

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF FLOOD MANAGEMENT

AFTER ACTION REPORT

2005-2006 STORMS
PART I: LATE DECEMBER 2005 EVENT
PART II: APRIL 2006 EVENT



MEMORANDUM REPORT
APRIL 2007

On the Cover:

On December 31st 2005 the Department opened 20 of the 48 gates on the Sacramento Weir for the first time since 1998, spilling excess flows from the Sacramento River into the already surging Yolo Bypass.

As part of Advanced Measures during the April 2006 Event, over 12,000 linear feet of visquine slope protection was placed along the Trahern Levee in RD 2075.

High winds gusting above 50 mph and choppy waves contributed to levee overtopping at Twitchell Island, prompting an evacuation order on January 1st 2006.

Daily briefing conducted at the Flood Operations Center to review weather/river forecasts, hydrology, reservoir and flood operations.

Memorandum

Date: April 30, 2007

To: 1. Gary Bardini
2. Rodney G. Mayer

From: Dave Paulson, Chief
Flood Operations Branch
Department of Water Resources

Subject: After Action Report, 2005-06 Storms, Parts I and II: Late December 2005 and April 2006 Events

This report presents a two-part review and analysis of the Department of Water Resources' (DWR) emergency response to the 2005-06 Storms and subsequent flood-related issues. Part I of this report covers the event beginning in late December 2005 and Part II relates to the April 2006 event. In whole, it serves as a planning document and catalyst for further discussions necessary to improve DWR's flood emergency response readiness.

Specifically, Part I and Part II of this report each:

- Provides an event history and summary of response activities
- Describes the post-flood debriefing process
- Identifies successes and areas for improvement with DWR's response
- Analyzes the effectiveness of the Standardized Emergency Management System (SEMS) implementation for the event
- Makes recommendations for implementing improvements

Given the proximity of the two events covered by this report, the Department was not able to address most of the response issues identified in Part I prior to the following event. Since the majority of these issues were also encountered during the April 2006 event, to avoid duplicity Part II of this report focuses on newly raised issues and more completely addresses input from field Incident Command, flood fight operations, and emergency construction activities.

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 National Incident Management System (NIMS), evaluates plans and procedures, and identifies training and exercise needs. An AAR provides a source for documentation of response activities, identification of successes and problems during emergency operations, analysis of the effectiveness of the SEMS implementation and provides a plan of action to improve emergency operations.

Specifically, this report is a two-part review and analysis of DWR's emergency response during two separate events in the 2005-2006 storm season. Part I details a review of the late December 2005 through early January 2006 storms and associated high water event. A review of DWR's response to the April 2006 event is addressed in Part II.

Based upon issues identified during each event, this report includes a set of recommendations for improving DWR's response to a flood emergency for future flood seasons. The following activities were carried out to develop this report:

- Following each event, an after action evaluation form was made available electronically through the DWR Aquanet website and by email. All DWR staff involved in each event were encouraged to participate in the process and to complete the survey.
- After action debriefings were conducted by the Flood Operations Center (FOC).
- For the Late December 2005 event, an initial after action review was prepared by the Incident Commanders. Additional feedback was obtained from the Incident Command Teams following the April 2006 event.
- Due to post-event recovery activities and the subsequent April storms, no large joint debriefing meetings have been conducted by the emergency response field, operations center and management teams. The distribution of this document will serve as a catalyst to facilitate such joint discussions at a later date.
- Issues requiring further attention, improvement or corrections identified in the above steps have been noted in this document.

Given the proximity of the two events, the Department was not able to address the response issues identified in Part I prior to the April 2006 event. Since the majority of these issues were encountered during both events, to avoid duplicity Part II of this report focuses on newly raised issues and more completely addresses input from field Incident Command, flood fight operations, and emergency construction activities.

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 Events

Late December 2005 Event:

In coordination with its numerous cooperating agencies, DWR responded quickly to a series of powerful storms that occurred between December 17, 2005 and January 2, 2006. These storms brought significant rainfall to Northern California and created flood conditions on many rivers and streams. Advanced reservoir releases and weir flows into the bypass system allowed the major flood controlled river systems to handle the storms as designed and without major incidents. Smaller and quick-to-respond waterways such as the Napa and Russian Rivers saw extensive flooding as a result of direct exposure to these storms. On the North Coast, several rivers including the Klamath and the Eel Rivers rose several feet above flood stage. The Delta region was also of major concern due to high tides, increased inflows and wave action from strong winds creating numerous incidents on the stressed levee system.

Following a series of forecasts by DWR and National Weather Service staff a Flood Alert was declared by the Flood Operations Branch Chief to activate the State-Federal Flood Operations Center under the Standardized Emergency Management System on December 27th 2005. Flood fight inspectors were dispatched to assess key locations and Incident Command Teams (ICTs) were directed to prepare for field operations.

As storms intensified and rivers rose Director Lester Snow declared DWR to be mobilized on an emergency basis on December 29th 2005. As a result the FOC began operating on a 24/7 basis. Dozens of DWR employees staffed the FOC (typically in two 12-hour shifts) forecasting and monitoring river flows, disseminating flood information, responding to media requests, and coordinating reservoir operations. DWR field staff were also working on a 24/7 basis patrolling levees, coordinating with local reclamation districts and public safety officials, and conducting flood fights with the help of California Conservation Corps (CCC) and California Department of Forestry (CDF) crews and local levee maintaining agency staff.

The Sacramento River flood control system performed well, and while overflow occurred along some rural portions of the Sacramento River above Ord Ferry, the lower leveed main stem of the Sacramento River remained below flood stage throughout the event.

On December 31st the Sacramento River reached an elevation of 27.5 feet at the I Street Bridge in Sacramento and forecasts called for a continued rise. As a result and in accordance with standard operating procedures set by the Corps of Engineers, DWR opened 20 of the 48 gates on the Sacramento Weir on December 31st. This was the first time the weir had been opened since 1998. On January 9, 2006 the water elevation at the weir fell below 25.0 feet and DWR began closing the gates in accordance with standard operating procedures. All gates were closed by January 10th.

Delta levees were stressed due to high astronomical tides and increased flows from the Sacramento River and Yolo Bypass. High winds gusting above 50 mph and choppy waves contributed to levee overtopping at several islands. More than 25 Delta incidents were recorded, with boils, seepage and levee problems stabilized by DWR, CCC, and levee maintaining agency teams.

DWR also provided technical assistance and support on approximately 30 incidents throughout the Central Valley outside the Delta, mostly related to boils, seepage, erosion, and sloughing. The Department requested U.S. Army Corps of Engineers technical assistance through Public Law 84-99 for incidents in RD 38, RD 900, RD 1000 and RD 1001. There was one reported levee breach on the Cosumnes River Overflow Channel that was ultimately considered to be a local or county maintenance issue.

The Governor paid visits to two storm-affected areas and spoke of the need to strengthen California's levee and flood protection system. As of January 12th the Governor had issued proclamations declaring 34 of California's 58 counties disaster areas due to flood impacts.

California news media provided extensive coverage of the storm series and floods, the most severe and widespread since those of 1998. DWR officials and their flood alert partners held frequent news briefings and Public Information Officers handled hundreds of media inquiries from throughout California and across the nation.

With improved weather conditions, receding rivers and reservoirs, and stabilization or completion of most DWR-assisted flood fight incidents, the Flood Operations Center was deactivated on Monday January 9, 2006 from twenty-four hour status.

Upon FOC deactivation DWR transitioned from emergency operations to after action evaluation, event documentation, and fiscal recovery duties. Field emergency operations slowly transitioned to levee rehabilitation and maintenance support.

Hydrologically the series of four storms in late December boosted the Northern Sierra 8 Stations Precipitation Index to nearly 26 inches (310 percent of average), the fourth wettest December on record.

April 2006 Event:

For much of January into February, mild conditions in California resulted in below normal precipitation. The pattern changed towards the end of February as numerous storm centers developed and eventually moved inland through the state. These back-to-back storms from late February through late March affected northern and central California and set the stage for significant flooding. March precipitation totals finished well above normal as soils became saturated and levees were stressed by weeks of high water. Flood control space in many reservoirs diminished and problems emerged with each new storm. By March 29th, most of northern and central California had set or

was close to setting records for the number of days with rain or snow. Breaks between storms often lasted less than 48 hours further exacerbating the conditions and kept water levels in the system from being able to adequately recover.

In recognition of existing conditions and forecasts of continuing storms, a Flood Alert was declared by the Flood Operations Branch Chief to reactivate the State-Federal Flood Operations Center under the SEMS on April 3rd. As storms intensified and river levels rose, Director Lester Snow declared DWR to be mobilized on an emergency basis on April 4th citing the need 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. Once mobilized, the Department began to hold daily weather briefings, media briefings, and notifications to local districts and OES. Briefings were also made to the Governors Office and key legislators. Flood fight specialists, inspectors and the three existing ICTs were immediately placed on alert and made available to assist in local efforts.

A prolonged storm period from April 2nd to April 6th and high snow levels (up to 10,000 feet) brought renewed flooding to California. This system targeted central California and eventually moved southeast bringing a slow progression of heavy rain and snow to the San Joaquin Valley and southern Sierra Nevada foothills. A follow-up storm took place April 10th through the 12th with heaviest precipitation focused through the San Francisco Bay Area northward to Shasta Lake. The Russian and Napa Rivers saw renewed rises but remained below their monitor stages. Runoff contributed to rises along the Sacramento River above flood stage and boosted already high weir overflows into the Sutter and Yolo Bypass system. The final storm in the lengthy series landed April 14th through the 16th bringing several periods of intense precipitation in localized areas from the Oregon border to the southern San Joaquin Valley. By April 16th, the northern Sierra already had experienced the second-wettest-March/April since 1921.

Although these storms affected areas throughout the State, the major area of concern was the fragile San Joaquin River system. Throughout the course of this event, several of the southern Sierra Nevada reservoir projects found themselves having to balance large reservoir inflows and diminishing flood storage space with releases downstream in attempts to prevent or at least minimize damage to the San Joaquin River levee system.

At the onset of the April storms, the State and Federal flood agencies, in coordination with local reservoir operators and flood officials, agreed on an action plan to address the foreseeable sustained high water event in the San Joaquin Valley. The intent was to take advanced measures to strengthen spots believed to pose a significant likelihood of problems to reduce flood damage and potential loss of life before the ability to wage an effective fight was further challenged. Proactive advanced measures taken to protect some of the more vulnerable levees included laying visquine and rock for erosion control, and providing 24 hour levees patrols for potential weak areas.

As part of these advanced measures, DWR assembled and activated its existing three ICTs and organized three more to provide coverage throughout the San Joaquin Valley.

Several "flood fight" activities took place during the event involving numerous boils and bank erosion on some levees. Flood fight materials were pre-positioned and CCC crews dispatched to assist in the flood fight efforts. Flood fight specialists and ICTs were given assignments and locations developed through consultations with local partners and were deployed as needed throughout the event.

Overall, strong cooperation between the numerous local, state, and federal agencies resulted in coordinated reservoir releases that kept flooding from becoming potentially worse. Flooding was mainly confined to affected agricultural and rural properties, although some local areas adjacent to waterways did experience residential flooding and impassable roadways. However, through the efforts of advance flood-fight measures, careful monitoring of levees, as well as critical water management coordination among state, federal and local agencies, the system performed as designed and more serious flooding was averted.

With the snowmelt season following just on the heels of this heavy precipitation event and the snowpack well above normal, high flows and releases from upstream reservoirs continued on the San Joaquin River system for an extended period of time. As such, the Department remained mobilized well after the storms had passed.

As of May 2nd, the Governor had issued proclamations declaring 20 of 58 counties disaster areas due to flood impacts. On June 5th, the President of the United States declared a major disaster for certain areas in the State.

Debrief Process

Due to post-event recovery activities and the subsequent April storms, no large joint debriefing meetings have been conducted by the emergency response field, operations center and management teams. The distribution of this document will serve as a catalyst to facilitate such joint discussions at a later date. The following activities taken after each event provided the information necessary to compile this report:

Late December 2005 Event

On January 25, 2006 a debrief meeting was held at DWR's Division of Flood Management (DFM) Joint Operations Center. Key members from each of the FOC SEMS Sections gathered to discuss lessons learned. Field Incident Commanders also conducted after-action meetings on January 12th and 26th, resulting in a draft Field ICT Joint After Action Report that has been incorporated into this report. 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.

April 2006 Event

Input regarding specific issues encountered by ICT 2 was provided by Incident Commanders Al Steele and Brian Smith. A questionnaire was distributed to all DWR staff members who participated in the incident. Comments received were compiled and categorized for inclusion in this report. The majority of the questionnaire feedback was related to issues already identified in the Late December 2005 Event debriefing process. To avoid duplicity, Part II of this report focuses on newly raised issues and more completely addresses input from field Incident Command, flood fight operations, and emergency construction activities.

Findings—Successes and Issues

Although there were numerous incidents and areas of localized flooding throughout the State the overall flood control system handled the high water as designed and there were no major failures.

DWR took a lead role in responding to the event and accomplished many emergency response and flood fight objectives. This is despite the difficulties associated with the April event coming right on the heels of the late December event, which itself occurred during the holiday season and into the New Year.

Interagency cooperation was laudable during these events with a number of agencies, departments, and divisions working to meet the demands of the emergency. Proactive advanced measures taken by the Department in coordination with other agencies at key locations throughout the flood control system proved successful at preventing catastrophic failures.

Although the overall response was successful in that no major failures were experienced a number of issues had the potential to affect the quality and nature of DWR's flood efforts. Parts I and II summarize these issues within their respective Debriefing Issues and Recommendations Matrix (found in Chapter Four of each Part). The matrices divide the issues into six general categories:

- Command and Management
- Training and Preparedness
- Staffing and Resource Management
- Communications and Information Management
- Relationships and Interagency Coordination
- Policy and Administration

Each issue and associated recommendations are discussed in detail in Chapter Five of Parts I and II of this report.

PART I: LATE DECEMBER 2005 EVENT

Chapter One – Introduction

1.1 Purpose and Scope

The purpose of an AAR is to document response activities, identify successes and problems during emergency operations, analyze the effectiveness of the SEMS implementation and provide a plan of action to improve emergency operations. This AAR covers DWR emergency response actions, application of the SEMS, evaluation of plans and procedures and identification of training and exercise needs.

Specifically, Part I of this report is a review and analysis of DWR's emergency response to the late December 2005 through early January 2006 storms and associated high water event. It includes a set of recommendations for improving DWR's response to flood emergencies. The following activities were carried out to develop this report:

- A *2005/06 High Water Event After Action Evaluation* form was developed and made available electronically through the DWR Aquanet website and by email. All DWR staff involved in the event were encouraged to participate in the process and to complete the survey.
- An after action debriefing was conducted by the Flood Operations Center team.
- An initial after action review was prepared by the Incident Commanders.
- Due to post-event recovery activities and the subsequent April storms emergency response no large group debriefing meetings have been conducted by the Incident Command Teams, DFM flood fight field operations staff, or Division of Engineering emergency teams.
- On March 29, 2006 this AAR was made available on Aquanet in draft form for all participants to provide comments prior to finalization.
- Issues requiring further attention, improvement or corrections identified in the above steps have been noted in this document.

Part II of this report cover the April event and more completely addresses input from field Incident Command, flood fight operations, and emergency construction activities.

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 for the Late December 2005 Event.

1.2 History of Event

A series of powerful storms spanning December 17, 2005 through January 2, 2006 brought significant rainfall to Northern California. Advanced reservoir releases in anticipation of the heavy rains and weir flows into the bypass system allowed the major flood control river systems (Sacramento, Feather and American watersheds) to handle the storms as designed and without major incidents. Smaller and quick-to-respond waterways such as the Napa and Russian Rivers saw extensive flooding as a result of

direct exposure to these storms. On the North Coast, several rivers including the Klamath and the Eel Rivers rose several feet above flood stage and rivaled flows observed during the December 1996 through January 1997 flood event. Many smaller streams and creeks overflowed throughout the State, including in Sacramento and the San Francisco Bay Area, causing more localized flood damage. The Delta region was also of major concern throughout the event due to astronomical high tides, increased inflows and wave action from strong winds creating numerous incidents on the stressed levee system.

In close coordination with its numerous cooperating agencies, DWR responded quickly to these storms and related high water event. Following a series of forecasts by DWR and National Weather Service staff a Flood Alert was declared by the Flood Operations Branch Chief to activate the State-Federal Flood Operations Center under the Standardized Emergency Management System on December 27th 2005. Flood fight inspectors were dispatched to assess key locations and Incident Command Teams 1-3 were directed to prepare for field operations.

As storms intensified and river levels elevated Director Lester Snow declared DWR to be mobilized on an emergency basis on December 29th 2005 citing high Delta tides and wet weather forecasts. Such mobilization authorized DFM to use any Department personnel and make expenditures beyond budgeted funding.

Dozens of DWR employees worked around the clock (typically in two 12-hour shifts) forecasting and monitoring river flows, providing information to the public and other agencies, responding to media requests for information, operating reservoirs for flood safety, patrolling levees, coordinating with local reclamation districts and public safety officials, and conducting flood fights with the help of California Conservation Corps and Department of Forestry crews and local levee maintaining agency staffs.

The Sacramento River flood control system performed well and while overflow occurred along some rural portions of the Sacramento River above Ord Ferry and through Moulton, Colusa, Tisdale, and Fremont Weirs for several days, the lower leveed main stem of the Sacramento River remained below flood stage throughout the event.

On December 31st the Sacramento River reached 27.5 feet elevation at the I Street Bridge in Sacramento (flood stage is 31 feet) and forecasts called for a continued rise. As a result and in accordance with standard operating procedures, on December 31st the Department opened 20 of the 48 gates on the Sacramento Weir for the first time since 1998, spilling excess flows into the already surging Yolo Bypass. Once the water elevation at the weir fell below 25.0' the Department commenced closing the gates on January 9th. Progressing at approximately one gate per half-hour all gates at the Sacramento Weir were closed by early Tuesday afternoon, January 10th.

The Delta was stressed with high astronomical tides and increased flows from the Sacramento River and Yolo Bypass. High winds gusting above 50 mph and choppy waves contributed to levee overtopping. The Delta-Suisun Marsh Office was assigned

to coordinate with local agencies to address multiple levee breaches and overtopping on Van Sickle and Simmons-Wheeler Islands. Twitchell Island in Southern Sacramento County was evacuated New Year's Day on orders of local officials due to overtopping. Swift work by DWR and CCC crews stabilized Twitchell Island by January 3rd and the evacuation order was lifted on January 4th. More than 25 other Delta incidents were recorded, with boils, seepage and levee problems stabilized by DWR, CCC, and levee maintaining agency teams.

The Department also provided technical assistance and support on approximately 30 incidents throughout the Central Valley outside the Delta, mostly related to boils, seepage, erosion and sloughing. The Department requested U.S. Army Corps of Engineers technical assistance through Public Law 84-99 for incidents in RD 38, RD 900, RD 1000 and RD 1001. Overtopping resulted in a flood fight conducted by the Sutter Maintenance Yard on Cherokee Canal in State Maintenance Area 13 and the Sacramento Maintenance Yard conducted a flood fight along Cache Creek near the town of Yolo due to the potential for overtopping. There was one reported levee breach on the Cosumnes River Overflow Channel that was ultimately considered to be a local or county maintenance issue.

The Governor paid visits to two storm-affected areas---flood-ravaged communities along the Russian and Napa rivers on January 2nd and the Natomas Cross Canal (RD 1001), north of Sacramento, on January 3rd. On both trips he spoke of the need to strengthen California's levee and flood protection system. As of January 3rd the Governor had issued proclamations declaring 23 of California's 58 counties disaster areas due to flood impacts.

California news media devoted extensive coverage to the storm series and floods, most severe and widespread since those of 1998. DWR officials and their flood alert partners in the National Weather Service held frequent news briefings for the news media, including two press events per day during the three-day New Year's holiday weekend. Public Information Officers handled hundreds of media inquiries from throughout California and across the nation.

With improved weather conditions, receding rivers and reservoirs, and stabilization or completion of most Department-assisted flood fight incidents, the Flood Operations Center was deactivated on Monday January 9, 2006 from twenty-four hour status. With the deactivation of the FOC, the Department was no longer considered to be under an emergency and was effectively demobilized.

Following the demobilization on January 9th DWR transitioned from emergency operations to after action evaluation, event documentation, and fiscal recovery duties, Field emergency operations slowly transitioned to levee rehabilitation and maintenance support.

The shift from emergency operations in the field to levee rehabilitation and maintenance support has been supplemented by the U.S. Army Corps of Engineers Rehabilitation Assistance for Flood-Damaged Flood Control Projects under Public Law 84-99. The Corps has authority under PL 84-99 to supplement local and state efforts in the repair of both Federal and non-Federally constructed flood control projects damaged by flood. On February 2, 2006 the Corps issued a Notice to Public Sponsors stating that the application period to apply for Rehabilitation Assistance would extend through March 3, 2006 for flood control projects that sustained damages due to flooding during the period of December 28, 2005 to January 9, 2006.

Hydrologically the series of four storms in late December boosted the Northern Sierra 8 Stations Precipitation Index to nearly 26 inches (310 percent of average), the fourth wettest December on record.

Preliminary estimates of 24-hour and 3-day river basin precipitation return intervals have been made as follows:

- | | | |
|--------------------------|---------------|--------------|
| ▪ Napa River | 1 in 30 years | 24-hour data |
| ▪ Russian River | 1 in 15 years | 24-hour data |
| ▪ Cosumnes River | 1 in 50 years | 24-hour data |
| ▪ Upper Sacramento River | 1 in 5 years | 3-day data |
| ▪ Feather River | 1 in 5 years | 3-day data |
| ▪ Yuba River | 1 in 5 years | 3-day data |
| ▪ American River | 1 in 5 years | 3-day data |

1.3 Proclamations/Declarations

By proclamations dated January 2nd, January 3rd and January 12th 2006, the Governor proclaimed a state of emergency to exist in 34 of 58 counties due to damages caused by these storms.

On January 18, 2006 the Governor requested President Bush to declare a major disaster for the State of California.

