION CONTACT: Magda Ruiz, Recovery Division, Federal Emergency Management Agency, Washington, DC 20472, (202) 646-2705.

SUPPLEMENTARY INFORMATION: Notice is hereby given that, in a letter dated June 30, 2004, the President declared a major disaster under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5206 (the Stafford Act), as follows:

I have determined that the damage in certain areas of the State of California, resulting from flooding as a result of a levee break on June 3, 2004, and continuing, is of sufficient severity and magnitude to warrant a major disaster declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5206 (the Stafford Act). I, therefore, declare that such a major disaster exists in the State of California.

In order to provide Federal assistance, you are hereby authorized to allocate from funds available for these purposes, such amounts as you find necessary for Federal disaster assistance and administrative expenses.

You are authorized to provide Public Assistance and Hazard Mitigation in the designated areas and any other forms of assistance under the Stafford Act you may deem appropriate. Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Stafford Act for Public Assistance and Hazard Mitigation will be limited to 75 percent of the total eligible costs. If Other Needs Assistance under Section 408 of the Stafford Act is later requested and warranted, Federal funding under that program will also be limited to 75 percent of the total eligible costs.

Further, you are authorized to make changes to this declaration to the extent allowable under the Stafford Act.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Under Secretary for Emergency Preparedness and Response, Department of Homeland Security, under Executive Order 12148, as amended, William L. Carwile, III, of FEMA is appointed to act as the Federal Coordinating Officer for this declared disaster. I do hereby determine the following area of the State of California to have been affected adversely by this declared major disaster:

San Joaquin County for Public Assistance.

San Joaquin County within the State of California is eligible to apply for assistance under the Hazard Mitigation Grant Program.

(The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund Program; 97.032, Crisis Counseling; 97.033, Disaster Legal Services Program; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance; 97.048, Individual and Household Housing; 97.049, Individual and Household Disaster Housing Operations; 97.050 Individual and Household Program-Other Needs, 97.036, Public Assistance Grants; 97.039, Hazard Mitigation Grant Program.)

/s/

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Michael D. Brown,  
Under Secretary,  
Emergency Preparedness and Response,  
Department of Homeland Security.

## **Appendix B**

# **Chronological Summary of Jones Tract Levee Failure Events**



## Chronological Summary of Jones Tract Levee Failure Events

Thursday, June 3, 2004

- 8:00 AM Levee breach occurs on the right (east) bank of the Middle River near Bacon Island Road.
- 9:00 AM FOC notified of break by OES. DWR flood fight specialist and inspectors immediately dispatched to site. FOC activated 24-hrs. FOC staff implemented the "Delta Levee Failure Incident" response and began coordinating with federal, State and local entities to gather and disseminate pertinent information.
- AM Upper Jones Tract (Reclamation District 2039) floods (6,200 acres).
- AM DWR and Corps inspectors arrive on site to determine scope and provide technical assistance.
- AM Railroad and Reclamation District (RD) engineers are also onsite. Discussions begin regarding the viability of closing the opening in the railroad trestle between Upper Jones Tract and Lower Jones Tract.
- AM Trapper Slough Levee determined to be at risk of overtopping, posing a threat to State Highway 4 and Roberts Island to the south.
- AM Unified Command Post established onsite by San Joaquin County. DWR part of command structure.
- 10:00 AM DWR reduced and eventually ceased State Water Project exports south of Delta to minimize saltwater intrusion.
- 11:15 AM Verbal assurance provided by DWR to RD 2039 that assistance under AB 360 for flood fight activities would be pursued.
- 11:30 AM USBR Central Valley Project reduces exports to minimal levels and opens Delta Cross Channel gate.
- 1:00 PM DWR interagency conference call (including DWR, RD representatives, OES, Caltrans, Corps, and San Joaquin County): Results in proposal to (1) build dam at railroad trestle to prevent Lower Jones flooding; (2) close breach; (3) protect Hwy. 4; and (4) interior levee erosion protection.
- PM Dutra Construction has been contracted by the RD to armor the ends of the breach to reduce further erosion.
- PM Railroad still has not granted access.
- 3:30 PM Conference call: Results in firmed up plan, indication that the railroad has decided not to allow the blocking of the trestle opening, local contracts prepared to bring in rock, and up to 21 miles of plastic could be needed for wave protection. DWR prepares package for Governor's briefing. DWR responding to RD 2039 request for up to \$50,000 in AB 360 subvention funds. RD 2039 president estimates rock to repair the breach and flood fight activities will start arriving by 17:00.
- PM Lower Jones Tract (Reclamation District 2038) begins flooding as water passes under railroad trestle (5,800 acres).