The President responded on February 3, 2006 by declaring that a major disaster exists in the State of California and ordered Federal aid to supplement State and local recovery efforts in the area struck by severe storms, flooding, mudslides, and landslides from December 17, 2005, through and including January 3, 2006.

The President's action makes Federal funding available to affected individuals in the ten (10) counties of Contra Costa, Del Norte, Lake, Marin, Mendocino, Napa, Sacramento, Siskiyou, Solano, and Sonoma.

Federal funding also is available to State and eligible local governments and certain private nonprofit organizations on a cost-sharing basis for emergency work and the repair or replacement of damaged facilities in the 29 counties of Alpine, Amador, Butte, Colusa, Contra Costa, Del Norte, El Dorado, Humboldt, Lake, Lassen, Marin, Mendocino, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Cruz, Sierra, Siskiyou, Solano, Sonoma, Sutter, Trinity, Yolo, and Yuba.

Copies of the declarations listed below are included in Appendix A of this report:

- January 2, 2006 – Governor declares a State of Emergency in 7 counties
- January 3, 2006 – Governor declares a State of Emergency in 16 counties
- January 12, 2006 – Governor proclaims a State of Emergency in 11 counties
- February 3, 2006 – President proclaims a State of Emergency

1.4 Findings—Successes and Issues

Although there were numerous incidents and areas of localized flooding throughout the State, the overall flood control system handled the high water as designed and there were no major failures.

DWR took a lead role in responding to the event and accomplished many emergency response and flood fight objectives, despite the fact that this event occurred during the holiday season and into the New Year. Early issuance of the flood alert and activation of the Flood Operations Center added significantly to the ability of the Department to prepare and react during the holiday weekend.

In many instances the Flood Operations Center received positive feedback from the public and emergency responders regarding its responsiveness and effectiveness. The Incident Command Teams and field staff also received positive feedback concerning their organization, knowledge, leadership and ability to take control in volatile environments. This event provided an exceptional opportunity to build upon previous flood experience, refresh flood fighting techniques and train staff on emergency response.

Interagency cooperation was laudable during this event with a number of agencies, departments, and divisions working to meet the demands of the emergency. It appeared that DWR efforts to participate in and hold various pre-season preparation and other inter-agency coordination meetings throughout the year are paying off.

Additional positive feedback received from the debrief process is as follows:

- Certain gear was more readily accessible than in previous events
- The National Weather Service and its FOC Representative (Cindy Matthews and Sacramento Weather and River Forecast Office forecasting staff) did an excellent job providing updated weather and river condition forecasts
- The Sherman Island Patrol Team had been well-coordinated ahead of time - communication with the Sherman Island Reclamation District was excellent and there was a clear understanding of roles
- Twitchell Warehouse crew was well organized and efficiently distributed flood fight materials – had a 100% safety record under severe weather conditions with numerous crews, staff, media, vehicles and heavy equipment onsite
- Budget Office and Funds Assignment were very responsive to setting up cost objects
- When requesting DOE technical assistance it was beneficial to have a single point of contact from DOE that was knowledgeable of staff availability, expertise and experience
- CCC and CDF crews were well trained, hard-working and easy to work with
- OES representatives in the Flood Operations Center were consistently knowledgeable and cooperative
- Good communication during shift change at the Flood Operations Center
- A number of informational products were issued and updated on a routine basis including the Executive Incident Summary, Hydrological Summary, Event Factoids, 8-Stations / 10-day Feather QPF

Although the overall response was successful in that no major failures were experienced, a number of issues had the potential to affect the quality and nature of DWR's flood efforts. These issues have been summarized in Chapter Four's Debriefing Issues and Recommendations Matrix which divides the issues into six general categories:

- Command and Management
- Training and Preparedness
- Resource Management
- Communications and Information Management
- Relationships and Inter-agency Coordination
- Staffing and Support

Each issue and associated recommendations are discussed in detail in Chapter Five of this report.

Figure 1: Late December 2005-January 2006 Incidents

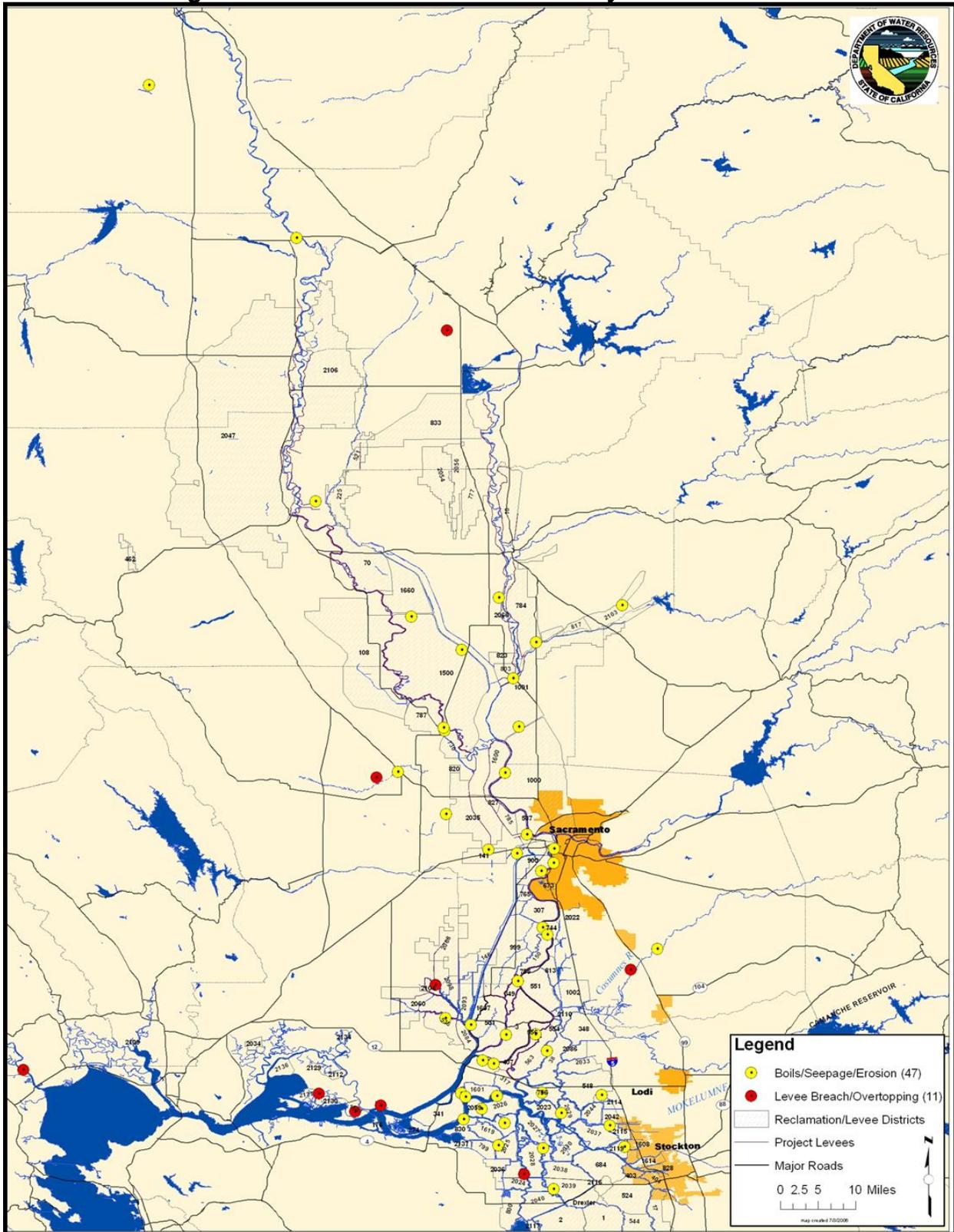
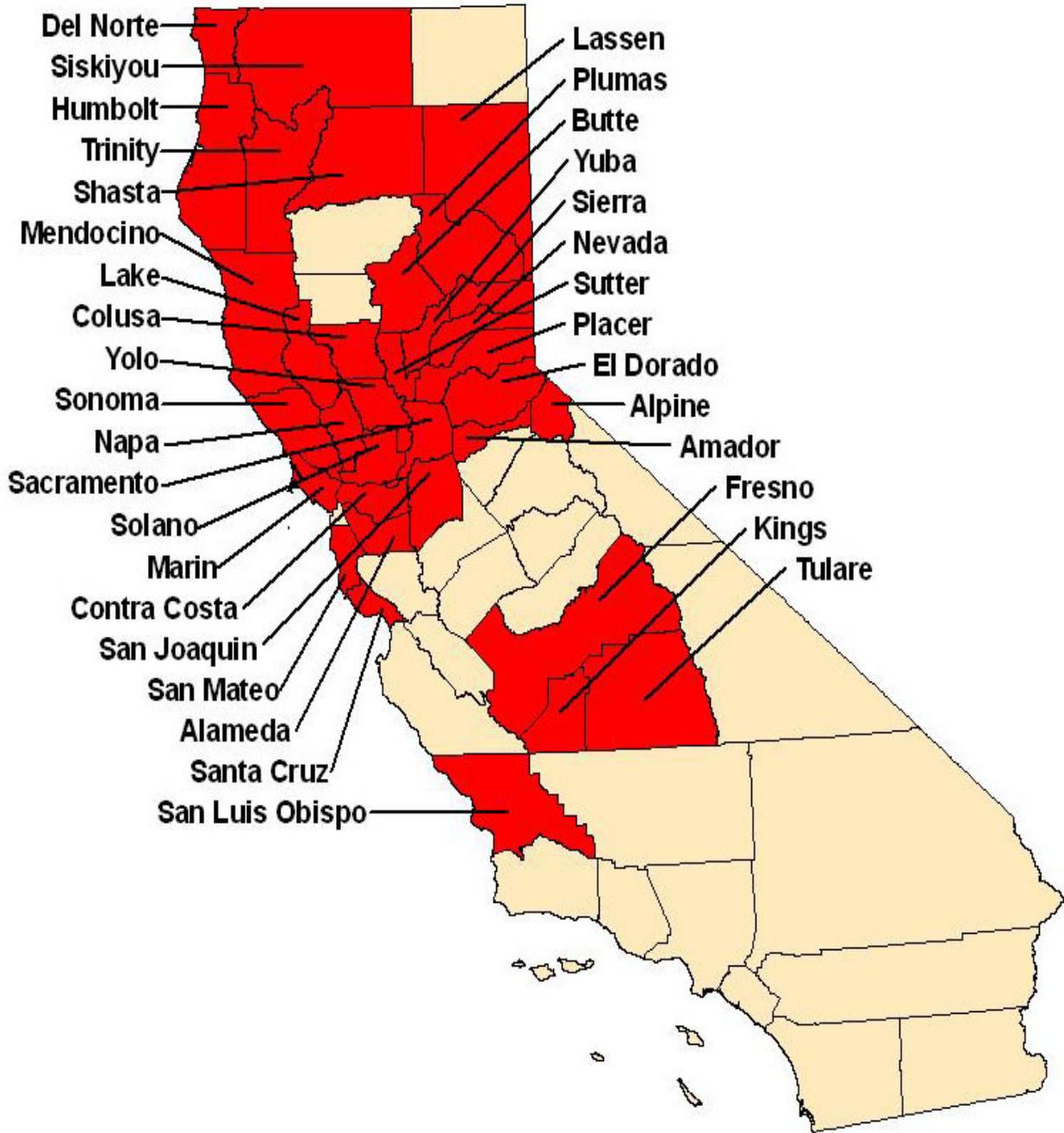


Figure 2: Counties declared State of Emergency by Governor



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 Teams (taken from Field ICT Joint After Action Report)

One of the outcomes of the 2004 Jones Tract Flood Incident was the need for several major incident command teams. ICT 1, based largely on staff from the Jones Tract team, has been maintained in existence. ICT 2 was beginning to form by the onset of this event and was rushed to completion. The Central District was instructed to form ICT 3 just prior to the flood event.

ICTs 1 and 2 were initially deployed as a precaution in case of major flood emergencies. For the majority of the event, only 3 members of ICT 1 were deployed. ICT 2 initially deployed 8 team members with all four general staff sections represented. Later several DFM staff were temporarily assigned to the ICT 2 Operations Section for January 2nd and 3rd. As the event unfolded members were demobilized in accordance with the improving situation. ICT 3 deployed 12 team members initially, reducing to 6 members at the conclusion of the event.

The size and scope of the event did not require a full ICT response and procedures and coordination were more informal than in some previous events. Each team was ready and capable of a more formal response if it had been needed.

On December 27th, the day the Flood Alert was declared, the DWR Emergency Preparedness and Security Manager convened a conference call with the FOC, the District offices of DPLA, and the primary Incident Commanders. During that call, ICT 1 (Bill Burkhard, IC) was directed to prepare for field operations, ICT 2 (Brian Smith, IC) was directed to complete its formation and prepare for field duty and ICT 3 (Mike Mosbacher, IC) was directed to form and be readied for field duty. It was planned that ICT 1 would be the first team to deploy, followed in turn by ICT 2 and ICT 3. These actions would supplement efforts by DWR flood fight specialists and inspectors who were already active in the field responding to various incidents.

On the morning of December 31st, ICT 1 was deployed to Brannan Island and ICT 2 alerted for probable deployment. By the scheduled afternoon conference call, the decision was made to deploy ICT 2 to Stockton as a precaution. The Fresno-based team was in Stockton by 8 pm New Year's Eve, as reported to the FOC.

ICT 1 was initially assigned to Brannan Island, setting up an ICP in Walnut Grove on morning of December 31st. The ICP closed later that day upon diminishment of the threat to Brannan Island. The team then spent January 1st-5th moving throughout the Delta maintaining contact and coordination with local agencies and assisting in numerous small flood fights.

ICT 2 was assigned to respond and deploy to the Cosumnes River on January 1st in case the breach was significant and resources of DWR would be needed to assist in the closure. The breach was not significant and it was determined that no response was needed. The Team was then assigned to Twitchell Island as a precautionary deployment due to the dangerous situation that prevailed following the New Year's Day storm. The team assumed command of the island on January 2nd and carried out a number of flood fight activities on Twitchell, Sherman, and Ryer Island until demobilized in the afternoon of January 5th.

ICT 3 was assigned late on January 1st to assist RD 1001 on the Natomas Cross Canal where several thousand feet of levee wash protection was installed. The team was in the field from January 2nd to January 6th.

2.2 Flood Operations Center

Days prior to the Flood Alert declared on December 27th, the FOC operated on extended hours in order to monitor the impending storms and make necessary preparation and notifications. Once activated, the FOC operated 24-hours, seven days a week with additional personnel as required. The FOC fully mobilized under SEMS to provide necessary operations and support for the event. 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.

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 regular conference calls with the responding State, Federal and local agencies, including the affected levee/reclamation districts. Along with partnering agencies such as the NWS, during the height of the event FOC Management conducted two daily briefings to address the media and public concerns.

An Executive Incident Summary was compiled and regularly updated by the Plans/Intel Section providing information on all flood-related incidents throughout the regions. Information for this summary was largely provided by the Operations Chief, the ICs in the field and calls received by FOC Flood Information Specialists. The summary allowed FOC Management, Executive and other emergency response agencies to be briefed on the status of incidents 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 those experiencing problems associated with the high water and threat to levees. The FOC made numerous verbal high water notifications and provided technical assistance throughout the event. DWR Flood Fight Specialists, Inspectors and the ICTs provided direct technical and flood flight assistance to local agencies in the field as necessary.

2.5 Operational Area

Given the widespread nature of this event throughout the State, the FOC was in contact with many Operational Areas. During the height of the event, the City of Sacramento provided a representative to the FOC.

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 affected Operational Areas. OES provided an agency representative to the FOC throughout the course of the event. Due to the large size and scope of the flood event, department SOC and REOC representatives were not available however the EPSM worked closely with both EOCs.

2.7 Other State Agencies

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

- CDF: Provided labor crews to install wave wash protection. The Department of Corrections was also involved in the provision and oversight of crews.
- CCC: Provided labor crews to assist in the flood fight at various locations.
- Department of Boating and Waterways: Based on recommendations from the FOC, issued an advisory and ban on recreational boating in the Sacramento-San Joaquin Delta from December 31st through January 4th due to high water levels and concerns that boat traffic could cause water to flow over the levees and potentially cause damage to the levees.

2.8 Federal Agencies

The Corps, upon request by the State for assistance under Public Law 84-99, provided assistance for incidents in RD 38, RD 900, RD 1000 and RD 1001. The Corps was also instrumental in working closely with the Department to provide technical assistance at numerous other locations of existing or potential issues. The Corps and USBR coordinated with DWR on releases from upstream reservoirs to help mitigate the high river stages downstream.

The National Weather Service and California-Nevada River Forecast Center coordinated with DWR to provide FOC support, regular briefings (media and weather/hydrological) and river stage, tide, wind and weather forecasts and warnings.

The Department of Homeland Security requested approval from the EPSM to allow a Protective Services Advisor to liaison at the FOC. The request was granted and the PSA provided briefings to DHS Washington Headquarters during the two days he was onsite and then was redirected to the Governor's OES SOC.

Chapter Three – Debrief Process

3.1 Introduction

In the aftermath of this high water event, the Department evaluated the flood experience and reviewed the flood management system for areas needing improvement. The evaluation resulted in this After Action Report to be used for future planning and enhanced preparation. The process involved compiling information through a series of After Action meetings and collecting feedback from staff involved in the event. The intent of the evaluations was to focus attention on what went right during the emergency as well as identify areas that require improvement.

Comments received from both the FOC and the Field ICTs were compiled for this part of the AAR. The results and recommended actions are included in Chapters Four and Chapter Five of this report.

3.2 DWR Debriefs

The FOC held its debrief meeting with key members from each SEMS Section on January 25, 2006. Participants were grouped into their respective Sections and tasked with reviewing the successes, areas of concern and issues for improvement. Key issues were identified and refined for consideration in this AAR.

The field ICTs held separate debriefing sessions to discuss the response, what went right and what went wrong during the response and recommendations for future responses. ICT 2 conducted After Action Meetings on January 12th for Fresno-based team members and January 26th for Sacramento-based team members. All three ICTs coordinated and submitted their preliminary findings in a draft joint report to assist the Division of Flood Management in preparing this overall AAR.

3.3 Questionnaire

A questionnaire (see Appendix C) was distributed to all DWR employees who participated in the high water event. These employees were from multiple divisions throughout the Department. The questionnaire asked “What went well?” and “What could have been improved?” in eight separate categories: 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.

Chapter Four – Issue and Recommendation Matrix

The principal findings and recommendations of this report are presented in a matrix made up of six (6) summary tables, one for each of the following issue categories:

- Command and Management – Overall FOC and ICP Operations
- Training and Preparedness – Organization, programs, planning, procedures, corrective actions, training and exercises, personnel qualifications and certification, etc.
- Staffing and Resource Management – Identifying staffing and resource requirements, issues, reimbursement, and the categorizing, managing, inventorying, acquiring, mobilizing, etc. of resources
- Communications and Information Management – Incident management communications, documentation and information management, interoperability standards, etc.
- Relationships and Interagency Coordination
- Policy and Administration

The tables are formatted to include for each category:

Issue Number: Includes the Category Number (I through VI) and a sequence number within each category ranked in order of urgency or importance.

[Note: Issues that were also identified during the April 2006 Event debriefing covered by Part II are denoted with an asterisk (e.g.: I-1*). To avoid duplicity, these were not re-evaluated and Part II focuses solely on newly raised issues.]

Issue Title: Title of the issue.

Recommendations: Brief description of the action(s) recommended to correct deficiencies or make improvements to existing policies or procedures.

Responsible Parties: The organization(s) within the Department of Water Resources, or outside cooperating agencies, that have lead responsibility for implementing the recommendations.

Goal Category:

Critical: Issues that must be resolved prior to the next flood season.

Short-Term: Issues that can be resolved by December 1, 2007.

Long-Term: A suggested two-year period ending December 1, 2009.

Ongoing: Issues that require continuous maintenance or attention from one year to the next, beginning with the next flood season.

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – DEC 05/JAN 06 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
I. Command and Management							
I-1	Organization Structure and SEMS Compliance*	Establish clearly defined and recognized roles and responsibilities within SEMS for all levels of staff involved in the event. Ensure that staff stay within their respective roles as defined by the event.				X	L – DFM S – Exec
I-2	Emergency Notification*	Immediate and direct notification of the emergency to all DWR staff from Management. Ensure clear direction from Management to supervisors and FOC staff regarding priority.				X	L – Exec
I-3	FOC Operations Section and Coverage*	Increase the number of staff typically assigned to the FOC Operations Section. Consider an Area Command approach for large flood events covering much of the State.		X			L – DFM
I-4	FOC Access and Space Management*	Improve access and space planning for each Section, media, executives, public agencies and dignitaries.			X		L – DFM
I-5	Delta Operations (ICTs and Twitchell Warehouse)	Better coordinate and define each ICT's role in the field to avoid confusion. Improve communication capabilities at Twitchell Warehouse and provide backup power generation at all times. Re-evaluate the viability of establishing an ICP at Twitchell and consider alternative Delta locations in the future.	X				L – DFM S – IC
I-6	Environmental Issues and Health/Safety*	Be proactive and aware of the role/responsibility of DWR in environmental and health/safety issues. Be aware of other responding agencies roles and verify actions being taken.				X	L – DFM S – DES

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – DEC 05/JAN 06 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
II. Training and Preparedness							
II-1	Flood Fight Training*	Begin scheduling classes in the summer to manage the increasing number of training requests. The Emergency Preparedness and Security Manager shall write a memo for the Deputy Director's signature to support this training, and shall consider funding to cover instructor expenditures outside of DFM.	X				L – DFM S – EPISM, TO
II-2	SEMS and ICS Training*	Increase understanding amongst all staff regarding the similarities/differences in SEMS and ICS structures and the role/protocol between the FOC and ICTs. Annually conduct SEMS, ICS, FOCIS and Section-specific training and exercises for flood response teams. Conduct annual flood fight methods training. Ensure that DWR Management staff are adequately trained to understand SEMS and its importance within emergency management and response.	X				L-EPISM S - DFM, Exec
II-3	SEMS/ICS Duty Statements*	Update and distribute duty statements for all SEMS positions.		X			L – DFM
II-4	Reference Materials*	Update and compile reference materials for use by staff at the FOC and in the field.		X			L – DFM
II-5	Real-time Training Program*	Activate additional staff at the onset of an event for training purposes and to shadow experienced personnel in various capacities.				X	L – DFM
II-6	Flood Information Specialists and Public Information Officers*	FIS and PIOs should receive training to increase understanding of California hydrology, flood control systems, the SEMS/ICS system and decision support tools used at the FOC.		X			L – DFM
II-7	First Aid and CPR*	Ensure that a sufficient number of FOC and field staff are trained in first aid and CPR.		X			L – DFM
II-8	Hydrology and Geotechnical Training*	Increase level of knowledge among DWR personnel related to the hydrologic and geotechnical aspects of California's flood control systems, reservoirs and water projects to improve overall emergency response effectiveness.			X		L – DFM
II-9	Radio Communications*	Train staff in the capabilities and use of DWR's radio equipment.		X			L – DTS S-EPISM
II-10	Incident Command Teams*	Each ICT should meet prior to flood season and review individual roles, review resources and identify issues that need to be addressed. ICTs should prepare a basic plan or checklist regarding the establishment of an ICP and daily operations.				X	L – IC S-EPISM, DFM
II-11	Equipment Training*	Provide for training of DWR staff on operating forklifts, flatbed trucks, 4WD vehicles, boating safety, etc.				X	L – DFM S – DMS, TO

2005-2006 Storms AAR: Part I

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

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – DEC 05/JAN 06 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
III. Staffing and Resource Management							
III-1	Emergency Response Teams*	Update and organize 2005-2006 flood response teams for both the FOC and the ICTs. Annually update emergency assignments, clearing assignments with managers and supervisors.				X	L-EPMS S – DFM
III-2	Staff Availability and Assignments*	Conduct emergency meeting of all DFM staff to notify of major event and review staffing assignments. Staff assignments and tracking to be performed by Logistics. Provide sufficient numbers of staff early in a major flood event and continue staffing at sufficient levels to ensure adequate flood response. Recruit staff from within DFM prior to pulling from other Divisions.				X	L – DFM S – Exec
III-3	Staff Rotation, Shift Duration and Night Shift Work*	Develop guidelines and criteria limiting the consecutive hours/days staff work throughout the event to ensure staff health and safety and prevent burn-out. Establish sufficient staffing levels to allow for overlapping coverage and rotation.		X			L – DFM
III-4	Emergency Contact Lists*	Maintain and continually update an emergency contact list for all trained staff as well as appropriate emergency contacts within and outside of DWR.				X	L – DFM S-TO, PO
III-5	Daily Staffing Chart	Logistics will create and continually update a staffing chart that identifies who is assigned where and in what capacity.				X	L - DFM
III-6	Field Technical Staff Requests*	When requesting field staff for technical assistance, ensure the need and be prepared to provide all necessary information and equipment prior to dispatch.				X	L – DFM S-IC, Op
III-7	ICT Level of Activation and Expertise	Define initial deployment composition alternatives to allow the activation to be based upon the severity of the event and actual need. A "short" team should precede full deployment composition. Provide mixture of expertise and skills for compilation of ICTs.		X			L – DFM S – IC
III-8	ICT Command Post Establishment*	Establish ICP once an ICT exceeds 3-4 persons. Conduct a survey to identify viable locations to establish ICPs throughout the State. Establish protocol for setting up facilities and do any necessary pre-planning/contracting to expedite process.		X			L – DFM S-IC,DMS
III-9	FOC Liaison Officer*	Ensure that a dedicated Liaison Officer is scheduled to staff the FOC. Involve the Legislative Affairs Office for legislative requests and FOC liaison activities.		X			L – DFM S – LAO
III-10	Public Information Officers at the FOC and ICPs*	Comprehensive PIO coverage at both the FOC and at the ICPs is required throughout the event. Train and utilize PIOs from various Divisions to allow for adequate coverage.		X			L – PAO S – DFM
III-11	Contract Assistance*	Contracts and Accounting provide staff to be present at the FOC to increase efficiency and minimize misunderstandings.				X	L – DFM S-DMS, DFS
III-12	Clerical Support*	Assign dedicated clerical support throughout the event.				X	L – DFM

2005-2006 Storms AAR: Part I

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

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – DEC 05/JAN 06 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
III. Staffing and Resource Management (continued)							
III-13	Expendable/Accountable Supplies*	Consider that some materials supplied during an event are expendable. Establish and document what supplies will and will not be accountable at the end of an event.			X		L – DFM
III-14	Resource Deployment Strategy*	Establish formal process for acquiring, deploying and tracking of resources to the field. Prepare and pre-deploy standard ICP "tool boxes".				X	L – DFM
III-15	Resource Availability*	Ensure that sufficient supplies (4WD vehicles, rain gear, etc.) are readily available at all times prior to dispatching staff.				X	L – DFM S – DMS, DFS
III-16	Equipment and Vendor Data*	Create and have available easily accessible and widely disseminated lists of flood equipment and vendors.				X	L – DFM
III-17	Flood Fight Materials*	Restock and expand flood fight materials expended during event.	X				L – DFM

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – DEC 05/JAN 06 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
IV. Communications and Information Management							
IV-1	Continual Information Flow Between SEMS Sections*	Section Chiefs periodically meet and exchange information throughout each shift and not just at changeover. Conduct general informational briefing at least once per shift for all staff.		X			L – DFM
IV-2	Management to Staff Information Flow*	DWR Management shall conform to Standardized Emergency Management System protocols and chain-of-command when disseminating information and decisions.				X	L – DFM S – Exec
IV-3	FOC and ICT Information Flow*	Encourage peer-to-peer communications during event within Sections.				X	L – DFM
IV-4	Field Reporting to the FOC*	Establish a protocol and provide necessary forms/equipment for field units to submit consistent and complete reports at specified times to the FOC.		X			L – DFM
IV-5	SEMS/FOCIS Reports*	Each Section will designate an individual to keep a real time log of the information flow in their Section to allow efficient and accurate preparation of SEMS reports in FOCIS.				X	L – DFM
IV-6	Situation and Incident Reports*	Streamline process to ensure more real-time reporting of situations.		X			L – DFM
IV-7	GIS and Mapping Services*	Increase capability of FOC and ICPs to efficiently obtain GIS data and create real-time maps.	X				L – DFM
IV-8	Finance Information*	Ensure that all costs, invoices and receipts are provided to F/A throughout the event.				X	L – DFM
IV-9	Telecommunications*	Develop and annually review an emergency telecommunications plan. Execute services contracts to provide rapid, effective communications in all areas throughout the State.		X		X	L – DFM, DTS
IV-10	Conferencing and Briefing Technology*	Update technology, capabilities and security for conducting conferences and briefings (including internal, external, web and media). Videotape and audiotape all media briefings.	X				L – DFM S – DTS
IV-11	Media Outreach*	Increase interaction between PIO's and FOC. Perform recruitment within DWR to find Spanish-fluent technical personnel with flood-related backgrounds, then train them as PIO.		X			L – DFM, PAO
IV-12	FOC Information Technology*	Address issues with IT staff regarding problems with IT security, web-based email access, printer access, remote access from outside WAN, DSL connection in media room, etc.	X				L – DTS S – DFM
IV-13	CDEC Availability	Evaluate load on public CDEC site and availability of access to public agencies.		X			L – DFM
IV-14	FOC Phone Documentation*	Develop standard protocol for efficiently and consistently responding to and documenting calls into the FOC.		X			L – DFM
IV-15	Remote Communication*	Provide field staff with more reliable telecommunications equipment including radios, cell-phones, laptops, wireless internet capability, etc..	X				L – DFM, DTS
IV-16	Mobile Trailers*	Acquire mobile field trailers equipped with necessary telecommunication and IT equipment.	X				L – DFM, EPSM S – DTS

2005-2006 Storms AAR: Part I

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

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – DEC 05/JAN 06 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
V. Relationships and Interagency Coordination							
V-1	Interagency Agreements*	Execute and update agreements as needed with all applicable agencies to enable immediate emergency response. Annually review existing agreements.		X		X	L – Exec S – DFM
V-2	Interagency Coordination*	Build on key relationships with COE, CDF, CCC, OES, locals and other agencies by annually conducting discussions with key personnel. Strengthen relationships with coastal and southern California communities.				X	L-EP SM, DFM
V-3	OES Mission Tasking and RIMS*	Work with State OES to train staff in mission tasking and the use of RIMS.		X			L – DFM
V-4	Coordinated Reservoir Operations*	Continue to foster coordination amongst reservoir operators and DFM.				X	L – DFM
V-5	Forecasting Operations Interface*	Utilize the National Weather Service Representative as an interface between FOC and Forecasting Operations.				X	L – DFM
V-6	Legislative Interaction*	Develop standard procedures and provide adequate staff not immersed in the event operations to handle inquiries from legislative offices.		X			L – DFM, LAO
V-7	Public Law 84-99 Coordination*	Establish better coordination and PL 84-99 request protocols between DWR, the Corps, OES Regions and Operational Areas, and Levee Maintaining Agencies.				X	L - DFM

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – DEC 05/JAN 06 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
VI. Policy and Administration							
VI-1	DWR Responsibility for Assistance on Non-project Levees*	Develop a clear policy and plan specifying DWR's flood fight assistance and responsibility on non-project levees. Provide a funding mechanism for any specified response.	X				L – Exec S – DFM
VI-2	Authorize Emergency Expenditures*	Authorize DFM to expend funds during major flood emergencies for the necessary contract and equipment required to respond quickly and institute emergency business practices.			X		L – DMS S - DFS, Exec
VI-3	DWR Business Processes*	Streamline or specialize business processes to use in an emergency. Train line staff and managers in applicable Divisions in SEMS response roles and responsibilities.	X				L – DMS, DFS, S – Exec
VI-4	Compensation*	Institute a method to fairly compensate applicable managers and supervisors who work extended emergency response hours.		X			L – DMS S – Exec
VI-5	Time Tracking*	Implement streamlined process for check in/check out and time tracking. Assign appropriate levels of F/A staff to facilitate daily entry of timesheets and cost object validation.		X			L – DFM
VI-6	Food and Janitorial Services*	Take steps to ensure adequate food and janitorial services in the FOC and field.	X				L – DFM, DMS S – Exec

Chapter Five – Issues and Recommendations

The Debriefing Issues and Recommendations Matrix in Chapter Four provides an organized and simplified summary of all topics developed through the debriefing process. Each issue is treated in depth in this Chapter and is referenced as follows:

Issue Number: A two-part number cross-referenced directly to the Issues and Recommendations Matrix in Chapter Four. It includes the Category Number (I through VI) and a sequence number within each category.

Issue Title: Title of the issue as shown in the Issues and Recommendations Matrix.

Category: Issues were ultimately sorted into the following six categories based in part on the National Incident Management Compliance Assurance Support Tool (NIMCAST), used to compare NIMS and SEMS:

- Command and Management
- Training and Preparedness
- Staffing and Resource Management
- Communications and Information Management
- Relationships and Inter-Agency Coordination
- Policy and Administration

Discussion: An expanded discussion of major comments received during the debriefing process and the resulting recommendations.

Recommendations: The action(s) recommended to correct deficiencies or make improvements to existing policies or procedures.

Responsible Parties: The organization(s) within the Department of Water Resources, or outside cooperating agencies, that have lead responsibility for implementing the recommendations.

Goal Category:

Critical: Issues that must be resolved prior to the next flood season. These are shortcomings in the Department's emergency response which most limit our ability to respond to flood emergencies in a timely, efficient and complete manner, or are areas where a correction is necessary to bring DWR into compliance with standard procedures or legal requirements.

Short-Term: Issues that can be resolved by December 1, 2007.

Long-Term: Issues that require a longer period to address. A two-year period ending December 1, 2009 is initially suggested.

Ongoing: Issues that require continuous maintenance or attention from one year to the next, beginning with the next flood season.

ISSUE NUMBER: I-1

ISSUE TITLE: Organization Structure and SEMS Compliance

Category: Command and Management

Discussion: To paraphrase an email message dated May 30th 2006 from DWR's Emergency Preparedness and Security Manager, Sonny Fong:

“The Department is a recognized public safety agency and plays an integral role in the State Emergency Plan and the State Terrorism Plan. We've played key roles in the implementation and maintenance of the Standardized Emergency Management System/Incident Command System (SEMS/ICS) throughout the State and have trained over 800 department staff in SEMS/ICS...To this end, the Department has complied with the Governor's Executive order W-9-91 wherein all State agencies were required to utilize SEMS/ICS in their emergency planning and response.

The Federal Government has created the National Incident Management System (NIMS), an emergency management system based on SEMS/ICS, and is requiring all states to adopt this system in order to be in compliance with Presidential Decision Directive 5...and if they want to continue to be eligible for federal assistance funding.”

During this event there was a certain degree of confusion and misunderstanding regarding the roles and responsibilities of management, FOC and ICT staff as defined by the event. Under the provisions of NIMS, SEMS and ICS, there is a definite distinction between the roles and responsibilities of the FOC (as the EOC) and the Incident Command in the field under ICS. As stated in ICS Overview Instruction released by FEMA, “although the EOC (FOC) uses ICS management principles it does not manage on-scene operations.”

Recommendations: Establish clearly defined and recognized roles and responsibilities to ensure compliance with SEMS and ICS for all levels of staff involved in the event. Ensure that staff remain within their respective roles as defined by the event.

Responsible Parties: Lead: DFM
Support: DWR Executive

Goal Category: Ongoing

ISSUE NUMBER: I-2

ISSUE TITLE: Emergency Notification

Category: Command and Management

Discussion: Recruiting and retaining staff was unpredictable due to a lack of understanding at the supervisor-level of the importance and priority of this event. It became evident in soliciting staff throughout the Department that there was no clear directive to all staff as to the ability of the FOC to obtain personnel for the event.

Recommendations: Immediate and direct notification of the emergency to all DWR staff from Management. Ensure clear direction from Management to supervisors and FOC staff regarding priority.

Distribute Flood Alert and Mobilization Memoranda via email to all DWR staff and post on Aquanet to advise Department staff that they may need to be available if requested.

Responsible Parties: Lead: DWR Executive

Goal Category: Ongoing

ISSUE NUMBER: I-3

ISSUE TITLE: FOC Operations Section and Coverage

Category: Command and Management

Discussion: The Operations Section at the FOC was limited in staff with immense workload and coverage spread out over a great area. As much as the FOC needs to coordinate efforts throughout the State, it also needs to consider establishing an Area Command/Coordination approach to its operational structure – both in the field and at the FOC. Since large flood events are typically spread throughout regions and overlap Operational Areas, an Area Command may be better suited to control many field incidents occurring within a specific area or boundary.

Recommendations: Increase the number of staff typically assigned to the FOC Operations Section. The FOC should continue to evaluate and prioritize resources on a statewide level, but consider an Area Command approach for delegating responsibilities during large flood events covering much of the State.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: I-4

ISSUE TITLE: FOC Access and Space Management

Category: Command and Management

Discussion: Use of the JOC space during flood emergencies needs to be reviewed. During a large flood event, office space at the FOC becomes tight and various SEMS Sections are not properly accommodated.

JOC does not have appropriate areas or meeting rooms for DWR Executive and Managers to conduct business and therefore the FOC Management Room becomes a default meeting location. This hinders and sometimes obstructs the FOC Director and other SEMS Management Section staff from conducting their necessary duties.

The Media Room is not sufficient size to effectively conduct briefings of large media interest.

Recommendations: Improve access and space planning for each Section, media, executives, public agencies and dignitaries. For the long-term, address the option of permanently relocating the JOC to more suitable accommodations.

Flood Management will conduct a long-range study to determine if each SEMS Section at the FOC needs additional physical space and possible locations.

Specific space at the JOC should be identified to allow for DWR Executive and other non-SEMS Managers to conduct business and be briefed by SEMS Chiefs and/or the DWR Executive Liaison Officer.

Evaluate options for relocating or expanding the existing Media Room.

Responsible Parties: Lead: DFM

Goal Category: Long-term

Target Completion Date: 12/1/2009

ISSUE NUMBER: I-5

ISSUE TITLE: Delta Operations (ICTs and Twitchell Warehouse)

Category: Command and Management

Discussion: Coordination of tasks and roles assigned to the Inspection staff and the ICTs was not always clear. At times this led to confusion, misunderstandings and overlapping of duties. There was confusion regarding the use of a permanent ICT at Twitchell Island and roving Delta ICT with respect to delineation of priority and responsibility.

Concerns with the ICP being located at Twitchell Island were raised throughout the event given location, accessibility, space limitations, safety and lack of necessities (shelter, power, heat, work area, telecommunications, etc.).

Recommendations: Better coordinate and define each ICT's role in the field to avoid confusion. Ensure that staff remain within their respective roles as defined by the event under SEMS/ICS.

Improve communication capabilities at Twitchell Warehouse and provide backup power generation at all times. Re-evaluate the viability of establishing an ICP at Twitchell and consider alternative Delta locations in the future. Locate and potentially establish cooperative agreements with various local agencies for suitable sites that could be used.

Responsible Parties: Lead: DFM
Support: IC

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: I-6

ISSUE TITLE: Environmental Issues and Health/Safety

Category: Command and Management

Discussion: When dealing with high water and flooding, DWR encounters numerous environmental and regulatory issues during the course of the event (health and safety of staff working in and around floodwaters, water quality of flood waters, contaminants in the materials used to bolster/repair levees, etc.). Given the number of responding agencies, there can be 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

Goal Category: Ongoing

ISSUE NUMBER: II-1

ISSUE TITLE: Flood Fight Training

Category: Training and Preparedness

Discussion: The Department offers Flood Fighting Methods training to agencies statewide, in addition to its own personnel. Local agencies are making an increasing number of training requests.

When conducting a flood fight, DWR staff is typically assigned to direct and help oversee crews. More DWR staff should receive flood fight training, and more trainers must be developed to teach it.

Recommendations: Flood Management shall begin scheduling classes in the summer to manage the increasing number of training requests and to complete training prior to mid-December, without impact to flood season.

The Emergency Preparedness and Security Manager shall write a memo for the Deputy Director's signature to all Division, Branch, Section and Office Chiefs to support this training, and shall consider funding to cover flood fight instructor expenditures for personnel outside of DFM. DFM must budget for expenses by its trainers.

The Training Office shall assist DFM as necessary.

Responsible Parties: **Lead:** DFM
Support: EPSM, Training Office

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: II-2

ISSUE TITLE: SEMS and ICS Training

Category: Training and Preparedness

Discussion: Some personnel who either played a key role in flood response or were assigned to the ICP and the FOC were not trained in the overall SEMS/ICS process or their specific duty. This lack of understanding led to confusion regarding roles, responsibilities, and chain of command. This degree of misunderstanding regarding the roles and responsibilities of DWR Management, FOC and ICP staff as defined by the event contributed to strained communication at times amongst responders.

Under the provisions of NIMS, SEMS and ICS, there is a definite distinction between the roles and responsibilities of the FOC/EOC and the Incident Command in the field. As stated in ICS Overview Instruction released by FEMA, “although the EOC (FOC) uses ICS management principles it does not manage on-scene operations.” The role of the FOC is to support the field ICTs and provide overall guidance regarding DWR policy.

DWR Emergency Preparedness and Security Manager addressed the need for NIMS, SEMS and ICS training in a memo addressed to all DWR Managers and Supervisors dated May 23, 2006 (see Attachment B).

Recommendations: Annually conduct SEMS, ICS, FOCIS and Section-specific training and exercises for flood response teams. Conduct annual flood fight methods training for Operations, ICT and field staff. Ensure that DWR Management staff are adequately trained to understand SEMS and its importance within emergency management and response.

As recognized by DWR’s Emergency Preparedness and Security Manager, address the need to train all levels of staff in NIMS/SEMS/ICS to ensure compliance with State and Federal mandates. Increase understanding amongst all staff regarding the similarities/differences in SEMS and ICS structures and the role/protocol between the FOC and ICTs.

Responsible Parties: Lead: EPSM
Support: DFM, DWR Executive

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: II-3

ISSUE TITLE: SEMS/ICS Duty Statements

Category: Training and Preparedness

Discussion: The roles and responsibilities of each SEMS/ICS position was not always clear to staff, particularly new employees and those that had not been involved in past emergency events. It is important not only to be astute regarding your own role, but to also be familiar with the duties and responsibilities of other emergency responders.

Recommendations: Update and distribute duty statements for all SEMS positions. Conduct Section-specific training for all DWR staff and hold an annual pre-flood season meeting to review the most current emergency staff roster, address potential changes and refresh memories on basic Flood Operations and SEMS/ICS positions.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: II-4

ISSUE TITLE: Reference Materials

Category: Training and Preparedness

Discussion: There is a lack of updated and coordinated reference materials for staff in the FOC and field to have at hand.

Recommendations: Update and compile reference materials for use by staff at the FOC and in the field. The materials should be current and readily available to distribute at a moments notice.

Responsible Parties: Lead: DMS
Support: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: II-5

ISSUE TITLE: Real-time Training Program

Category: Training and Preparedness

Discussion: Formalized training is an extremely important component of ensuring that staff is prepared to respond during an emergency. However, no amount of formal training can accomplish the same level of exposure and experience one receives while being immersed in an actual event. Working alongside (“shadowing”) experienced staff with institutional knowledge is a very efficient and effective means of seasoning staff in the reality of flood operations and response. Such real-time training allows staff to assist in the response while gaining invaluable experience for future use.

Given the immense amount of preparation and coordination it takes to conduct formalized training, overstaffing at the onset of an event to allow less experienced staff to shadow others is a very efficient and effective training mechanism. This also automatically creates a larger pool of knowledgeable candidates to assign later on in the event.

Recommendations: Activate additional staff at the onset of an event for training purposes and to shadow experienced personnel in various capacities.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: II-6

ISSUE TITLE: Flood Information Specialists and Public Information Officers

Category: Training and Preparedness

Discussion: Staff require more training about how to better respond to operational requests on flood control and reservoir systems from the public. Commonly received requests include opening the Sacramento Weir and adjusting reservoir releases.