- 7:00 PM Conference call: The railroad confirms that it will not allow the trestle to be closed. Locals and Caltrans will work through night to raise Trapper Slough Levee. DWR arranges to deliver heavy equipment and operators Friday morning. Dutra Construction will have to wait until the water stabilizes and flow through the breach significantly reduces prior to being able to start breach repair.
- 7:00 PM Reclamation District 2039 faxes letter to DWR requesting State and federal assistance. DWR verbally notifies Corps that an official request for PL84-99 assistance is being prepared.
- 9:00 PM DWR receives supplemental fax from RD clarifying help requested and Land, Easement, and Right of Way Agreement
- 11:20 PM DWR officially requests Corps PL 84-99 flood fight assistance for the Trapper Slough levee raising and erosion protection, and for emergency repairs to close the levee breach.

Friday, June 4, 2004

- 9:00 AM Corps approves the Trapper Slough levee raising and signs PL 84-99 agreement with DWR for emergency assistance to raise the Trapper Slough levee (Caltrans has agreed to rock the levee crown).
- 9:00 AM Corps denies request for emergency repairs to close the levee breach as not being under emergency operations authority (i.e.: flood has already occurred and the Trapper Slough levee raising will stabilize area).
- PM DWR executes assurance and work agreements (through AB 360 Delta Levee Subventions Program) with RD 2039 and the Corps for the Trapper Slough levee raising to protect public benefits in the Delta.
- 2:30 PM DWR holds major media press conference at the FOC.
- PM Governor proclaims State of Emergency directing all agencies of State government, as necessary, to utilize and employ State personnel, equipment and facilities for the performance of any and all activities to alleviate this emergency. Governor directs OES to ensure that all necessary State resources are brought to bear in both the response to and recovery from this emergency.
- PM DWR executes contract to provide the Trapper Slough levee borrow material to the Corps.
- PM DWR delivers flood fight materials to site.
- PM DWR Director declares a "Flood Mobilization" to provide ongoing FOC activation and to fund emergency operations.
- PM DWR prepares Governors Action Request to request Corps' Advance Measures assistance to fill Middle River breach.
- PM Corps' efforts to raise the Trapper Slough levee by the placement of dirt fill starts.

Saturday, June 5, 2004

- 7:00 AM Corps making good progress on raising the Trapper Slough levee since 6:00 p.m.

yesterday. Through DWR funding, RD 2038 and RD2039 contracted with Dutra to cap the levee breach.

AM FOC staff made phone contacts with surrounding RDs on levee status.

AM OES notifies DWR about availability of California Disaster Assistance Act for breach closure and flood fighting.

10:00 AM The Governor and DWR Director visit break site. Decision made to use OES California Disaster Assistance Funds to close the breach. Water is continuing to equalize across the breach.

10:30 AM DWR becomes part of Unified Command

AM DWR is notified that the Corps will raise Trapper Slough Levee one foot higher than originally planned and that another 15,000 cubic yards of earth fill are needed. DWR secured approval from the Port of Stockton shortly thereafter for the necessary earth fill.

11:30 AM Director and staff meet with Bill Dutra, CEO – Dutra Corporation, on site and enter into verbal contract to repair breach.

12:00 PM FOC is notified to start contracting process with Dutra Construction for levee closure. It was later determined that DOE would process the contract.

4:00 PM DWR Contracts Office and Dutra are contacted to initiate agreement. DWR construction inspectors from Division of Engineering are sent to inspect work that may begin as early as 7:00 p.m.

2:00 PM DWR staff at the site meets with Dutra to negotiate contract scope of work and unit costs.

5:00 PM In a conference call with the Corps, Caltrans, and DWR, it was agreed that the Corps should complete the additional 1-foot raise at the Trapper Slough levee due to high tide concerns expected in the morning.

7:00 PM FOC and OES conference call regarding mission task for incident. OES to create three mission tasks: 1) general flood fight, 2) repair levee breach, and 3) Trapper Slough Levee flood fight.

7:30 PM Dutra begins repairing the breach under the negotiated agreement with DWR.

Night As a precautionary measure, FOC and DWR field staff develops a levee visquine action plan for Upper Jones Tract and Lower Jones Tract.

#### Sunday, June 6, 2004

6:00 AM DWR establishes its own ICP to be co-located with the Unified Command Post.

AM Mission Task orders approved by OES.

AM Water levels in Upper Jones Tract and Lower Jones Tract have equalized.

Monday, June 7, 2004

PM Raising of the Trapper Slough levee with dirt fill is nearly completed. Caltrans is still in the process of armoring dirt fill with the placement of rock.