Staff working in the Flood Center also need to be aware of the overall SEMS/ICS system and how the Flood Center functions during an emergency.

Recommendations: FIS and PIOs should receive training to increase understanding of California hydrology, flood control systems, the SEMS/ICS system and decision support tools used at the FOC. Flood Management shall develop a written procedure for handling Sacramento Weir information requests. Other requests shall be referred to PIO or operations personnel at the agencies involved.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: II-7

ISSUE TITLE: First Aid and CPR

Category: Training and Preparedness

Discussion: Field operations can be performed under strained and sometimes unpredictable circumstances. Staff in the field would benefit from an increased number of personnel trained in first aid and CPR.

Recommendations: Ensure that a sufficient number of FOC and field staff are trained in first aid and CPR. A list of field-experienced personnel shall be developed with training to follow. The Training Office shall schedule classes and trainers.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: II-8

ISSUE TITLE: Hydrology and Geotechnical Training

Category: Training and Preparedness

Discussion: An increased level of knowledge among DWR personnel related to the hydrologic and geotechnical aspects of California's flood control systems, reservoirs, and water projects would improve our overall emergency response effectiveness.

During high water events, DWR staff are relied upon to conduct investigations into the integrity and stability of levees and dams. It is important that such staff are adequately trained and experienced in geotechnical matters as they relate to such events.

Recommendations: Increase level of knowledge among DWR personnel related to the hydrologic and geotechnical aspects of California's flood control systems, reservoirs and water projects to improve overall emergency response effectiveness.

Flood emergency workers involved in information dissemination should take DWR's Hydrology Basics course. DFM should upgrade the course to provide a broader view of California hydrology and flood control systems.

Ensure that DWR at all times has an adequate number of trained and experienced geotechnical staff to send into the field to conduct evaluations. Experienced staff should mentor other technical staff at every opportunity to develop a broader pool of geotechnical candidates.

Responsible Parties: Lead: DFM

Goal Category: Long-term

Target Completion Date: 12/1/2009

ISSUE NUMBER: II-9

ISSUE TITLE: Radio Communications

Category: Training and Preparedness

Discussion: The use of radios can be an effective way to communicate in situations where other means are compromised. There are many DWR staff not adequately trained on DWR's radio communication system.

Recommendations: Train staff in the capabilities and use of DWR's radio equipment and protocols.

Responsible Parties: **Lead:** DTS
Support: EPSM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: II-10

ISSUE TITLE: Incident Command Teams

Category: Training and Preparedness

Discussion: To ensure enhanced and immediate emergency response capabilities, preseason coordination amongst the ICTs should be conducted.

Recommendations: Each ICT should meet prior to flood season and review individual roles, review resources and identify issues that need to be addressed. ICTs should prepare a basic plan or checklist regarding the establishment of an ICP and daily operations.

Responsible Parties: **Lead:** IC
Support: EPSM, DFM

Goal Category: Long-term

Target Completion Date: 12/1/2009

ISSUE NUMBER: II-11

ISSUE TITLE: Equipment Training

Category: Training and Preparedness

Discussion: During flood emergencies, the Department needs readily available staff trained in operating equipment and machinery.

Recommendations: Provide for training of DWR staff on operating forklifts, flatbed trucks, 4WD vehicles, boating safety, etc.

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

Goal Category: Long-term

Target Completion Date: 12/1/2009

ISSUE NUMBER: III-1

ISSUE TITLE: Emergency Response Teams

Category: Staffing and Resource Management

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: Update and organize 2005-2006 Department-wide, cross-division, flood response teams for both the FOC and the ICTs. Annually update DWR flood emergency response assignments for both the FOC and ICT, clearing the assignments with managers and supervisors.

Responsible Parties: **Lead:** EPSM
Support: DFM

Goal Category: Ongoing

ISSUE NUMBER: III-2

ISSUE TITLE: Staff Availability and Assignments

Category: Staffing and Resource Management

Discussion: There are no written procedures available for requesting emergency personnel within DWR. Details are needed including: (1) requesting staff to temporarily leave their regular job; (2) obtaining supervisory approval; (3) releasing staff from emergency duty; (4) providing relief days off; and (5) calling staff back for additional duty.

Although the FOC began staffing up and working extended hours as soon as the situation appeared to warrant, inadequate numbers of available trained staff led to confusion and some inefficiency. Given the lack of recent training and sufficient notice to all employees, there were difficulties in acquiring the number of personnel needed to fully and effectively staff the FOC and field. In addition, at times there was confusion regarding particular assignments for staff.

Recommendations: DFM will draft procedures for review by Management. Once approved, they will become Standard Operating Procedures.

Conduct 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 DWR's web portal, Aquanet, to advise Department staff that they may need to be available if requested.

All staffing and assignments will be acquired and tracked through Logistics. When requesting staff through Logistics, it is important to communicate the requirements and particular role/assignment being filled.

Emphasize ongoing training for DWR staff. Provide sufficient staff early in a major flood event and continue staffing at sufficient levels to ensure adequate flood response.

Recruit staff from within DFM prior to pulling from other Divisions.

Responsible Parties: Lead: DFM
Support: Executive

Goal Category: Ongoing

ISSUE NUMBER: III-3

ISSUE TITLE: Staff Rotation, Shift Duration and Night Shift Work

Category: Staffing and Resource Management

Discussion: Emergency personnel frequently work excessively long shifts and too many consecutive days with little relief, resulting in risks to personal safety and health. Although it is important to keep experienced and knowledgeable individuals onsite, this can create situations of burnout. By having a candidate pool of trained emergency workers at least three or more times the number of required positions 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.

Staffing for the night shift at the FOC was difficult given minimal volunteers, uncertainties regarding workload and overall working conditions. Switching over to a night shift causes a much greater impact to staff and their families than an extension of a normal workday. There is not an adequate night shift differential in place to sufficiently compensate staff for rearranging their lives to accommodate this schedule. The amount of time needed to adjust to this schedule is not taken into account when scheduling or compensating staff for this shift. It was also difficult to determine the appropriate number of staff needed on a given night shift until the prior day shift, sometimes creating undue hardship on staff being tasked or released at the last minute.

Recommendations: Develop guidelines and a system to limit personnel from working more than 10 to 14 consecutive hours and ensure adequate staffing on all shifts. This policy should limit the number of consecutive days worked, which would include time at emergency and regular job locations. The Department shall continue to increase the number of personnel trained in flood emergency procedures so that a limited number of individuals are not always relied upon during an emergency.

Re-evaluate the way in which staff are tasked and compensated to work the night shift; consider using CDF or comparable SOPs as models. Ensure that extra care is taken to provide night shift staff with enough lead-time to make necessary arrangements to adjust their schedules. Recognize that it can be an extreme hardship to have to readjust from day to night (and vice-versa) and therefore minimize last-minute changes.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: III-4

ISSUE TITLE: Emergency Contacts List

Category: Staffing and Resource Management

Discussion: Phone numbers (land, cell, pager, FAX, etc.) for emergency personnel and locations was not uniformly available.

A roster or database of experienced and potential DWR flood emergency personnel would improve the personnel selection process during an emergency. Section Chiefs and Logistics need to be able to review past emergency duty experience when making personnel requests. The SEMS/ICS and other flood training history of DWR personnel should also be included in the database. Experience has shown that the candidate pool of trained emergency workers should be at least three or more times than the number of positions available.

Recommendations: Maintain and continually update an emergency contact list for all trained staff as well as appropriate emergency contacts within and outside of DWR.

The FOCIS Personnel-Tracking application under development by Flood Management shall include a personnel roster. This application will be used to select personnel, and track their job assignments during an emergency. Flood Management will maintain the roster and training history year-round. Retired annuitants and key agency liaisons will also be included.

DWR's Training Office will provide flood-related training histories to DFM to develop the database. Flood emergency training should not be considered part of an employee's training allotment.

Responsible Parties: Lead: DFM
Support: TO, PO

Goal Category: Ongoing

ISSUE NUMBER: III-5

ISSUE TITLE: Daily Staffing Chart

Category: Staffing and Resource Management

Discussion: It was difficult at times to decipher who was working at each location and in what capacity. Logistics made a solid effort to track staff, but additional work is necessary to ensure the real-time accuracy of staffing lists and making them more accessible for review by others.

Recommendations: Logistics will create and continually update a staffing chart that identifies who is assigned where and in what capacity. At a minimum, this chart shall be updated and validated by Logistics towards the beginning and end of each shift.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: III-6

ISSUE TITLE: Field Technical Staff Requests

Category: Staffing and Resource Management

Discussion: At times there was confusion regarding the process of requesting and acquiring technical staff in the field. The experience and background of personnel should be considered when making requests. Certain tasks, such as Geographical Information System support, construction, geotechnical, flood fight, computer skills, information dissemination, etc. require specialized training or experience.

DWR and FOC Management need to provide overall support and ensure personnel are released from their regular jobs to perform emergency duties.

Recommendations: When requesting field staff for technical assistance, ensure the need and be prepared to provide all necessary information and equipment prior to dispatch. The requester(s) need to be very specific as to the type of technical support being requested to ensure that the proper personnel are assigned.

Incident Commanders, with Logistics Section support, are responsible for the needs of their personnel and for articulating requests through ICP Logistics to the FOC Operations Chief. The Operations Chief is responsible for balancing the personnel needs of all Incident Command Posts and other field sites and coordinating personnel assignments with the FOC Logistics Chief.

Responsible Parties: **Lead:** DFM
Support: ICs, Operations Chiefs

Goal Category: Ongoing

ISSUE NUMBER: III-7

ISSUE TITLE: ICT Level of Activation and Expertise

Category: Staffing and Resource Management

Discussion: The size and scope of this event did not require a full ICT response and procedures and coordination were more informal than in previous events. Each team was ready and capable of a more formal response if it had been needed. Given the lack of a full and complete deployment, there was some confusion regarding the need for team members, team assignments and the roles and responsibilities of those assigned.

Recommendations: Define initial deployment composition alternatives to allow the activation to be based upon the severity of the event and actual need. A "short" team should precede full deployment composition. Provide mixture of expertise and skills for compilation of ICTs.

Responsible Parties: **Lead:** DFM
Support: IC

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: III-8

ISSUE TITLE: ICT Command Post Establishment

Category: Staffing and Resource Management

Discussion: Prior to an ICP being set up at Twitchell Island, there was no common location for staff to use as a headquarters for field operations. This made it difficult for field staff to coordinate and be more effective.

Concerns with the ICP being ultimately located at Twitchell Island were raised throughout the event given location, accessibility, space limitations, safety and lack of necessities (shelter, power, heat, work area, telecommunications, etc.).

Recommendations: Establish ICP once an ICT exceeds 3-4 persons. Conduct a survey to identify viable locations to establish ICPs throughout the State. Potentially establish cooperative agreements with various local agencies for suitable sites that could be used. Establish protocol for setting up facilities and do any necessary pre-planning/contracting to expedite process.

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

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: III-9

ISSUE TITLE: FOC Liaison Officer

Category: Staffing and Resource Management

Discussion: The FOC needs to have a dedicated Liaison Officer to manage the various individuals from DWR Executive, media and other agencies that frequent the FOC during an event. This takes a great deal of time and effort and it has been found unreasonable to require Administrative Staff to perform this duty along with all of their other tasks.

Recommendations: Ensure that a dedicated Liaison Officer is scheduled to staff the FOC. Involve the Legislative Affairs Office for legislative requests and FOC liaison activities.

Responsible Parties: **Lead:** DFM
Support: LAO

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: III-10

ISSUE TITLE: Public Information Officers at the FOC and ICPs

Category: Staffing and Resource Management

Discussion: During the early stages of the event there was a great need for PIO coverage at both the FOC and in the field. Until later on in the event, the number of PIO staff available was not sufficient to satisfy the demands for information and media attention (particularly the early morning hours when media attention is high). In order for PIOs to be effective, they need to be up to speed on the event and have the latest information available.

Recommendations: Comprehensive PIO coverage at both the FOC and at the ICPs is required throughout the event. In many cases the Public Affairs Office 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 (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.

Management shall provide regular briefings to the PIOs to ensure they have the latest information available. While the need and desire of the press for technical experts is understandable, the Department should also consider using the PIO's as the primary face of the Department to effectively maintain a consistent message. Technical experts within Flood Management and other Divisions and Offices should assist PIO's in the preparation of media releases and other statements to this effect.

Responsible Parties: Lead: PAO
Support: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: III-11

ISSUE TITLE: Contract Assistance

Category: Staffing and Resource Management

Discussion: Better coordination with Contracts and Accounting is needed during a flood event.

Recommendations: Contracts and Accounting need to provide staff to be present at the FOC to increase efficiency and minimize misunderstandings.

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

Goal Category: Ongoing

ISSUE NUMBER: III-12

ISSUE TITLE: Clerical Support

Category: Staffing and Resource Management

Discussion: There is a critical need for dedicated clerical support for emergency response activities and staff throughout the event. The lack of adequate clerical support results in critical emergency response staff having to divert time and energy into handling tasks that could otherwise be assigned to more efficient clerical support.

Recommendations: Assign adequate levels of dedicated clerical support throughout the event.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: III-13

ISSUE TITLE: Expendable/Accountable Supplies

Category: Staffing and Resource Management

Discussion: There is a great variety of resources assigned and deployed to the field during high water events. Although all expenditures should be tracked, some of these materials are not durable in nature or become unsuitable for reuse. Efforts to recover and return these materials is sometimes not cost-effective and can create undue burden on staff with more important issues to address during an emergency.

Recommendations: Consider that some materials supplied during an event are expendable. Establish and document what supplies will and will not be accountable at the end of an event.

Responsible Parties: Lead: DFM

Goal Category: Long-term

Target Completion Date: 12/1/2009

ISSUE NUMBER: III-14

ISSUE TITLE: Resource Deployment Strategy

Category: Staffing and Resource Management

Discussion: Procedures are needed for issuing and coordinating resource requests between field and FOC Operations Sections, and the Logistics Section. Requests must be made with sufficient detail to be easily understood by Logistics Section personnel.

Guidelines for pre-deployment of flood fight materials is needed.

Recommendations: Establish formal process for acquiring, deploying and tracking of resources to the field. Field operations personnel, under direction from the FOC, will initiate resource requests to field Logistics Section personnel. These requests will be relayed to the FOC Logistics Section, which in turn will coordinate requests with the FOC Operations Section. Direct contact with resources issued to the field should be under the authority and responsibility of someone designated by the IC. Once assigned, resources should be tracked by the designee until demobilized and returned to the FOC if necessary.

Prepare and pre-deploy standard ICP "tool boxes" to minimize delays in getting the basic equipment needed to set up an ICP.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: III-15

ISSUE TITLE: Resource Availability

Category: Staffing and Resource Management

Discussion: A sufficient number of resources (properly equipped vehicles, raingear, field data gathering equipment, laptops, cell-phones, first aid kits, etc) must be readily available at the FOC and Incident Command Posts during a flood event.

Recommendations: At all times the Flood Center should have a backup supply of certain items ready to go at a moments notice.

During an event, Logistics shall ensure that sufficient supplies are readily available at all times prior to dispatching staff. Vehicles (especially 4WD) should be staged at the FOC and ICP's as directed by the FOC Logistics Section with Management approval and closely coordinated with the Operations Section to ensure efficiency. If supplies are not on-hand, Logistics shall work with Finance to immediate facilitate the acquisition of necessary resources.

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

Goal Category: Ongoing

ISSUE NUMBER: III-16

ISSUE TITLE: Equipment and Vendor Data

Category: Staffing and Resource Management

Discussion: Easily accessible lists of flood equipment and supply vendors, although available through Purchasing Services, were not widely available to staff in the FOC or the field.

Recommendations: Prior to each flood season, DFM Flood Operations Section shall coordinate with Purchasing Services, Flood Management Maintenance Yards, Division of Planning and Local Assistance, Operations and Maintenance Field Divisions, Division of Engineering, and the Corps of Engineers to have available an up-to-date list of flood equipment and vendors throughout the State. At the onset of an event, DFM shall make available and widely disseminate these lists to all ICS and SEMS Section Chiefs in the FOC and the field. Each updated list will be included in the FOCIS system, and should be added to any applicable DFM Intranet site.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: III-17

ISSUE TITLE: Flood Fight Materials

Category: Staffing and Resource Management

Discussion: Pre-positioned flood materials were expended during the high water event, leaving exposure for a future flood.

Recommendations: Restock and expand flood fight materials expended during event.

Responsible Parties: Lead: DFM

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: IV-1

ISSUE TITLE: Continual Information Flow between SEMS Sections

Category: Communications and Information Management

Discussion: Information flow at the Flood Operations Center needs attention, with more frequent and timely updates between Sections, particularly Operations and Planning/Intelligence. More coordination is needed on data entry and dissemination by the Response Information Management System.

Recommendations: Section Chiefs will periodically meet and exchange information throughout each shift and not just at changeover. An overall situation briefing should be available to all FOC staff once per shift.

The Planning/Intelligence Section will request updates from the Operations Section every few hours. Section compositions should be reviewed to determine if changes would allow improved communication. The Operations Chief will brief field personnel on reporting responsibilities prior to dispatch. A defined position will be created in the FOC Operations Section that will be dedicated to disseminating information to the other Sections.

The two Chiefs must decide whether Operations or Planning/Intelligence staff will update the RIMS California Levee and Flood Incident system. All Operations reports and DWR/ICS forms will be incorporated into the Flood Operations Center Information System, which will make all reports and updates available to all personnel.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: IV-2

ISSUE TITLE: Management to Staff Information Flow

Category: Communications and Information Management

Discussion: Management needs to ensure that FOC personnel receive updates on key high-level issues.

The role of the Management Section Liaison to DWR Executive was not consistently established and made clear to others, leading to confusion at times regarding chain of command.

Recommendations: FOC Director shall conduct a special briefing for Section Chief's at least once per shift. The Management Section shall also task a scribe to document all relative conference calls, meetings, etc. and regularly provide such information to other Section Chiefs and Deputies.

DWR Management shall conform to Standardized Emergency Management System protocols and chain-of-command when disseminating information and decisions.

Responsible Parties: Lead: DFM
Support: DWR Executive

Goal Category: Ongoing

ISSUE NUMBER: IV-3

ISSUE TITLE: FOC and ICT Information Flow

Category: Communications and Information Management

Discussion: Although communication between the FOC and counterparts in the field was better than in previous events, improvement is needed. At times, a lack of communication between the field and the FOC sections over policy, equipment, and personnel onsite led to confusion.

Recommendations: Encourage peer-to-peer communications during event within Sections. Ensure that all Incident Action Plans, summaries, reports, etc. are shared in real-time between the FOC and ICs in the field.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: IV-4

ISSUE TITLE: Field Reporting to the FOC

Category: Communications and Information Management

Discussion: Information from staff dispatched to the field was inconsistent and not available in a timely manner. There is currently no procedure or established mechanism to effectively transfer of field status reports to the FOC or ICPs.

Recommendations: Establish a protocol and provide necessary forms/equipment for field units to submit consistent and complete reports at specified times to the FOC. Such equipment should consist of adequate mobile and telecommunications capabilities, GIS/GPS hardware and software, etc.

Field inspectors/responders should be sent out in teams to ensure that there is someone available to properly document and prepare the field reports.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: IV-5

ISSUE TITLE: SEMS/FOCIS Reports

Category: Communications and Information Management

Discussion: Rapid pace, quick decisions, closed-door discussions and volumes of information resulted in late or sketchy transmission of reports.

FOCIS is not being used to its full capacity and there is a lack of understanding regarding its use and capabilities.

Recommendations: Each Section will designate an individual to keep a real time log of the information flow in their Section to allow efficient and accurate preparation of SEMS reports in FOCIS.

FOCIS applications include Incident, Situation and other reports, all ICS forms and the Incident Action Plan. Protocol and training needs to be developed regarding the use of these tools to contribute to a more efficient and standardized information-reporting process.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: IV-6

ISSUE TITLE: Situation and Incident Reports

Category: Communications and Information Management

Discussion: The FOCIS Situation and Incident Reports were not being updated in real-time.

Recommendations: Streamline process to ensure more real-time reporting of situations. Dedicate staff at the FOC to updating FOCIS reports.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: IV-7

ISSUE TITLE: GIS and Mapping Services

Category: Communications and Information Management

Discussion: Management, Flood Center and field personnel expressed a need for improved and timelier maps. Expansion of in-house and mobile GIS capabilities in the Division of Flood Management will improve this situation. Hard copy maps including Levee Plates, California State Automobile Association highway maps, Thomas Bros. Maps, etc. are useful to have readily available in the FOC and field.

Recommendations: Establish a fully-functional GIS program within DFM. Increase capability of FOC and ICPs to efficiently obtain, organize and store GIS data to facilitate the creation of real-time maps. Research and implement mobile GIS technology for staff in the field to transmit data efficiently and effectively to the Flood Center. Train staff accordingly.

Responsible Parties: Lead: DFM

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: IV-8

ISSUE TITLE: Finance Information

Category: Communications and Information Management

Discussion: Information such as costs, invoices and receipts were not provided to F/A in a timely and complete manner.

Recommendations: Ensure that all costs, invoices and receipts are provided to F/A throughout the event.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: IV-9

ISSUE TITLE: Telecommunications

Category: Communications and Information Management

Discussion: Poor cellular phone coverage and lack of computer/Internet access led to confusing and inefficient communications at times.

Recommendations: Develop and annually review an emergency telecommunications plan. Execute services contracts to provide rapid, effective communications in all areas throughout the State.

Responsible Parties: Lead: DFM, DTS

Goal Category: Short-term, Ongoing

Target Completion Date: 12/1/2007

ISSUE NUMBER: IV-10

ISSUE TITLE: Conferencing and Briefing Technology

Category: Communications and Information Management

Discussion: The FOC does not have updated technology to effectively conduct and broadcast briefings and meetings to a wide audience.

Recommendations: Update technology, capabilities and security for conducting conferences and briefings (including internal, external, web and media). Videotape and audiotape all media briefings.

Responsible Parties: Lead: DFM
Support: DTS

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: IV-11

ISSUE TITLE: Media Outreach

Category: Communications and Information Management

Discussion: Given the lack of PIO coverage early on, there were concerns that the Department was not able to put out a consistent message to the public. While field personnel were capable of interpreting the situation, they weren't always given sufficient information to discuss context and plans, or to provide statistics.

DWR may not be adequately serving California's Spanish-speaking population during a flood emergency.

Recommendations: Public Information Officers shall disseminate information to the media as time and staff allows. Increase interaction between PIO's and FOC Chiefs to accurately prepare and disseminate information to the public. Planning/Intelligence staff shall assist the PIO by preparing or coordinating statements for their use. If Public Affairs Office personnel are unavailable or busy, trained field staff will disseminate the information, i.e., Incident Commanders, Operations Chiefs, et al.

Perform recruitment within DWR to find Spanish-fluent technical personnel with flood-related backgrounds, then train them as PIO.

Responsible Parties: Lead: DFM, PAO

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: IV-12

ISSUE TITLE: FOC Information Technology

Category: Communications and Information Management

Discussion: The FOC needs to update its technology and ensure that all appropriate security measures are in place.

Recommendations: Address issues with IT staff regarding problems with IT security, web-based email access, printer access, remote access from outside WAN, DSL connection in media room, etc.

Responsible Parties: **Lead:** DTS
Support: DFM

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: IV-13

ISSUE TITLE: CDEC Availability

Category: Communications and Information Management

Discussion: During this event there were times in which CDEC's public site was difficult to access given the large amount of activity and heightened interest. Subsequently, the Flood Center received an increased volume of calls (and complaints) from the public and media to obtain information that should have been available online. Such a situation takes valuable resources and Flood Center staff time to accommodate this additional call load.

Recommendations: Evaluate load on public CDEC site and availability of access to public agencies. Investigate mechanisms/upgrades to reduce the chance of overload to the system during high water events. CDEC and Flood Operations staff shall work together to ensure adequate performance during emergency events.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: IV-14

ISSUE TITLE: FOC Phone Documentation

Category: Communications and Information Management

Discussion: There is no efficient and formalized method of documenting phone calls and reports made to the FOC during an event. Staff made use of available hardcopy and electronic logs, but the lack of a consistent and convenient method restricted the flow of information.

Recommendations: Develop standard protocol for efficiently and consistently responding to and documenting calls into the FOC.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: IV-15

ISSUE TITLE: Remote Communication

Category: Communications and Information Management

Discussion: Communications from the field were limited and at times unavailable.

Recommendations: Provide field staff with more reliable telecommunications equipment including radios, cell-phones, laptops, wireless internet capability, etc.

Responsible Parties: Lead: DFM, DTS

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: IV-16

ISSUE TITLE: Mobile Trailers

Category: Communications and Information Management

Discussion: Mobile trailers are needed at field locations which are equipped with all necessary telecommunication and computer equipment i.e., phones, radios, FAX, pagers, notebook computers, mapping tools, etc.

Recommendations: Acquire or be prepared to lease mobile field trailers equipped with necessary telecommunication and IT equipment 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: DFM, EPSM
Support: DTS

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: V-1

ISSUE TITLE: Interagency Agreements

Category: Relationships and Interagency Coordination

Discussion: Interagency agreements allowing immediate response needs to be formalized. Agreements with applicable agencies avoid potential delays to flood fight while contracts are being executed.

Although the goals and objectives of the high water response were essentially 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/ICS, CDF has offered its services to activate specialized strike teams to initially establish ICPs 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.

Maintaining Agencies should provide materials and the lands and rights of way to support emergency activities. Pre-existing agreements would; establish roles and guidelines for borrowing and replenishing materials, provide access to sites, define how assistance is requested, hold the State harmless, etc.

Recommendations: Execute and update agreements as needed with all applicable agencies to enable immediate emergency response. Annually review agreements.

When feasible, request CDF assistance to assist in initial setup of an ICP.

Develop MOUs between the Department and Levee Maintaining Agencies. These agreements will be reviewed at all pre-season flood operations meetings.

Responsible Parties: Lead: DWR Executive
Support: DFM

Goal Category: Short-term, Ongoing

Target Completion Date: 12/1/2007

ISSUE NUMBER: V-2

ISSUE TITLE: Interagency Coordination

Category: Relationships and Interagency Coordination

Discussion: Lack of understanding of other agencies mission and roles led to inefficiencies. Policies are needed regarding DWR's response beyond the Central Valley flood control projects and the Delta.

Recommendations: Build on key relationships with COE, CDF, CCC, OES, locals and other agencies by annually conducting discussions with key personnel. Research the Department's flood response history outside of the Central Valley/Delta and develop guidelines and policies with input from DPLA and O&M. Strengthen relationships with coastal and southern California communities.

Responsible Parties: Lead: EPSM, DFM

Goal Category: Ongoing

ISSUE NUMBER: V-3

ISSUE TITLE: OES Mission Tasking and RIMS

Category: Relationships and Interagency Coordination

Discussion: Staff at the FOC and ICP were not adequately trained in the use of RIMS and the Mission Tasking Process. RIMS was not updated as regularly or consistently as should have occurred due to staff lack of understanding and access to the system.

Recommendations: Work with State OES to train staff in mission tasking and the use of RIMS.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: V-4

ISSUE TITLE: Coordinated Reservoir Operations

Category: Relationships and Interagency Coordination

Discussion: The coordination of reservoir operations with emergency and flood control operations is critical to the Department's mission.

Recommendations: Continue to foster coordination amongst reservoir operators and DFM.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: V-5

ISSUE TITLE: Forecasting Operations Interface

Category: Relationships and Interagency Coordination

Discussion: The National Weather Service and DWR are partners in flood operations and emergency response. It is critical to have real-time coordination and interface with NWS Forecasting operations.

Recommendations: Utilize the National Weather Service Representative as an interface between FOC and Forecasting Operations.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: V-6

ISSUE TITLE: Legislative Interaction

Category: Relationships and Interagency Coordination

Discussion: To prevent the diversion of critical staff time during emergencies, standard procedures are needed to handle inquiries from legislative offices.

Recommendations: Develop standard procedures and provide adequate staff not immersed in the event operations to handle inquiries from legislative offices. Coordination with the Legislative Office is necessary.

Responsible Parties: Lead: DFM, LAO

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: V-7

ISSUE TITLE: Public Law 84-99 Coordination

Category: Relationships and Interagency Coordination

Discussion: The Department and Corps maintained effective coordination and teamwork throughout the emergency. However, more Public Law 84-99 emergency assistance coordination and protocols between DWR, OES Regions and Operational Areas, and Levee Maintaining Agencies are needed. The understanding of the assistance available and how it is approved and reimbursed must be increased. Flood Operations personnel from DWR and other emergency response agencies have conducted numerous pre-season flood control meetings to raise awareness of Public Law 84-99.

Recommendations: Establish better coordination and PL 84-99 request protocols between DWR, the Corps, OES Regions and Operational Areas, and Levee Maintaining Agencies. DWR, the Corps and OES should review existing written guidelines and procedures on Public Law 84-99 assistance. All current and new informational documentation should be reviewed for inclusion in the FOCIS System, and in any Flood Operations web site developed. The Public Law 84-99 presentation used at preseason meetings shall be updated to reflect recent experience.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: VI-1

ISSUE TITLE: DWR Responsibility for Assistance on Non-project Levees

Category: Policy and Administration

Discussion: A clear policy specifying DWR's level of assistance and flood fight authority on non-project levees is needed. A State plan and policies are lacking with respect to responding to non-federal levee failures, particularly in the Delta, and for allocating responsibilities. Such policies should also specify DWR's authority to repair flood damage (including dewatering of flooded areas) from non-project levees. Lack of such a plan and policies affects decision-making and can lead to inconsistencies in the Department's response to high water events.

Recommendations: Develop a clear policy and plan specifying DWR's authority and responsibility for assistance on non-project levees. Provide a funding mechanism for any specified response.

Responsible Parties: Lead: DFM

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: VI-2

ISSUE TITLE: Authorize Emergency Expenditures

Category: Policy and Administration

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. This can create 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 DFM to expend funds during major flood emergencies for the necessary contract and equipment required to respond quickly and institute emergency business practices.

Responsible Parties: **Lead:** DMS
Support: DFS, Exec

Goal Category: Long-term

Target Completion Date: 12/1/2009

ISSUE NUMBER: VI-3

ISSUE TITLE: DWR Business Processes

Category: Policy and Administration

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 line staff and managers in applicable Divisions in SEMS and emergency response roles and responsibilities.

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

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: VI-4

ISSUE TITLE: Compensation

Category: Policy and Administration

Discussion: Senior Engineers, Supervising Engineers and other applicable exempt 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. This had led to certain staff refusing to perform emergency work and can negatively affect morale of all staff involved.

There is not an adequate night shift differential in place to sufficiently compensate staff for rearranging their lives to accommodate this schedule. The amount of time needed to adjust to this schedule is not taken into account when scheduling or compensating staff for this shift.

Recommendations: Institute a method and written policy of employee participation requirements/exemptions and for fair compensation to applicable managers and supervisors who work extended emergency response hours (overtime/hardship pay). Use CDF and other comparable methodologies as model.

Procedures for reporting overtime and shift differentials during a flood emergency should be developed by the Personnel Office and reviewed by Labor Relations.

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

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: VI-5

ISSUE TITLE: Time Tracking

Category: Policy and Administration

Discussion: Time tracking of all the staff in the FOC and field was cumbersome and labor intensive. The procedures for filling out timesheets, approval and submission, and entry into SAP process did not allow the Finance Section to track and enter time in a timely manner.

Recommendations: Implement streamlined process for check in/check out and time tracking. Assign appropriate levels of F/A staff to facilitate daily entry of timesheets and cost object validation.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: VI-6

ISSUE TITLE: Food and Janitorial Services

Category: Policy and Administration

Discussion: There was no mechanism to provide food service to staff working in the Flood Center during extended shifts. During high water and flood events in which the Flood Center is activated 24 hours, food service is a very critical need for staff to ensure a healthy and safe working environment. There is little to no opportunity for staff to leave during a shift to bring food to the Center given the workload, staffing requirements and safety reasons (particularly at night). The level of activity in the Flood Center can be very intense, leading to staff working without thought or accessibility to nutrition unless it is consistently provided for them. Given the long shifts day after day it is not reasonable for staff to also assume the burden of preparing meals outside of their shifts for their extended work duties. The lack of reliable nutrition creates a situation that affects staff's health, safety and morale. This can ultimately lead to a reduced workforce as individuals become ill and/or burned out.

The regularly contracted janitorial, security and other JOC support services must be increased during a flood emergency. Increased garbage and recycled paper pickup, bathroom cleaning, and security services are necessary whenever the FOC is activated on 24-hour operations.

Recommendations: Take steps to ensure adequate food, security and janitorial services in the FOC and field.

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

Goal Category: Short-term

Target Completion Date: 12/1/2007

PART II: APRIL 2006 EVENT

Chapter One – Introduction

1.1 Purpose and Scope

The purpose of an AAR is to document response activities, identify successes and problems during emergency operations, analyze the effectiveness of the SEMS implementation and provide a plan of action to improve emergency operations. This two-part AAR covers DWR emergency response actions, application of the SEMS, evaluation of plans and procedures, identification of training and exercise needs and includes a set of recommendations for improving DWR's response to flood emergencies.

Specifically, Part II of this report is a review and analysis of DWR's emergency response to the April 2006 storms and associated high water event. The following activities were carried out to develop this part of this report:

- A *2005/06 High Water Event After Action Evaluation* form was developed and made available electronically through the DWR Aquanet website and by email. All DWR staff involved in the event were encouraged to participate in the process and to complete the survey.
- Part I of this report was distributed in draft form to the Incident Commanders and other management-level responders for their review and feedback. Comments regarding response to the April 2006 Event were solicited from the Incident Commanders and written responses were received from Brian Smith and Al Steele.
- On March 29, 2006 this AAR was made available on Aquanet in draft form for all participants to provide comments prior to finalization.
- Issues requiring further attention, improvement or corrections identified in the above steps have been noted in this document.

The April 2006 Event came on the heels of the Late December 2005 Event covered in Part I of this report. As detailed in Part I, a number of issues were identified related to DWR's late December/early January response. Given the proximity of the two events covered by this After Action Report, the Department was not able to address most of the response issues identified in Part I prior to the following event. As such, the majority of these issues were also encountered during the April 2006 event. Therefore, to avoid duplicity, Part II of this report focuses on newly raised issues and more completely addresses input from field Incident Command, flood fight operations, and emergency construction activities.

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 for the April 2006 Event.

1.2 History of Event

For much of January into February, mild conditions in California resulted in precipitation totals below normal. The pattern changed towards the end of February, however, as numerous storm centers developed and parked just off the California coast, eventually moving inland through the state. Although each storm started out as a cold system, several tapped into plumes of tropical moisture making them warmer and wetter. These back-to-back storms from late February through late March affected northern and central California and set the stage for significant flooding. Precipitation totals finished well above normal for March as soils became saturated and levees were stressed by weeks of high water. Flood control space in many reservoirs diminished and problems emerged with each new storm.

By March 29th, most of northern and central California had set or was close to setting records for the number of days with rain or snow. National Weather Service reports indicate that precipitation was approximately 200% or more of the March average for the Coastal Range and north coast, the San Francisco Bay area, the western Sierra Nevada and Shasta Lake-area mountains, and the Sacramento and San Joaquin Valleys. Breaks between storms often lasted less than 48 hours further exacerbating the conditions and kept water levels in the system from being able to adequately recover. As such, rivers and bypasses experienced high water for record periods of time.

In recognition of conditions already primed by a wet winter, above normal March precipitation and forecasts of continuing storms, a Flood Alert was declared by the Flood Operations Branch Chief to reactivate the State-Federal Flood Operations Center under the SEMS on April 3rd. As storms intensified and river levels elevated Director Lester Snow declared DWR to be mobilized on an emergency basis on April 4th citing the need 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. Such mobilization authorized DFM to use any Department personnel and make expenditures beyond budgeted funding. Once mobilized, the Department began to hold daily weather briefings, media briefings, and notifications to local districts and OES. Briefings were also made to the Governors Office and key legislators. Flood fight specialists, inspectors and the three existing ICTs were immediately placed on alert and made available to assist in local efforts.

A prolonged storm period from April 2nd to April 6th and rather high snow levels (up to 10,000 feet) brought renewed flooding to California. This system targeted central California with rain and snow on the coast and nearby mountains resulting in flooding and debris flows. The storm eventually moved southeast, bringing a slow progression of heavy rain and snow to the San Joaquin Valley and southern Sierra Nevada foothills leading to problems along the San Joaquin River system. A follow-up storm took place April 10th through the 12th with heaviest precipitation focused through the San Francisco Bay Area northward to Shasta Lake. The Russian and Napa Rivers saw renewed rises but river levels remained below their monitor stages. Runoff from streams along the west side and north end of the Sacramento Valley contributed to rises along the

Sacramento River above flood stage and boosted already high weir overflows into the Sutter and Yolo Bypass system. The final storm in the lengthy series landed April 14th through the 16th. This cold storm brought several periods of intense precipitation in localized areas from the Oregon border to the southern San Joaquin Valley. By April 16th, the northern Sierra already had experienced the second-wettest-March/April since 1921.

With the majority of the precipitation falling as rain instead of snow, runoff volumes over the entire basin and inflow to reservoirs increased at a higher rate than is typical with colder storms. Reservoirs on the San Joaquin River system are generally smaller Sacramento River system and their ability to release water quickly is limited due to restricted downstream channel capacity. Throughout the course of this event, several of the southern Sierra Nevada reservoir projects found themselves having to balance large reservoir inflows and diminishing flood storage space with releases downstream in attempts to prevent or at least minimize damage to the fragile San Joaquin River levee system that carries water to the Delta. Similar conditions were experienced at the south end of the San Joaquin Valley along the Sierra Nevada which drains into the Tulare lake bed. The prolonged April storm events also affected areas outside of the southern Sierra Nevada and San Joaquin Valley including the Salinas River in central California. Heavy precipitation also occurred along the transverse mountain ranges of southern California, with elevated flows experienced on the Santa Ynez River from Lake Cachuma releases. To the north, with much of the basin's topography at lower elevations and snow levels running quite high with this storm system, observed flows on the Cosumnes River were the highest ever for any April on record. Increased flows into the Sacramento and San Joaquin Delta region also resulted in higher stages at several gages. Combined with high tides, these elevated flows caused the Sacramento River at Rio Vista to go above its monitor stage of 8 feet during its peak high tide.

At the onset of the April storms, the State and Federal flood agencies, in coordination with local reservoir operators and flood officials, agreed on an action plan to address the foreseeable sustained high water event in the San Joaquin Valley. DWR and its partners began discussing this initiative as extensive local flooding was beginning to interfere with the ability to mobilize people and material. The intent was to take advanced measures to reduce flood damage and potential loss of life before the ability to wage an effective fight was further challenged. A long history of flood fights and responses to previous events enabled the partners to propose and undertake varied advanced measures to strengthen spots believed to pose a significant likelihood of problems.

Proactive advanced measures taken to protect some of the more vulnerable levees included laying visquine and rock for erosion control, and providing 24 hour levees patrols for potential weak areas. Such spots included the Chowchilla Bypass in the San Joaquin River system which exceeded its design capacity, increasing the strain on levees and elevating the risk of levee failures. The lower stretches of the San Joaquin River were of particular concern where the river crested at 29.3 feet at Vernalis on April 12th (Danger Stage" at Vernalis is 29.5 feet).

As part of these advanced measures, DWR assembled and activated its existing three ICTs and organized three more to provide coverage throughout the San Joaquin Valley. Flood fight materials were pre-positioned and California Conservation Corps (CCC) crews dispatched to assist the ICTs in the flood fight efforts. Flood fight specialists and ICTs were given assignments and locations developed through consultations with local partners and were deployed as needed throughout the event.

Several "flood fight" activities took place during the event involving numerous boils and bank erosion on some levees. DWR responded to over 30 incidents across Northern California although the majority of the incidents occurred in the San Joaquin River Basin. DWR was assisted by the U.S. Army Corps of Engineers and other state/local agencies at many of these incidents.

Overall, strong cooperation between the numerous local, state, and federal agencies resulted in coordinated reservoir releases that kept flooding from becoming potentially worse. Flooding was mainly confined to affected agricultural and rural properties, however some local areas adjacent to waterways did experience residential flooding and impassable roadways. However, through the efforts of advance flood-fight measures, careful monitoring of levees, as well as critical water management coordination among state, federal and local agencies, the system performed as designed and more serious flooding was averted.

With the snowmelt season following just on the heels of this heavy precipitation event and the snowpack well above normal, high flows were continued on the San Joaquin River system for quite some time. Releases from upstream reservoirs remained elevated to make room for the impending snowmelt, which typically peaks in late May or early June. As such, the Department remained mobilized well after the storms had passed.

1.3 Proclamations/Declarations

On February 24, 2006, the Governor of the State of California proclaimed a State of Emergency for California's levee system based on a finding that conditions of extreme peril to the safety of persons and property exist within the State's levee system. The findings were related to severe weather conditions during the past two flood seasons. The combination of heavy rainfall and existing poor levee conditions throughout the flood control system created conditions of imminent peril to those living near levees, to the environment, businesses, and critical life support systems, such as drinking water.

By proclamations dated April 10th, April 13th and May 2nd 2006, the Governor declared a state of emergency in 20 of 58 counties due to damages caused by the recent storms. The proclamations advised that severe weather conditions continued to bring unusually heavy rainfall causing flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the failure of local levees primarily to Northern and Central California counties. The damages to public and private property throughout the affected areas were in magnitudes that exceeded the local capabilities to handle.

On June 5, 2006 the President of the United States declared a major disaster under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act for certain areas in the State. This was based upon a finding that damage resulting from severe storms, flooding, landslides, and mudslides during the period of March 29 to April 16, 2006 was of sufficient severity and magnitude to warrant such a major disaster declaration. This declaration authorized FEMA to provide Public Assistance in designated areas, Hazard Mitigation throughout the State, and any other forms of assistance under the Stafford Act deemed appropriate by FEMA. Designated areas for Public Assistance included the counties of Alameda, Amador, Calaveras, El Dorado, Lake, Madera, Marin, Merced, Napa, Nevada, Placer, San Joaquin, San Mateo, Santa Cruz, Sonoma, Stanislaus, and Tuolumne. Individual assistance was not included in the FEMA designation.

Copies of the declarations listed below are included in Appendix A of this report:

- April 10, 2006 – Governor proclaims a State of Emergency in 7 counties
- April 13, 2006 – Governor proclaims a State of Emergency in 9 counties
- May 2, 2006 – Governor proclaims a State of Emergency in 4 counties
- June 5, 2006 – President declares a Major Disaster in 17 counties

1.4 Findings—Successes and Issues

Although there were numerous incidents and areas of localized flooding throughout the State, particularly in the San Joaquin Valley, the overall flood control system handled the high water as designed and there were no major failures. This is in large part due to proactive advanced measures taken by the Department and supporting agencies to strengthen and protect particularly vulnerable areas.

DWR took a lead role in responding to the event and accomplished many emergency response and flood fight objectives. This is despite the fact that this event occurred so soon after the Late December 2005 Event, which significantly stressed the flood control system and strained State resources. Given that the Department was still on alert from the previous event and continued high water, the activation and response was immediate and widespread.

As in the previous event, in many instances the Flood Operations Center received positive feedback from the public and emergency responders regarding its responsiveness and effectiveness. The proactive approach taken by the Department to strengthen and protect vulnerable areas resulted in a flood control system that withstood continued high water, often in exceedance of its design capacity.

The Incident Command Teams and field staff also received positive feedback concerning their organization, knowledge, leadership and ability to take control in volatile environments. This event provided an exceptional opportunity to build upon previous flood experience, refresh flood fighting techniques and train staff on emergency response.

Interagency cooperation was laudable during this event with a number of agencies, departments, and divisions working to meet the demands of the emergency. DWR efforts to participate in and hold various pre-season preparation and other inter-agency coordination meetings throughout the year are paying off. The proactive advanced measures taken at key locations throughout the flood control system proved successful at preventing catastrophic failures.