RD 2038 sends formal request for immediate DWR flood fight assistance to place rock and rip rap on Lower Jones Tracts' remaining interior levee slopes. RD 2039 sends a copy of AB 360 work agreement for RD 2039 emergency levee work for signature by DWR.

Tuesday, June 8, 2004

RD 2038 and 2039 formally request that DWR undertake the administration, contracting and payment to dewater Upper Jones Tract and Lower Jones Tract. The request states that each RD will contribute \$400,000 to the dewatering efforts.

DWR ICP is fully operational and the San Joaquin County Unified Command Post is demobilized (sheriff and CHP remain onsite in support of ICP).

Corps' raising/fortification of the Trapper Slough levee is complete and its Emergency Operations Center is to be deactivated.

Wednesday, June 9, 2004

DWR Director sends formal PL 84-99 request to the Corps regarding the need for technical and direct assistance in repairing the breach and to pump inundated lands.

Friday, June 11, 2004

DWR Director acknowledges Corps assistance in raising the Trapper Slough levee and sends another formal PL 84-99 request to reaffirm need for further technical and direct assistance in repairing the breach.

Friday, June 18, 2004

Governor Schwarzenegger asks President George W. Bush to issue a major disaster declaration in San Joaquin County to make funds available to: (1) cover emergency response costs; (2) fund efforts to remove debris that threatens lives; (3) restore damaged infrastructure; (4) fund hazard mitigation programs; and (5) provide additional federal funding that may be appropriate.

Thursday, June 24, 2004

DWR opened contract bids to dewater Upper Jones Tract and Lower Jones Tract.

Monday, June 28, 2004

DWR awarded a contract to Ford Construction Company, Inc., of Lodi to dewater Upper Jones Tract and Lower Jones Tract after breach closure.

Wednesday, June 30, 2004

Middle River levee breach at Upper Jones Tract closed this morning well ahead of schedule. A "plug" was constructed in the closure to aid dewatering by allowing

flow out of Jones Tract during low tidal cycles.

President George W. Bush declared a major disaster for the State of California under the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

Monday, July 12, 2004

Manual dewatering began as pumping Units #1-4 (42-inch) were gradually brought online at approximately 50,000+ GPM each. Up to 10 total pumping units are expected to be gradually brought online.

Monday July 26, 2004

All 10 pumps, eight 42 inch and two 30 inch, were brought online. Pumping is at the rate of about 350,000 gallons per minute.

**Summary of Pumpout**

DATE	Estimated Total Drawdown (inches)	Estimated Total Volume Pumped (acre-ft)
8-1-04	2.34	27,819
8-14-04	4.11	49,395
9-1-04	6.36	63,161
9-10-04	7.47	74,211
10-14-04	10.36	103,161
10-25-04	11.12	110,711
11-1-04	11.90	
11-15-04	13.97	
12-1-04	17.29	
12-14-04	18.66	140,000



**Appendix C**

**Debriefing Questionnaire**



## 2004 Jones Tract Levee Break After-Action Evaluation

***Please complete this form return it via Email, inter-office mail, or FAX to the Flood Operations Center. Type directly onto this form, or print out. Use additional space, the back of the form or multiple sheets if necessary. Please call (916) 574-2619 if you have any questions.***

DWR, Division of Flood Management  
 Flood Operations Center, Suite 200  
 P.O. Box 219000, 3310 El Camino Ave.  
 Sacramento, CA 95821

VOICE :(916) 574-2619  
 FAX: (916) 574-2798  
 Email: [twegener@water.ca.gov](mailto:twegener@water.ca.gov)

Name:
Job Title and Division:
Assigned Section (Management, P/I, Logistics, Finance, Operations):
Assigned Position/Role (Documentation, Flood Information Specialist, Plans Unit, etc):
Dates Assigned to Flood Incident:
Description of Emergency Duties:
<b>EVALUATION—AREAS/SUBJECTS THAT WORKED WELL</b> Please describe specific Areas/Subjects that worked well in each of the categories below:
Staffing and Support:
Communication and Information:
Overall FOC Operations:
Overall ICP Operations:
What went well with your Specific Role and Function:
Relationships and Inter-Agency Coordination:
Training and Preparedness:
Other:

## 2004 Jones Tract Levee Break After-Action Evaluation (Continued)

EVALUATION—AREAS/SUBJECTS THAT NEED IMPROVEMENT Please describe specific Areas/Subjects that need improvement in each of the categories below:
Staffing and Support:
Communication and Information:
Overall FOC Operations:
Overall ICP Operations:
How could your Specific Role and Function be improved:
Relationships and inter-Agency Coordination:
Training and Preparedness:
Other:

ADDITIONAL COMMENTS: Use the space below to provide additional comments and/or suggestions

## **Appendix D**

### **Division/Office Response Detail**



**Division/Office Response Detail**

<b>Division/Office</b>	<b>Activities</b>	<b>Personnel</b>	<b>Equipment</b>
Bay-Delta Office	Provided support to DWR Executive and staff to the ICT.	Approximately 23 staff for Headquarters and the ICT	Light vehicles and equipment for ICP; flood fight materials from SB 360 stockpile
DFM – Flood Operations Branch	Provided staff and management for the FOC; provided staff for the ICT.	Approximately 60 staff for the FOC and the ICP	A variety of light vehicles and heavy equipment for the ICP as well as equipment for the ICP trailers; flood fight materials from pre-positioned supplies (non-SB 360)
DFM – Hydrology Branch	Provided river, tide and weather forecasting to the FOC and ICT		
DFM – Floodplain Management Branch	Provided staff to the FOC and ICT		
DFM – Maintenance Branch	Provided staff to the ICT Operations Section		
DFM – Other	Supported the FOC and ICT		
DPLA – San Joaquin District	Provided staff for the ICT; provided staff and equipment to assist in water quality monitoring during pump out phase	7 staff for ICT and additional staff for pump-out water quality monitoring	Various light vehicles for the ICP and a boat, trailer, vehicle and water quality sampling and monitoring equipment.
DPLA-Central District	Provided staff for the ICT; provided staff and equipment to assist in water quality monitoring during pump out phase	2 staff for ICT and additional staff for pump-out water quality monitoring.	Various light vehicles for the ICP and a boat, trailer, vehicle and water quality sampling and monitoring equipment

### Division/Office Response Detail

Division/Office	Activities	Personnel	Equipment
O&M-Delta Field Division & Delta MEO shop	Provided various staff and equipment to the ICT Operations and Logistics Sections; provided mobile equipment support to the ICT.		
DOE	Prepared, awarded and managed construction contracts to support incident response; provided staff to inspect and administer contracts to ICT; provided staff for ICT Operations as Strike Team Leader; conducted field survey work. San Joaquin Field Division provided support for emergency power generation at ICP.	11 staff for ICT to direct contracts plus additional staff in HQ to prepare, advertise, and administer contracts. One staff member used as ICT Operations Section Strike Team, Leader. Staff from geodetic Branch conducted field survey work. Electrical staff from San Joaquin Field Division was used to transport and support the emergency power generator.	Light vehicles and equipment for ICP; ICP facilities and support via contracts. Portable emergency generator used for onsite power at the ICP.
Division of Fiscal Services	Provided staff for ICT Finance/Admin Section and supported financial functions.	1 staff member of ICT's Finance/Admin Section and various staff in HQ.	
Division of Safety of Dams	Provided staff for the ICT	1 person to P/I Section as technical specialist	Light vehicle

### Division/Office Response Detail

Division/Office	Activities	Personnel	Equipment
Division of Management Services	Provided staff to ICT Logistics Section and supported logistical functions.	3 staff to support ICT in field or HQ	
Public Affairs Office (formerly Office of Water Education)	Provided staff for PIO function at ICT and FOC	2 staff to support ICT and HQ	
Division of Environmental Services	Supported collection of water quality data and regulatory issues, including public health, dewatering and the Trapper Slough levee fill concerns	4 staff to support the incident in HQ and the field	
The Reclamation Board	Provided management support to FOC	2 staff to support FOC	
Division of Technology Services	Provided communications and network support to incident	1 staff member to support incident	



## Glossary

AAR – After Action Report  
BDO – Bay-Delta Office  
BNSF – Burlington Northern – Santa Fe Railroad  
Caltrans – California Department of Transportation  
CCC – California Conservation Corps  
CDF – California Department of Forestry & Fire Protection  
CHP – California Highway Patrol  
Corps – U.S. Army Corps of Engineers  
DFM – Division of Flood Management  
DOE – Division of Engineering  
DPLA – Division of Planning & Local Assistance  
DWR – Department of Water Resources  
EBMUD – East Bay Municipal Utility District  
EPM – Emergency Preparedness Manager  
F/A – Finance / Administration Section  
FEMA – Federal Emergency Management Agency  
FOC – Flood Operations Center  
FOCIS – Flood Operations Center Information System  
ICP – Incident Command Post  
ICT – Incident Command Team  
O&M – Division of Operations & Maintenance  
OA – Operational Area  
OES – Office of Emergency Services  
PAO – Public Affairs Office  
P/I – Planning / Intelligence Section  
PIO – Public Information Officer  
RD – Reclamation District  
REOC – Regional Emergency Operations Center  
SEMS – Standard Emergency Management System  
SOC – State Operations Center  
USBR – U.S. Bureau of Reclamation