Additional positive feedback received from the debrief process is as follows:

- Praise regarding staff dedication, support and professionalism was received at many levels.
- The caliber of expertise sent into the field for technical support, levee patrols and incident command operations was commendable.
- Mobile communications for field operations in the San Joaquin Valley worked well. Communications were enhanced by the use of comprehensive phone lists used in the field and in the FOC.
- CDEC was operational and readily available to provide necessary data, forecasts and observations.
- A number of informational products were issued and updated on a routine basis including the Executive Incident Summary, Hydrological Summary, Event Factoids, 8-Stations / 10-day Feather QPF.
- Daily conference calls between the FOC, ICTs and other supporting agencies allowed for direct flow of information and decision making.
- The ICT leadership was motivated and provided positive support, direction and communication to field staff. Staff had a good understanding of individual roles and misunderstandings were quickly resolved.
- The ability of San Joaquin ICT to maintain its post at the Lower San Joaquin Levee District greatly assisted operations. The facility was accommodating and provided for sufficient meeting space, work areas and reliable communications.
- The experience, support, familiarity of the local system, and preparedness of the DWR San Joaquin Field District made for more effective operations in that region. Proactive measures had been taken by the District to stockpile supplies and assemble field materials (maps, forms, publications, etc.) that ensured a smooth transition to emergency field operations. The existing relationship with local agencies/levee districts made for a positive and direct exchange of information and support.
- Coordination and interaction with other agencies including CDF, State and local OES and the levee districts was very positive.

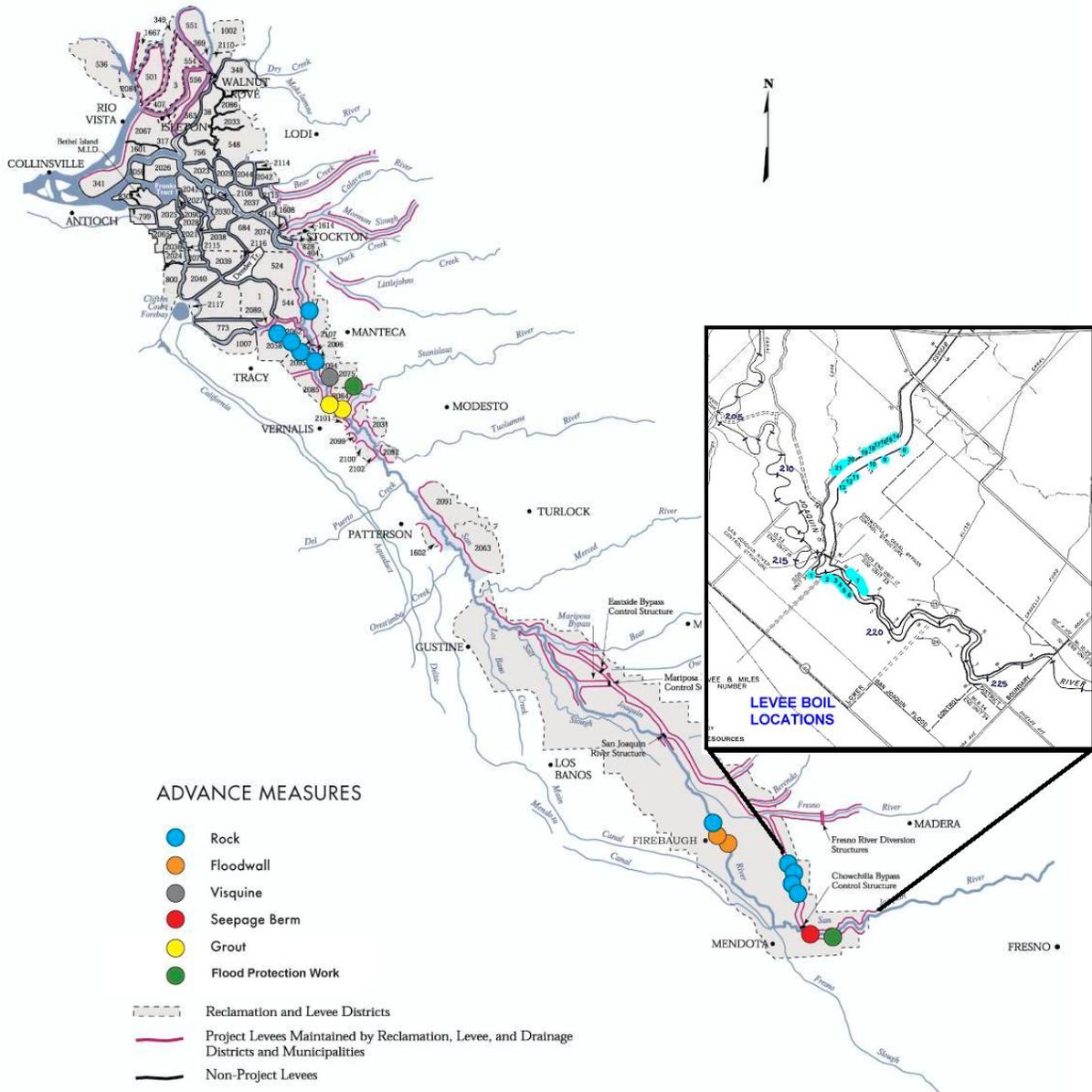
Although the overall response was successful and no major failures were experienced, a number of issues had the potential to affect the quality and nature of DWR's flood efforts. These issues have been summarized in Chapter Four's Debriefing Issues and Recommendations Matrix which divides the issues into six general categories:

- Command and Management
- Training and Preparedness
- Resource Management
- Communications and Information Management
- Relationships and Inter-agency Coordination
- Staffing and Support

Each issue and associated recommendations are discussed in detail in Chapter Five of this report.

Figure 1: April 2006 Storms: Emergency Advance Measures

DELTA AND SAN JOAQUIN VALLEY FLOOD CONTROL SYSTEM
Reclamation and Levee Districts



* As of 5/15/2006

Figure 2: Counties declared State of Emergency by Governor



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 Teams

One of the outcomes of the 2004 Jones Tract Flood Incident was the need for several major incident command teams. ICT 1, based largely on staff from the Jones Tract team, has been maintained in existence. ICT 2 and ICT 3 were both formed at the onset of the Late December 2005 Event.

Upon mobilization and as part of the advanced measures plan, DWR immediately assembled and activated its existing three ICTs and began organizing three more to provide coverage throughout the San Joaquin Valley. Ultimately in the course of this event there were 8 separate ICTs activated throughout the State. Flood fight materials were pre-positioned and CCC crews dispatched to assist the ICTs in the flood fight efforts. Flood fight specialists and ICTs were given assignments and locations developed through consultations with local partners. Each ICT was deployed as needed throughout the event as follows:

ICT 1: Activated immediately under IC Bill Burkhard, this team was deployed to provide assistance to locals in the North Delta area. In coordination with San Joaquin County OES, this team led crews involved in flood fights and advanced measures such as placing plastic on 1.6 miles to protect the Trahern Levee (RD 2064 and 2075). The team was demobilized as of April 21st, although trailers and certain equipment remained at the Stockton Fairgrounds longer to allow for quick reactivation if needed.

ICT 2: Activated under IC Brian Smith, this team was based out of the Lower San Joaquin Levee Districts Dos Palos headquarters. Among other duties, this team was responsible for taking advanced measures to protect the community of Firebaugh and efforts to stabilize the Chowchilla Bypass. Towards the end of the activation, the team left the Dos Palos post but continued to monitor activities from the DWR San Joaquin District offices in Fresno.

ICT 3: Initially activated under IC Mike Mosbacher, this team was eventually assembled with IC Juan Escobar to act as night shift for ICT 2 and the Lower San Joaquin Levee District.

ICT 4: Assembled under IC Glen Pearson of staff largely from DWR's Northern District, this ICT remained on standby until deactivated.

ICT 5: Assembled under IC Will Hicks from DOE staff as night shift for ICT 1.

ICT 6: Assembled under IC Mike Driller from DOE, this team remained on standby until deactivated.

ICT 7: Assembled under IC Jim Hartline from O&M Delta Field Division staff to shadow ICT 1 with the intent ultimately relieve ICT 2.

ICT 8: Assembled from San Luis Field Division staff under IC Carl Torgeson to support ICT 1. Upon slowing of activity in ICT 1 area, ICT 8 was directed to support and relieve ICT 2.

Several "flood fight" activities took place during the event involving numerous boils and bank erosion on some levees. DWR responded to over 30 incidents across Northern California although the majority of the incidents occurred in the San Joaquin River Basin. Details on the Department's involvement in specific incidents and advanced measures was documented by the FOC throughout the event in an *April 2006 Storms Executive Summary*.

2.2 Flood Operations Center

Given the recent flooding and residual high water from the December/January storms, the FOC was closely monitoring the impending situation and already working extended hours. Flood fight specialists were in the field monitoring the conditions of the flood control system with our local partners on an ongoing basis.

The FOC fully mobilized on April 4th under SEMS to provide necessary operations and support for the event. 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 throughout the event. Supporting operations in the field, the FOC prepared river forecasts, managed and disseminated flood-related information, and provided technical assistance and support to the field up to 24 hours per day. Flood fight specialists, inspectors and other technical specialists were deployed from the FOC to assist in the field as needed. Given particular concern regarding identified critical erosion sites (24 at the time of mobilization), Reclamation Districts with these sites were contacted and agreed to submit regular reports to DWR regarding site conditions.

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 regular conference calls with the responding State, Federal and local agencies, including the affected levee/reclamation districts. Along with partnering agencies such as the NWS, during the height of the event FOC Management conducted two daily briefings to address the media and public concerns.

An Executive Incident Summary was compiled and regularly updated by the Plans/Intel Section providing information on all flood-related incidents throughout the regions. Information for this summary was largely provided by the Operations Chief, the ICs in the field and calls received by FOC Flood Information Specialists. The summary allowed FOC Management, Executive and other emergency response agencies to be briefed on the status of incidents 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 those experiencing problems associated with the high water and threat to levees. The FOC made numerous verbal high water notifications and provided technical assistance throughout the event. DWR Flood Fight Specialists, Inspectors and the ICTs provided direct technical and flood flight assistance to local agencies in the field as necessary.

2.5 Operational Area

Given the widespread nature of this event throughout the State, the FOC was in contact with many Operational Areas.

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 affected Operational Areas. OES provided an agency representative to the FOC throughout the course of the event. Due to the large size and scope of the flood event, department SOC and REOC representatives were not available however the EPSM worked closely with both EOCs.

2.7 Other State Agencies

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

- CDF: Provided labor crews to install wave wash protection. The Department of Corrections was also involved in the provision and oversight of crews.
- CCC: Provided labor crews to assist in the flood fight at various locations.

2.8 Federal Agencies

The Corps, upon request by the State for assistance under Public Law 84-99, provided assistance for incidents throughout the State. The Corps was also instrumental in working closely with the Department to provide technical assistance at numerous locations of existing or potential issues. Corps technical experts worked closely with DWR staff to perform hydraulic modeling of potential flooding near the community of Firebaugh for planning and advanced measures purposes. The Corps and USBR also coordinated with DWR on releases from upstream reservoirs to help mitigate the high river stages downstream.

The National Weather Service and California-Nevada River Forecast Center coordinated with DWR to provide FOC support, regular briefings (media and weather/hydrological) and river stage, tide, wind and weather forecasts and warnings.

Chapter Three – Debrief Process

3.1 Introduction

In the aftermath of this high water event and the Late December 2005 event, the Department evaluated the flood experiences and reviewed the flood management system for areas needing improvement. The evaluation resulted in this After Action Report to be used for future planning and enhanced preparation. The process involved compiling information and collecting feedback from staff involved in the event. The intent of the evaluations was to focus attention on what went right during the emergency as well as identify areas that require improvement.

Comments received from both the FOC and the Field ICTs were compiled for this AAR. The results and recommended actions are included in Chapters Four and Chapter Five of this part of the report.

3.2 DWR Debriefs

Due to post-event recovery activities no large joint debriefing meetings were conducted by the emergency response field, operations center and management teams. The distribution of this document will serve as a catalyst to facilitate such joint discussions at a later date.

3.3 Questionnaire

A questionnaire (see Appendix C) was distributed to all DWR employees who participated in the high water event. These employees were from multiple divisions throughout the Department. The questionnaire asked “What went well?” and “What could have been improved?” in eight separate categories: 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.

Chapter Four – Issue and Recommendation Matrix

This matrix is to be reviewed in conjunction with the matrix contained within Part I of this report. Given its proximity to the Late December 2005 event, most of the issues raised in the April 2006 Event debriefing process have already been addressed in Part I of this AAR and are not repeated herein. Principal new findings and recommendations identified during the April 2006 Event are presented in a matrix made up of six (6) summary tables, one for each of the following issue categories:

- Command and Management – Overall FOC and ICP Operations
- Training and Preparedness – Organization, programs, planning, procedures, corrective actions, training and exercises, personnel qualifications and certification, etc.
- Staffing and Resource Management – Identifying staffing and resource requirements, issues, reimbursement, and the categorizing, managing, inventorying, acquiring, mobilizing, etc. of resources
- Communications and Information Management – Incident management communications, documentation and information management, interoperability standards, etc.
- Relationships and Interagency Coordination
- Policy and Administration

The tables are formatted to include for each category:

Issue Number: Includes the Category Number (I through VI) and a sequence number within each category ranked in order of urgency or importance.

Issue Title: Title of the issue.

Recommendations: Brief description of the action(s) recommended to correct deficiencies or make improvements to existing policies or procedures.

Responsible Parties: The organization(s) within the Department of Water Resources, or outside cooperating agencies, that have lead responsibility for implementing the recommendations.

Goal Category:

Critical: Issues that must be resolved prior to the next flood season.

Short-Term: Issues that can be resolved by December 1, 2007.

Long-Term: A suggested two-year period ending December 1, 2009.

Ongoing: Issues that require continuous maintenance or attention from one year to the next, beginning with the next flood season.

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – APRIL 2006 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
I. Command and Management							
I-1	Incident Command Post Space Management	Ensure that the Incident Commanders and other staff in the field have adequate private work areas. Consider use of a separate trailer for the Incident Commander to conduct business as necessary.				X	L – DFM
I-2	Finance and Administration Section Coverage	Increase the number of Finance and Administration staff assigned to ICTs in the field.		X			L – DFM
I-3	Operations Section and Coverage	Increase the number of staff, particularly Deputy Chiefs, assigned to the FOC and ICT Operations Sections.		X			L – DFM
I-4	Safety Officer Coverage	Increase the number of trained Safety Officers at both the FOC and ICTs in the field. Consider use of CDF Safety Officers in the field if necessary.		X			L – DFM
I-5	Redundant Field Visits	Improve scheduling and coordination with Incident Command when scheduling field visits to eliminate redundancy.				X	L - DFM

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – APRIL 2006 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
II. Training and Preparedness							
II-1	Standard Safety Kits	Coordinate with Safety Officers to prepare safety kits and have them readily available for dispatch to the field in advance of staff.	X				L – DFM S–EPSM
II-2	Levee Patrol Preparedness	Ensure that all staff on levee patrol duties have had adequate training and are sufficiently equipped for their duties.	X				L – DFM S–EPSM

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – APRIL 2006 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
III. Staffing and Resource Management							
III-1	Technical Specialist Availability	Increase the number of Department staff available to act as Technical Specialists in the field and the FOC during emergencies. Identify expertise ahead of time and ensure that staff understands their role should an emergency arise.		X			L – DFM
III-2	Identify Resource Availability	Coordinate with various Districts and Divisions and conduct a regular inventory of all resources and equipment available throughout the Department for use in emergencies.				X	L – DFM S – DMS
III-3	Condition of Resources	Ensure that resources (vehicles, rain gear, equipment, etc.) are readily available in good working order prior to and throughout an emergency. Coordinate with various Districts and Divisions to ensure preventative maintenance and record-keeping is being conducted for all resources available for use in emergencies.				X	L – DFM S – DMS

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – APRIL 2006 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
IV. Communications and Information Management							
IV-1	Information Technology Equipment for the ICTs and Field Staff	Provide dedicated and ample IT equipment for use in the field.	X				L – DFM
IV-2	Information Technology Access and Capabilities	Increase availability of robust computer systems, laptops, wireless internet connections, high speed internet connections and increased server/mailbox sizes for those involved in responding to an emergency.				X	L – DFM
IV-3	Mobile Communications and Reception	Create redundancy in communications systems including use of multiple providers of cellular phone service, external antennas, and use of the State radio system. Consider cellular phone reception and communication issues when determining the location of an ICP.				X	L – DFM
IV-4	Improved Contact Information	Prepare and more widely distribute contact information for all staff and team members involved in the event. Continually update such phone lists and consider programming key contacts into cellular phones used in the field.				X	L – DFM
IV-5	Communication with the FOC	Maintain staff at the FOC at all times during an emergency that is fully trained and experienced in flood issues.				X	L – DFM

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – APRIL 2006 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
V. Relationships and Interagency Coordination							
V-1	Public Law 84-99 Coordination	Establish better coordination and PL 84-99 request protocols between DWR, the Corps, OES Regions and Operational Areas, and Levee Maintaining Agencies. Identify DWR team members assigned to PL 84-99 duties and conduct training in coordination with the Corps ahead of time.				X	L – DFM
V-2	Improved Agency Contact Information	Ensure that all staff in the FOC and ICTs have continuously updated contact information for all agencies involved in the event.				X	L – DFM
V-3	Interagency Training	Coordinate with other local, State and Federal agencies in conducting training for emergency response. Ensure that all agencies are aware of each other's roles, responsibilities, resources and capabilities.				X	L – DFM S - EPSM

AFTER ACTION REPORT – DEBRIEFING ISSUES AND RECOMMENDATIONS MATRIX – APRIL 2006 EVENT

Issue Number	Issue Title	Recommended Action	Critical	Short-term	Long-term	Ongoing	Responsible
VI. Policy and Administration							
VI-1	DWR Emergency Advanced Measures	Develop a clear policy specifying DWR's plan, protocol and responsibility for conducting emergency advanced measures.	X				L – Exec S – DFM
VI-2	Team Member Expenses	To alleviate concerns regarding the burden of individuals expending personal resources upfront for lodging, per diem, etc. the Department shall ensure that all staff are aware of their rights and responsibilities regarding travel advances and reimbursement.				X	L – DFM S – DFS
VI-3	Team Member Time Sheets and Compensation	Provide the appropriate level of staff in Finance and Administration Sections and within the Department's Fiscal Services to efficiently and expeditiously manage time accounting and compensation for staff responding to an emergency.				X	L – DFM S – DFS
VI-4	Cal-Card Emergency Expenditures	Pre-authorize and assign Cal-cards to key team staff for use in emergencies. Authorize increased spending limits on Cal-card purchases for critical emergency-related purchases.	X				L – Exec S – DFS

Chapter Five – Issues and Recommendations

The Debriefing Issues and Recommendations Matrix in Chapter Four provides an organized and simplified summary of all topics developed through the debriefing process. Each issue is treated in depth in this Chapter and is referenced as follows:

Issue Number: A two-part number cross-referenced directly to the Issues and Recommendations Matrix in Chapter Four. It includes the Category Number (I through VI) and a sequence number within each category.

Issue Title: Title of the issue as shown in the Issues and Recommendations Matrix.

Category: Issues were ultimately sorted into the following six categories based in part on the National Incident Management Compliance Assurance Support Tool (NIMCAST), used to compare NIMS and SEMS:

- Command and Management
- Training and Preparedness
- Staffing and Resource Management
- Communications and Information Management
- Relationships and Inter-Agency Coordination
- Policy and Administration

Discussion: An expanded discussion of major comments received during the debriefing process and the resulting recommendations.

Recommendations: The action(s) recommended to correct deficiencies or make improvements to existing policies or procedures.

Responsible Parties: The organization(s) within the Department of Water Resources, or outside cooperating agencies, that have lead responsibility for implementing the recommendations.

Goal Category:

Critical: Issues that must be resolved prior to the next flood season. These are shortcomings in the Department's emergency response which most limit our ability to respond to flood emergencies in a timely, efficient and complete manner, or are areas where a correction is necessary to bring DWR into compliance with standard procedures or legal requirements.

Short-Term: Issues that can be resolved by December 1, 2007.

Long-Term: Issues that require a longer period to address. A two-year period ending December 1, 2009 is initially suggested.

Ongoing: Issues that require continuous maintenance or attention from one year to the next, beginning with the next flood season.

ISSUE NUMBER: I-1

ISSUE TITLE: Incident Command Post Space Management

Category: Command and Management

Discussion: To improve working conditions and efficiency in the field, Incident Command Posts should be selected such that there are adequate private work spaces for the Incident Commanders and other staff. Without confidential and quiet spaces in which to operate, staff functions can be significantly hindered.

Recommendations: Ensure that the Incident Commanders and other staff in the field have adequate private work areas when selecting facilities for the ICP. Consider use of a separate trailer for the Incident Commander to conduct business as necessary.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: I-2

ISSUE TITLE: Finance and Administration Section Coverage

Category: Command and Management

Discussion: An insufficient number of staff assigned to Finance and Administration led to difficulties managing time keeping and timely payment of travel expense claims, travel advances, overtime, etc. This was especially evident at the ICPs in the field, where in some cases there was no one specifically dedicated and assigned to these duties.

Recommendations: Increase the number of Finance and Administration staff assigned to ICTs in the field.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: I-3

ISSUE TITLE: Operations Section Coverage

Category: Command and Management

Discussion: Operations Sections were not staffed to appropriate levels with trained staff. The ICTs in the field were in need of Deputy Operations Chiefs to help oversee numerous projects and to relieve the workload of the Operations Chief. In the FOC, there were a number of people assigned to shadow and assist the Operations Chief, but the level of prior training was limited. At times, these “shadow” Operations staff were pulled off to other assignments and were unable to focus on Operations duties.

Recommendations: Increase the number of staff, particularly Deputy Chiefs, assigned to the FOC and ICT Operations Sections. Ensure that there is routine, comprehensive and directed training available for staff identified to assume these positions.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: I-4

ISSUE TITLE: Safety Officer Coverage

Category: Command and Management

Discussion: There was a lack of trained staff available to act as Safety Officers in the FOC and the field. The length of the event created burnout among the few Safety Officers available within the rotation. A lack of preparation and safety equipment was noted.

Recommendations: Identify staff that may serve as Safety Officers and ensure they have sufficient and regular training. Each ICT should have identified safety personnel familiar with the particular team. During an emergency, increase the number of trained Safety Officers at both the FOC and ICTs in the field. Ensure that all safety equipment necessary and requested by Safety Officers is available at the onset of an emergency. Monitor the quality and quantity of safety equipment and replenish as necessary. Consider use of CDF Safety Officers in the field if necessary.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: I-5

ISSUE TITLE: Redundant Field Visits

Category: Command and Management

Discussion: It was observed that in some cases field visits appeared unnecessary due to excessive levels of checks and balances amongst various teams. The regular appearance of different teams at the same site could be viewed as redundant and a waste of tax dollars.

Recommendations: Ensure that site visits and inspections are closely coordinated with the Incident Commander in charge of the area and schedule accordingly.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: II-1

ISSUE TITLE: Standard Safety Kits

Category: Training and Preparedness

Discussion: Safety equipment was not always readily available in the field throughout the event. Safety Officers were responsible for requesting such equipment after staff had already begun work. Assembling an assortment of safety materials during a flood event consumes valuable time and leaves the ICTs without important safety items needed in the early stages of the event.

Recommendations: Coordinate with Safety Officers and prepare standard safety kits to be readily available for deployment to the field in advance of crews. Monitor the quality and quantity of safety equipment and replenish as necessary.

Responsible Parties: Lead: DFM
Support: EPSM

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: II-2

ISSUE TITLE: Levee Patrol Preparedness

Category: Training and Preparedness

Discussion: Department staff did a commendable job patrolling levees in the San Joaquin Valley throughout the course of the high water event. Given the extended period of high water and elevated reservoir levels, these 24-hour patrols continued long after the storm events of March and April. Such patrols stretched the resources of the Departments' San Joaquin District and other Offices that made staff available for this effort. There was some confusion and lack of communication regarding directives and assignments coming from the FOC. Requirements of participation with respect to patrolling duties was unclear. It was commented that initial patrol shifts were too long (12 hours plus up to two hours travel) and fatigue/burnout was a result. Communication was sometimes inhibited by a lack of contact information for levee patrol staff. Patrol vehicles were not always properly equipped and vehicle break downs were a recurring problem.

Recommendations: Develop standard Departmental protocols and procedures for conducting levee patrols and conduct training accordingly. Coordinate with experienced patrollers and establish a standard for documenting shifts and associated reporting. Identify staff with the potential to be called into levee patrol duties and provide ongoing specific training, using past events as a reference. Ensure that all staff on levee patrol duties are adequately trained and sufficiently equipped for their duties. Such equipment should include important contact information, training-related information (levee failure hydrology, threats, etc.), GPS units, digital cameras, updated maps, inspector logs, gate keys, radios, operable cellular phones, safety gear, tools, measuring tape, portable strobe lights, etc. Continue to develop and maintain relationships and understandings with other agencies that can provide technical assistance (Corps, OES, CDF, CalTrans, locals, etc.).

Responsible Parties: Lead: DFM
Support: EPSM

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: III-1

ISSUE TITLE: Technical Specialist Availability

Category: Staffing and Resource Management

Discussion: Many comments were received regarding the lack of available technical specialists to provide geotechnical, surveying, flood fighting and engineering support. The limited number of trained and qualified personnel led to burnout and confusion as to the best use of these specialties.

Recommendations: Increase the number of Department staff available to act as Technical Specialists in the field and the FOC during emergencies. Identify expertise ahead of time and ensure that staff understands their role should an emergency arise. Dispatch of specialists should be carefully coordinated between the FOC and ICTs. Given the potential to have lengthy mobilizations during an emergency, ensuring adequate technical specialists are available and properly rotated is essential to an effective response. The Department should also partner with outside technical specialists where appropriate and take full advantage of specialists in other agencies through cooperative inter-agency agreements.

Responsible Parties: Lead: DFM

Goal Category: Short-term

Target Completion Date: 12/1/2007

ISSUE NUMBER: III-2

ISSUE TITLE: Identify Resource Availability

Category: Staffing and Resource Management

Discussion: Although Logistics and Finance Sections did a remarkable job of procuring certain necessities during the event, some essentials were not provided or available when needed. Field staff were often deployed without equipment essential to their particular functions. At times, staff had to resort to using personal items due to a lack of availability and/or functionality of Department equipment. Much of the necessary resources were available throughout the Department, however there was no pre-established system or updated inventory available to identify or track these resources.

Recommendations: Coordinate with various Districts/Divisions and conduct a regular inventory of all resources and equipment available throughout the Department for use in emergencies. Compile and continually update a Departmental resource list available to FOC and ICT Logistics Sections during an event. Prepare “field boxes” ahead of time with standard inspection and safety related equipment and provide them to individuals as they are deployed into the field. Logistics Sections shall track all resources deployed and expended throughout the course of the event and update the inventory list accordingly.

Responsible Parties: Lead: DFM
Support: DMS

Goal Category: Ongoing

ISSUE NUMBER: III-3

ISSUE TITLE: Condition of Resources

Category: Staffing and Resource Management

Discussion: Many of the resources employed by field staff were in poor condition and not dependable. There were many instances of vehicle break-downs and mobile communication equipment failures. Given the tenuous conditions under which field staff must sometimes operate, dependability of such equipment is essential to being able to function effectively and safely.

Recommendations: Ensure that resources (vehicles, rain gear, equipment, etc.) are readily available in good working order prior to and throughout an emergency. Coordinate with various Districts and Divisions to ensure preventative maintenance and record-keeping is being conducted for all resources available for use in emergencies.

Responsible Parties: Lead: DFM
Support: DMS

Goal Category: Ongoing

ISSUE NUMBER: IV-1

ISSUE TITLE: Information Technology Equipment for ICTs and Field Staff

Category: Communications and Information Management

Discussion: There was a lack of adequate IT equipment in the field for all staff to perform their duties most effectively. Several computers deployed to the field were outdated machines typically used by other staff for their regular job duties. This created situations in which necessary software or essential computing capabilities were not available. At times, the work done on staff computers was unavailable as the particular staff was relieved of duty. The availability of dedicated computers, laptops, printer/fax/copy machines, etc. to the ICPs and for field staff would improve the speed at which reports are produced and dissemination of information.

Recommendations: The Department should be prepared to immediately send updated computers, laptops, and other IT equipment into numerous field locations sufficient for a large amount of staff. It would be most efficient if such equipment was standardized and pre-loaded with all necessary software, forms, reporting templates, technical documents/reports, reference materials, contact information, etc.

Responsible Parties: Lead: DFM

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: IV-2

ISSUE TITLE: Information Technology Access and Capabilities

Category: Communications and Information Management

Discussion: Flood responses at all levels rely heavily on information and communication provided through the internet. The Department does not have a pre-established system in place to be able to provide instant internet access to staff and ICPs in the field. During this event, CDF came prepared with wireless connections but it took the Department several days to obtain access in some critical locations. The limitations on server/mailbox size and internet speeds inhibited the transfer of large files, maps, etc. from the field. Improved and faster internet connections would enhance communication with the FOC, other agencies and data gathering activities.

Recommendations: Increase the availability of robust computer systems, laptops, high speed internet connections and increased server/mailbox sizes for those involved in responding to an emergency. Reliable wireless internet capabilities should be incorporated into the equipment issued to field staff and ICPs.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: IV-3

ISSUE TITLE: Mobile Communications and Reception

Category: Communications and Information Management

Discussion: Communication by cellular phones was ineffective at times with limited or no reception in certain remote areas.

Recommendations: Create redundancy in communications systems including use of multiple providers of cellular phone service, external antennas, and use of the State radio system. Key personnel should be trained in the use of radios and issued them. Consider cellular phone reception and communication issues when determining the location of an ICP.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: IV-4

ISSUE TITLE: Improved Contact Information

Category: Communications and Information Management

Discussion: Complaints were received by a number of staff regarding the lack of contact information to be able to get a hold of other team members.

Recommendations: Prepare and more widely distribute contact information for all staff and team members involved in the event. Continually update such phone lists and consider programming key contacts into cellular phones used in the field.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: IV-5

ISSUE TITLE: Communication with the FOC

Category: Communications and Information Management

Discussion: On several occasions it was reported that when ICT staff called the FOC an answering service was reached, creating frustration and delays. At other times the response from the individual answering the phone was unsatisfactory due to a lack of water expertise or familiarity with terminology. At times there seemed to be a disconnect between the FOC and knowledge of assignments being carried out in the field.

Recommendations: Maintain staff at the FOC at all times that is fully trained and experienced in flood issues.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: V-1

ISSUE TITLE: Public Law 84-99 Coordination

Category: Relationships and Interagency Coordination

Discussion: There was a lack of staff in the FOC specifically trained and assigned to manage PL 84-99 requests. The presence of a Corps representative was a great service in this regard, however Department staff must also be trained to efficiently process these requests. The lack of trained individuals resulted in certain staff assigned to other SEMS duties having to redirect their efforts to PL 84-99 requests as needed. This resulted in other critical SEMS assignments being neglected and overburdening the few experienced staff available.

Recommendations: Establish better coordination and PL 84-99 request protocols between DWR, the Corps, OES Regions and Operational Areas, and Levee Maintaining Agencies. Identify DWR team members assigned to PL 84-99 duties and conduct training in coordination with the Corps ahead of time.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: V-2

ISSUE TITLE: Improved Agency Contact Information

Category: Relationships and Interagency Coordination

Discussion: The Directory of Flood Officials published annually by the Department provides a great resource for a variety of flood officials. On a more site-specific scale, there was a lack of routinely updated contact information for agency individuals working in a particular area or incident.

Recommendations: Ensure that all staff in the FOC and ICTs have continuously updated contact information for all agencies and representatives involved in an event.

Responsible Parties: Lead: DFM

Goal Category: Ongoing

ISSUE NUMBER: V-3

ISSUE TITLE: Interagency Training

Category: Relationships and Interagency Coordination

Discussion: As the Department embarks on its own training program for responding to emergencies, it should make every effort to coordinate with and include its partner agencies. Other agencies such as CDF and OES have much more experience in responding to emergencies and could provide valuable information and resources. It is important that all agencies responding to an emergency together have an understanding of each others roles, responsibilities, resources and capabilities.

Recommendations: Coordinate with other local, State and Federal agencies in conducting training for emergency response. Ensure that all agencies are aware of each others roles, responsibilities, resources and capabilities.

Responsible Parties: Lead: DFM
Support: EPSM

Goal Category: Ongoing

ISSUE NUMBER: VI-1

ISSUE TITLE: DWR Emergency Advanced Measures

Category: Policy and Administration

Discussion: The Department took numerous proactive, advanced measures throughout the April 2006 event. Instead of waiting for an incident to develop requiring the Department to engage in a flood fight, preventative measures on vulnerable areas were taken in coordination with local agencies and the US Army Corps of Engineers. Such measures included placement of rock, visquine, floodwalls, seepage berms and other flood protective activities. This mode of operation was somewhat different than in past emergency responses and at times led to uncertainty among staff as to what course of action was being taken and for what reason.

Recommendations: Develop a clear policy specifying DWR's plan, protocol and responsibility for conducting emergency advanced measures.

Responsible Parties: Lead: Exec
Support: DFM

Goal Category: Critical

Target Completion Date: 10/1/2007

ISSUE NUMBER: VI-2

ISSUE TITLE: Team Member Expenses

Category: Policy and Administration

Discussion: When staff is mobilized on short notice there is concern that the burden of paying for expenses such as lodging are carried by the individual until reimbursements can be made. In some cases this is a hardship and it was recommended that a credit card or other means be provided.

Recommendations: DWR employees are typically not “first responders” and are usually called out after local authorities have exhausted their resources. There is rarely the need for immediate, surprise deployments and should be adequate time to prepare travel advances if necessary. To alleviate concerns regarding the burden of individuals expending personal resources upfront for lodging, per diem, etc. the Department shall ensure that all staff are aware of their rights and responsibilities regarding travel advances and reimbursement. Processing travel advance and travel expense claims should be expedited to the extent possible.

Responsible Parties: Lead: DFM
Support: DFS

Goal Category: Ongoing

ISSUE NUMBER: VI-3

ISSUE TITLE: Team Member Time Sheets and Compensation

Category: Policy and Administration

Discussion: Long delays in rectifying time keeping issues created significant levels of frustration amongst staff. Timely payment for work performed is a basic expectation of all employees. As in previous events, there was also some confusion about the process for completing, submission, approval and entry of timesheets both in the field and at the FOC.

Recommendations: Provide the appropriate level of staff in Finance and Administration Sections and within the Department's Fiscal Services to efficiently and expeditiously manage time accounting and compensation for staff responding to an emergency.

Responsible Parties: Lead: DFM
Support: DFS

Goal Category: Ongoing

ISSUE NUMBER: VI-4

ISSUE TITLE: Cal-Card Emergency Expenditures

Category: Policy and Administration

Discussion: Emergency response staff in decision-making and administrative roles needs to be able to order and receive resources quickly and effectively. In many instances, the use of a Cal-card is the most efficient way to obtain such resources. There were times, particularly in the field, when the ability to obtain resources was made more difficult due to limited availability or restrictions on Cal-card usage.

Although Purchasing Services has routinely provided DFM with lists of current cardholders and offered to allocate additional cards to staff with emergency assignments, DFM has often elected not to take advantage of such offers. Failing to request additional cards or increased limits can result in a limited number of staff capable of procuring resources for a large number of incidents and individuals. During an emergency, this can stress the ability of the select few staff and individual limits on Cal-cards can be reached quickly.

Recommendations: DFM needs to continually update its emergency response roster and identify all staff that may have a need for authorizing and/or ordering resources during an emergency while in the FOC or the field. In assessing such staff, DFM should ensure that there is sufficient coverage/redundancy throughout the various teams and response areas to avoid dependence on a select few individuals for the needs of many. Once identified, prior to each flood season DFM shall work with Purchasing Services to pre-authorize and assign Cal-cards with elevated spending limits to key team staff for use in emergencies. DFM should communicate and ensure that all emergency responders are aware of the process by which to obtain resources throughout an event. Assign sufficient staff trained to order, process and track resources and expenditures for critical emergency-related purchases.

Responsible Parties: Lead: DFM
Support: DFS

Goal Category: Critical

Target Completion Date: 10/1/2007

APPENDICES

Appendix A

DWR Flood Alert/Mobilization/Demobilization, State/Federal Declarations

Memorandum

Date: December 27, 2005

To: All DWR Employees

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

Subject: **Flood Alert**

By this memorandum I declare a Flood Alert beginning on **December 27, 2005 at 0800 hours**, to deal with recent storms and forecasts of additional precipitation throughout California. The purpose is to increase flood information processing capability, to make the required notification calls in response to river forecasts, and to be in readiness to facilitate flood fight efforts by local, State, and U.S. Army Corps of Engineers forces on the Sacramento River Flood Control Project, the San Joaquin River Flood Control System, and elsewhere, should such efforts become necessary.

The State-Federal Flood Operations Center (FOC) will remain open for extended hours as needed, including weekends. We will reevaluate the alert status each afternoon. We will request support from additional personnel as needed.

If you have any questions, please call me at 574-2611 or you may contact the FOC staff at 574-2619.

Memorandum

Date: December 29, 2005

To: All DWR Employees

From: **Department of Water Resources**

Subject: Flood Mobilization

High tides in the Delta and continued wet weather forecast throughout the State 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 December 29, 2005.

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

Memorandum

Date: January 20, 2006

To: All DWR Employees

From: **Department of Water Resources**

Subject: Flood Demobilization

Recent high tides and wet weather throughout the State necessitated that I declare the Department of Water Resources (DWR) to be under an emergency and mobilized as of December 29, 2005.

With improved weather conditions, receding rivers and reservoirs, deactivation of all Incident Command Teams, and stabilization or completion of most Department-assisted flood fight incidents, the Flood Operations Center (FOC) was deactivated from 24 hour operations effective Monday, January 9, 2006 at 8:00 a.m.

With the deactivation of the FOC, the Department is no longer considered to be under an emergency and mobilized. Although some emergency work will continue for some time, in general, operations will slowly transition to non-emergency levee rehabilitation and maintenance support.

If you need additional information regarding DWR emergency flood response due to the recent storms, please contact Jay Punia, Chief of DWR's Flood Operations Branch, at (916) 574-2611.

/s/

Lester A. Snow
Director

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA



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 counties of Del Norte, Humboldt, Mendocino, Napa, Sacramento, Sonoma, and Trinity, as a result of a series of severe rainstorms in that area that commenced on December 19, 2005. The series of storms brought unusually heavy rains that caused flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the loss of human life. These counties have proclaimed local emergencies and have requested that I proclaim a state of emergency, because the magnitude of this disaster exceeds the capabilities of the services, personnel, equipment and facilities of these counties. 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 the counties of Del Norte, Humboldt, Mendocino, Napa, Sacramento, Sonoma, and Trinity.

Pursuant to this proclamation, I hereby direct all agencies of the state government to utilize and employ state personnel, equipment and facilities for the performance of any and all necessary activities to alleviate this emergency as directed by my Office of Emergency Services and in accordance with the State Emergency Plan.

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 of 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 second day of January 2006.

/s/ Arnold Schwarzenegger

Governor of California



OFFICE OF THE GOVERNOR

GAAS:006:06
FOR IMMEDIATE RELEASE
01/03/2006

Governor Schwarzenegger Declares State of Emergency in 16 Counties Affected by Storms

Governor Arnold Schwarzenegger today declared a state of emergency in the counties of Butte, El Dorado, Lake, Lassen, Marin, Nevada, Placer, Plumas, San Joaquin, San Mateo, Sierra, Siskiyou, Solano, Sutter, Yolo, and Yuba, as a result of a series of severe rainstorms in that area that commenced on December 19, 2005. Below is the full text of the proclamation.

A 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 counties of Butte, El Dorado, Lake, Lassen, Marin, Nevada, Placer, Plumas, San Joaquin, San Mateo, Sierra, Siskiyou, Solano, Sutter, Yolo, and Yuba, as a result of a series of severe rainstorms in that area that commenced on December 19, 2005. The series of storms brought unusually heavy rains that caused flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the loss of human life. These counties have proclaimed local emergencies and have requested that I proclaim a state of emergency, because the magnitude of this disaster exceeds the capabilities of the services, personnel, equipment and facilities of these counties. 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 the counties of Butte, El Dorado, Lake, Lassen, Marin, Nevada, Placer, Plumas, San Joaquin, San Mateo, Sierra, Siskiyou, Solano, Sutter, Yolo, and Yuba.

Pursuant to this proclamation, I hereby direct all agencies of the state government to utilize and employ state personnel, equipment and facilities for the performance of any and all necessary activities to alleviate this emergency as directed by my Office of Emergency Services and in accordance with the State Emergency Plan.

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 of this proclamation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 3rd day of January, 2006.

ARNOLD SCHWARZENEGGER
Governor of California

[Please click here to return to the previous page.](#)

Proclamation

Governor Schwarzenegger Signs State of Emergency for Eleven Counties

EXECUTIVE DEPARTMENT

STATE OF CALIFORNIA



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 counties of Alameda, Alpine, Amador, Colusa, Contra Costa, Fresno, Kings, San Luis Obispo, Santa Cruz, Shasta, and Tulare, as a result of a series of severe rainstorms that commenced on December 19, 2005. The series of storms brought unusually heavy rains that caused flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the loss of human life. The demands of the storm exceed the capabilities, services, personnel, equipment, and facilities of these counties. 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 the counties of Alameda, Alpine, Amador, Colusa, Contra Costa, Fresno, Kings, San Luis Obispo, Santa Cruz, Shasta, and Tulare.

Pursuant to this proclamation, I hereby direct all agencies of the state government to utilize and employ state personnel, equipment, and facilities for the performance of any and all necessary activities to alleviate this emergency as directed by my Office of Emergency Services and in accordance with the State Emergency Plan. I direct the implementation of standing orders numbers one and three to ensure adequate state staffing to expedite disaster response and recovery efforts.

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 of 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 twelfth day of January 2006.

/s/ Arnold Schwarzenegger

Governor of California

Proclamations are posted as soon as possible but may not always be available on the day they are issued.

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Federal Register Notice

Billing Code 9110-10-P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[FEMA-1628-DR]

California; Major Disaster and Related Determinations

AGENCY: Federal Emergency Management Agency, 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-1628-DR), dated February 3, 2006, and related determinations.

EFFECTIVE DATE: February 3, 2006.

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 February 3, 2006, 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 severe storms, flooding, mudslides, and landslides from December 17, 2005, through and including January 3, 2006, 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). Therefore, I 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 Individual Assistance and Public Assistance in the designated areas and Hazard Mitigation throughout the State. Consistent with the requirement that Federal assistance be supplemental, any Federal funds provided under the Stafford Act for Public Assistance, Hazard Mitigation, and the Other Needs Assistance under Section 408 of the Stafford Act will 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 time period prescribed for the implementation of section 310(a), Priority to Certain Applications for Public Facility and Public Housing Assistance, 42 U.S.C. 5153, shall be for a period not to exceed six months after the date of this declaration.

The Federal Emergency Management Agency (FEMA) hereby gives notice that pursuant to the authority vested in the Acting Director, under Executive Order 12148, as amended, Thomas P. Davies, of FEMA is appointed to act as the Federal Coordinating Officer for this declared disaster.

I do hereby determine the following areas of the State of California to have been affected adversely by this declared major disaster:

The counties of Contra Costa, Del Norte, Lake, Marin, Mendocino, Napa, Sacramento, Siskiyou, Solano, and Sonoma for Individual Assistance.

The counties of Alpine, Amador, Butte, Colusa, Contra Costa, Del Norte, El Dorado, Humboldt, Lake, Lassen, Marin, Mendocino, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Cruz, Sierra, Siskiyou, Solano, Sonoma, Sutter, Trinity, Yolo, and Yuba for Public Assistance.

All counties within the State of California are 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, Individuals and Households Housing; 97.049, Individuals and Households Disaster Housing Operations; 97.050 Individuals and Households Program-Other Needs, 97.036, Public Assistance Grants; 97.039, Hazard Mitigation Grant Program.)

/s/

R. David Paulison,
Acting Director,
Federal Emergency Management Agency,
Department of Homeland Security.

Federal Register Notice

Billing Code 9110-10-P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[FEMA-1628-DR]

California; Amendment No. 1 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, Department of Homeland Security.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of California (FEMA-1628-DR), dated February 3, 2006, and related determinations.

EFFECTIVE DATE: February 23, 2006.

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

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of California is hereby amended to include the following areas among those areas determined to have been adversely affected by the catastrophe declared a major disaster by the President in his declaration of February 3, 2006:

El Dorado and Nevada Counties for Individual Assistance (already designated for Public Assistance.)

Shasta County for Individual Assistance.

Alameda County for Public Assistance.

(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, Individuals and Households Housing; 97.049, Individuals and Households Disaster Housing Operations; 97.050 Individuals and Households Program-Other Needs, 97.036, Public Assistance Grants; 97.039, Hazard Mitigation Grant Program.)

/s/

R. David Paulison,
Acting Director,
Federal Emergency Management Agency,
Department of Homeland Security.



For Immediate Release
Office of the Press Secretary
February 3, 2006

Statement on Federal Assistance for California

The President today declared a major disaster exists in the State of California and ordered Federal aid to supplement State and local recovery efforts in the area struck by severe storms, flooding, mudslides, and landslides from December 17, 2005, through and including January 3, 2006.

The President's action makes Federal funding available to affected individuals in the counties of Contra Costa, Del Norte, Lake, Marin, Mendocino, Napa, Sacramento, Siskiyou, Solano, and Sonoma.

Assistance can include grants for temporary housing and home repairs, low-cost loans to cover uninsured property losses, and other programs to help individuals and business owners recover from the effects of the disaster.

Federal funding also is available to State and eligible local governments and certain private nonprofit organizations on a cost-sharing basis for emergency work and the repair or replacement of facilities damaged by the severe storms, flooding, mudslides, and landslides in the counties of Alpine, Amador, Butte, Colusa, Contra Costa, Del Norte, El Dorado, Humboldt, Lake, Lassen, Marin, Mendocino, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Cruz, Sierra, Siskiyou, Solano, Sonoma, Sutter, Trinity, Yolo, and Yuba.

Federal funding is also available on a cost-sharing basis for hazard mitigation measures statewide.

R. David Paulison, Acting Director, Federal Emergency Management Agency (FEMA), Department of Homeland Security, named Thomas P. Davies as the Federal Coordinating Officer for Federal recovery operations in the affected area.

The Agency said additional designations may be made at a later date if requested by the State and warranted by the results of further damage assessments.

The Agency said that residents and business owners who sustained losses in the designated counties can begin applying for assistance tomorrow by registering online at <http://www.fema.gov> or by calling 1-800-621-FEMA(3362) or 1-800-462-7585 (TTY) for the hearing and speech impaired. The toll-free telephone numbers will operate from 8 a.m. to 6 p.m. (local time) seven days a week until further notice.

FOR FURTHER INFORMATION CONTACT: FEMA (202) 646-4600.

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Return to this article at:

<http://www.whitehouse.gov/news/releases/2006/02/20060203-14.html>



State of California

The Resources Agency

M e m o r a n d u m

Date: April 3, 2006

To: All DWR Employees

**Jay Punia, Chief
Flood Operations Branch
Division of Flood Management**

From: Department of Water Resources

Subject: Flood Alert

By this memorandum I declare a Flood Alert beginning on **April 3, 2006** at **1400 hours**, to deal with recent and forecasted warmer storms prompting higher snow levels and increased releases from many reservoirs, including high releases from Nimbus Dam on the American River. The purpose of this Alert is to increase flood information processing capability, to make the required notification calls in response to river forecasts, and to be in readiness to facilitate flood fight efforts by local, State, and U.S. Army Corps of Engineers forces on the Sacramento River Flood Control Project, the San Joaquin River Flood Control System, and elsewhere, should such efforts become necessary.

The State-Federal Flood Operations Center (FOC) will remain open for extended hours as needed, including weekends. We will reevaluate the alert status each afternoon and request support from additional personnel as needed.

If you have any questions, please call me at (916) 574-2611 or you may contact the FOC staff at (916) 574-2619.

M e m o r a n d u m

Date: April 4, 2006

To: All DWR Employees

From: Department of Water Resources

Subject: Flood Mobilization

Recent and forecasted warmer storms prompting higher snow levels and increased releases from many reservoirs, including Nimbus Dam, 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 April 4, 2006.

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.

/s/

Lester A. Snow
Director

August 21, 2006

Rodney Mayer, Chief
Division of Flood Management

Leslie Harder, Deputy Director
Public Safety and Business Operations

Flood Demobilization

Recent warm storms prompting high snow levels and increased releases from many reservoirs necessitated that Director Lester Snow declare the Department of Water Resources (DWR) to be under an emergency and mobilized as of April 4, 2006.

With improved weather conditions, receding and/or stabilized river stages and reservoirs, deactivation of all Incident Command Teams, and stabilization or completion of most Department-assisted advanced measures and flood fight incidents, the Flood Operations Center (FOC) was deactivated from 24 hour operations effective Wednesday, April 26, 2006 at 8:00 a.m.

With the deactivation of the FOC and the Incident Command Teams, as of June 16, 2006 the Department is no longer considered to be mobilized under an emergency. Although close monitoring of the system and some emergency work may continue for some time, in general, operations will slowly transition to non-emergency levee rehabilitation and maintenance support.

cc: Jay Punia
Kevin Elcock

EXECUTIVE DEPARTMENT

STATE OF CALIFORNIA



PROCLAMATION
by the
Governor of the State of California

WHEREAS a series of severe rainstorms that commenced on December 19, 2005, brought unusual heavy rains that caused flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the loss of human life to Northern and Central California counties; and

WHEREAS I, ARNOLD SCHWARZENEGGER, Governor of the State of California, found that conditions of extreme peril to the safety of persons and property existed in 34 counties as a result of the series of severe rainstorms that commenced on December 19, 2005, and issued State of Emergency Proclamations on January 2, 3 and 12, 2006; and

WHEREAS severe weather conditions during the past two flood seasons have brought unusually heavy rains, which combined with the already poor conditions of many levees, creates conditions of imminent peril to those living near the levees, to the environment, businesses, and the critical life support systems, such as drinking water; and

WHEREAS on February 24, 2006, I, ARNOLD SCHWARZENEGGER, Governor of the State of California, proclaimed a State of Emergency for California's levee system based on a finding that conditions of extreme peril to the safety of persons and property exist within the State's levee system; and

WHEREAS severe weather conditions have brought unusually heavy rainfall commencing on March 29, 2006, and continuing that caused flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the failure of local levees primarily to Northern and Central California counties.

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 Counties of Amador, Calaveras, Fresno, Merced, San Joaquin, San Mateo and Stanislaus resulting from severe weather conditions, heavy rainfall, and floodwaters commencing on March 29, 2006, and continuing. These storms have caused the failure of local levees, evacuations of residents, and significant damage to public and private property throughout the affected area. Because the magnitude of this disaster exceeds the capabilities of the services, personnel, equipment and

facilities of these counties, I find these counties 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 in these counties.

Pursuant to this proclamation, I hereby direct all agencies of the state government to utilize and employ state personnel, equipment and facilities for the performance of any and all necessary activities to alleviate this emergency as directed by my Office of Emergency Services and in accordance with the State Emergency Plan.

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 of 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 tenth day of April 2006. /s/ Arnold Schwarzenegger Governor of California

EXECUTIVE DEPARTMENT

STATE OF CALIFORNIA



PROCLAMATION
by the
Governor of the State of California

WHEREAS a series of severe rainstorms that commenced on December 19, 2005, brought unusual heavy rains that caused flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the loss of human life to Northern and Central California counties; and

WHEREAS I, ARNOLD SCHWARZENEGGER, Governor of the State of California, found that conditions of extreme peril to the safety of persons and property existed in 34 counties as a result of the series of severe rainstorms that commenced on December 19, 2005, and issued State of Emergency Proclamations on January 2, 3 and 12, 2006; and

WHEREAS severe weather conditions during the past two flood seasons have brought unusually heavy rains, which combined with the already poor conditions of many levees, creates conditions of imminent peril to those living near the levees, to the environment, businesses, and the critical life support systems, such as drinking water; and

WHEREAS on February 24, 2006, I proclaimed a State of Emergency for California's levee system based on a finding that conditions of extreme peril to the safety of persons and property exist within the State's levee system; and

WHEREAS severe weather conditions have brought unusually heavy rainfall commencing on March 29, 2006, and continuing that caused flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the failure of local levees primarily to Northern and Central California counties; and

WHEREAS on April 10, 2006, I proclaimed a State of Emergency in seven counties because of these severe weather conditions.

NOW, THEREFORE, I, ARNOLD SCHWARZENEGGER, Governor of the State of California, find that conditions of extreme peril to the safety of persons and property exist within Alameda, El Dorado, Kings, Marin, Placer, Santa Cruz, Sonoma, Tulare, and Tuolumne resulting from severe weather conditions, heavy rainfall, and floodwaters commencing on March 29, 2006, and continuing. These storms have caused the failure of local levees, evacuations of residents, and significant damage to public and private property throughout the affected area. Because the magnitude of this disaster exceeds the capabilities of the services, personnel, equipment and facilities of these counties, I find these counties 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 in these counties.

Pursuant to this proclamation, I hereby direct all agencies of the state government to utilize and employ state personnel, equipment and facilities for the performance of any and all necessary activities to alleviate this emergency as directed by my Office of Emergency Services and in accordance with the State Emergency Plan.

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 of 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 thirteenth day of April 2006. /s/ Arnold Schwarzenegger Governor of California

EXECUTIVE DEPARTMENT

STATE OF CALIFORNIA



PROCLAMATION
by the
Governor of the State of California

WHEREAS, a series of severe rainstorms that commenced on December 19, 2005, brought unusual heavy rains that caused flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the loss of human life to Northern and Central California counties; and

WHEREAS, I, ARNOLD SCHWARZENEGGER, Governor of the State of California, found that conditions of extreme peril to the safety of persons and property existed in 34 counties as a result of the series of severe rainstorms that commenced on December 19, 2005, and issued State of Emergency Proclamations on January 2, 3 and 12, 2006; and

WHEREAS, severe weather conditions during the past two flood seasons have brought unusually heavy rains, which combined with the already poor conditions of many levees, creates conditions of imminent peril to those living near the levees, to the environment, businesses, and the critical life support systems, such as drinking water; and

WHEREAS, on February 24, 2006, I, ARNOLD SCHWARZENEGGER, Governor of the State of California, proclaimed a State of Emergency for California's levee system based on a finding that conditions of extreme peril to the safety of persons and property exist within the State's levee system; and

WHEREAS, on April 10 and 13, 2006, I proclaimed a state of emergency in a total of sixteen counties because of severe weather conditions commencing on March 29, 2006 and continuing, that brought unusually heavy rainfall flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the failure of local levees.

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 counties of Lake, Madera, Napa, and Nevada resulting from severe weather conditions, heavy rainfall, and floodwaters commencing on March 29, 2006, and continuing. These storms have caused the failure of local levees, evacuations of residents, and significant damage to public and private property throughout the affected area. Because the magnitude of this disaster exceeds the capabilities of the services, personnel, equipment and facilities of these counties, I find these counties 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 in these counties.

I HEREBY DIRECT that to ensure adequate resources and personnel are available to perform emergency response and recovery in all twenty counties where I have proclaimed a State of Emergency:

- a. All agencies of the state government shall utilize and employ state personnel, equipment and facilities for the performance of any and all necessary activities to alleviate this emergency as directed by my Office of Emergency Services and in accordance with the State Emergency Plan, and
- b. Implementation of standing order number one to ensure adequate state staffing of response and recovery efforts.

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 of 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 second day of May 2006. /s/ Arnold Schwarzenegger Governor of California

Gov. Schwarzenegger Proclaims State of Emergency for Roadway Damages in 40 Counties, Requests Federal Funds for Repairs

EXECUTIVE DEPARTMENT

STATE OF CALIFORNIA



PROCLAMATION
by the
Governor of the State of California

WHEREAS conditions of extreme peril to the safety of persons and properties exist within the counties of Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mendocino, Merced, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Trinity, Tulare, Tuolumne, Yolo, and Yuba as a result of heavy rainfall and severe road damage occurring between December 19, 2005 and April 16, 2006; and

WHEREAS the storms brought unusually heavy precipitation and caused washouts, landslides, slip outs, pavement damage, and sinkholes in California state highways in the above-noted counties; and

WHEREAS emergency conditions exist with respect to storm damages along California roadways as a result of washouts, landslides, slip outs, pavement damage, and sinkholes within these 40 counties; and

WHEREAS the level of damage to the highways is beyond the control of the services, personnel, equipment and facilities of Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mendocino, Merced, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

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 Counties of Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Fresno, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mendocino, Merced, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Trinity, Tulare, Tuolumne, Yolo, and Yuba with as a result of heavy rainfall and severe road damage occurring between December 19, 2005 and April 16, 2006. These storms have caused washouts, landslides, slip outs, pavement damage, and sinkholes within these 40 counties. Because the magnitude of such exceeds the capabilities of the services, personnel, equipment, and facilities of these counties, I find these counties 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 in these counties with regard to roadway damages.

Pursuant to this proclamation, I hereby direct the California Department of Transportation to formally request immediate assistance through the Federal Highway Administration's Emergency Relief Program, Title 23, United States Code section 125, in order to obtain federal assistance for highway repairs or reconstruction in Alameda, Alpine, Amador, Butte, Calaveras, Colusa,

Contra Costa, Del Norte, El Dorado, Fresno, Humboldt, Kings, Lake, Lassen, Madera, Marin, Mendocino, Merced, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Trinity, Tulare, Tuolumne, Yolo, and Yuba Counties.

I FURTHER DIRECT that as soon as hereafter possible, this proclamation be filed in the Office of 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 tenth day of May 2006. /s/ Arnold Schwarzenegger Governor of California

Designated Counties for California Severe Storms, Flooding, Landslides, and Mudslides

Disaster Summary For FEMA-1646-DR, California Declaration Date: June 5, 2006

Incident Type: Severe Storms and Flooding **Incident Period:** March 29 to April 16,

2006 **Individual Assistance**

(Assistance to individuals and households): None.

Public Assistance

(Assistance to State and local governments and certain private nonprofit organizations for emergency work and the repair or replacement of disaster-damaged facilities):

Alameda, Amador, Calaveras, El Dorado, Lake, Madera, Marin, Merced, Napa, Nevada, Placer, San Joaquin, San Mateo, Santa Cruz, Sonoma, Stanislaus, and Tuolumne Counties.

Hazard Mitigation Grant Program

(Assistance to State and local governments and certain private nonprofit organizations for actions taken to prevent or reduce long term risk to life and property from natural hazards):

All counties in the State of California are eligible to apply for assistance under the Hazard Mitigation Grant Program.

Other:

Additional designations may be made at a later date after further evaluation.

Federal Register Notice

Billing Code 9110-10-P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[FEMA-1646-DR]

California; Major Disaster and Related Determinations

AGENCY: Federal Emergency Management Agency, 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-1646-

DR), dated June 5, 2006, and related determinations.

EFFECTIVE DATE: June 5, 2006.

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 5, 2006, 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 severe storms, flooding, landslides, and mudslides during the period of March 29 to April 16, 2006, 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).

Therefore, I 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 in the designated areas, Hazard Mitigation throughout the State, 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 Director, under Executive Order 12148, as amended, Michael H. Smith, of FEMA is appointed to act as the Federal Coordinating

Officer for this declared disaster. I do hereby determine the following areas of the State of California to have been affected adversely by this declared major disaster: Alameda, Amador, Calaveras, El Dorado, Lake, Madera, Marin, Merced, Napa, Nevada, Placer, San Joaquin, San Mateo, Santa Cruz, Sonoma, Stanislaus, and Tuolumne Counties for Public Assistance.

All counties within the State of California are 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, Individuals and Households Housing; 97.049, Individuals and Households Disaster Housing Operations; 97.050 Individuals and Households Program-Other Needs, 97.036, Public Assistance Grants; 97.039, Hazard Mitigation Grant Program.)

/s/

R. David Paulison,
Under Secretary for Federal Emergency Management and Director of FEMA.

President Declares Major Disaster for California

Release Date: June 6, 2006

Release Number: HQ-06-090

WASHINGTON, D.C. -- The head of the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) announced that federal disaster aid has been made available for California to supplement state and local recovery efforts in the area struck by severe storms, flooding, landslides, and mudslides during the period of March 29 to April 16, 2006.

Acting FEMA Director R. David Paulison said federal funding is available to state and eligible local governments and certain private nonprofit organizations on a cost-sharing basis for emergency work and the repair or replacement of facilities damaged by the severe storms, flooding, landslides, and mudslides. Counties covered by the declaration include Alameda, Amador, Calaveras, El Dorado, Lake, Madera, Marin, Merced, Napa, Nevada, Placer, San Joaquin, San Mateo, Santa Cruz, Sonoma, Stanislaus, and Tuolumne.

Federal funding is also available on a cost-sharing basis for hazard mitigation measures statewide.

Paulison named Michael H. Smith as the Federal Coordinating Officer for federal recovery operations in the affected area. Smith said additional designations may be made at a later date if requested by the state and warranted by the results of further damage assessments.

FEMA manages federal response and recovery efforts following any national incident. FEMA also initiates mitigation activities, works with state and local emergency managers, and manages the National Flood Insurance Program. FEMA became part of the U.S. Department of Homeland Security on March 1, 2003.

Appendix B

National Incident Management System (NIMS) Compliance Directives

Memorandum

Date: May 23, 2006

To: All Managers and Supervisors

 Sonny Fong
 Emergency Preparedness and Security Manager
From: Department of Water Resources

Subject: National Incident Management System (NIMS) compliance

On February 28, 2003, President Bush issued Homeland Security Presidential Directive-5 which directed the Secretary of Homeland Security to develop and Administer a National Incident Management System (NIMS).

On March 1, 2004 the final version of NIMS was released. All federal departments, agencies, state, local, and tribal governments must fully comply with NIMS by September 30, 2006 in order to be eligible for federal assistance in FY 2007. To guarantee California's compliance, the Governor's Office of Emergency Services (OES) has been busy working on plans to integrate NIMS into the State's Standardized Emergency Management System (SEMS) so that future training will satisfy this federal requirement.

The Department has been working closely with OES since March 1, 2004 to integrate NIMS. As part of the effort, I sent an electronic memo, dated 9/13/2005, to all managers, supervisors and administrative officers requesting their assistance to have specified staff take the on-line NIMS Introductory Course (IS700). Many staff have taken the on-line course, however there are staff that have yet to do so or who may be interested in taking the course to further their training.

The NIMS Introductory Course is still being offered for free online and I need your assistance in encouraging your staff, especially those that may or have responded to emergencies or are members of a department incident command team, to take this course.

The URL address below will provide access to the NIMS Introductory course.

<http://training.fema.gov/emiweb/IS/is700.asp>

Once the website is accessed, scroll to the bottom of the page and to the **Please Note:** section and choose the link [Option 1: Interactive Web-based Course – EMI learning site](#). Take the course, complete the final exam, and submit the final exam.

All Managers and Supervisors
May 23, 2006
Page 2

Upon successful completion of the IS700 NIMS on-line course and passing of the multiple choice test, a Certificate of Completion will be issued. Please have staff forward a copy of their certificate to the Training Office at the following address:

Alan Ladwig
Department of Water Resources
1426 Ninth Street, Room 305
Sacramento, California 95814

Or email to:

alwig@water.ca.gov

The copies of the completion certificates will be filed and employee training histories will be updated.

It is very important for staff to complete the NIMS IS700 course so the department can be in compliance with State and Federal Law.

If you have any questions or concerns regarding this matter, please contact Alan Ladwig or myself.

Attachments

cc: Administrative Officers

**EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA**



**EXECUTIVE ORDER S-2-05
by the
Governor of the State of California**

WHEREAS, the President in Homeland Security Directive-5, directed the Secretary of the Department of Homeland Security to develop and administer a National Incident Management System, which would provide a consistent nationwide approach for federal, state, local, and tribal governments to work together more effectively and efficiently to prevent, prepare for, respond to, and recover from disasters, regardless of cause, size, or complexity; and

WHEREAS; California local and state government pioneered the development of standardized incident management systems to respond to a variety of catastrophic disasters, including fires, earthquakes, floods, and landslide; and

WHEREAS, in the early 1970s, the California fire service, in partnership with the federal government, developed the seminal emergency incident command system that has become the model for incident management nationwide; and

WHEREAS; in 1993, California was the first state to adopt a statewide Standardized Emergency Management System for use by every emergency response organization, and implemented a system involving local and state agencies to ensure the continual improvement of the Standardized Emergency Management System; and

WHEREAS, California local and state emergency management professionals have contributed their expertise to the development of the new National Incident Management System; and

WHEREAS, it is essential for responding to disasters and securing the homeland that federal, state, local, and tribal organizations utilize standardized terminology, standardized organizational structures, interoperable communications, consolidated action plans, unified command structures, uniform personnel qualification standards, uniform standards for planning, training, and exercising, comprehensive resource management, and designated incident facilities during emergencies or disasters; and

WHEREAS, the California Standardized Emergency Management System substantially meets the objectives of the National Incident Management System, and

WHEREAS, the National Commission on Terrorist Attacks (9-11 Commission) recommended adoption of a standardized Incident Command System nationwide.

NOW, THEREFORE, I, Arnold Schwarzenegger, Governor of the State of California, by virtue of the power vested in me by the Constitution and Statutes of the State of California, do hereby direct the following:

1. My Office of Emergency Services and Office of Homeland Security, in cooperation with Standardized Emergency Management System Advisory Board, will develop a program to integrate the National Incident Management System, to the extent appropriate, into the state's emergency management system.
2. The Office of Emergency Services will identify any statutes or regulations that need to be eliminated or amended to facilitate implementation of the National Incident Management System.
3. The Office of Emergency Services will report on the status of the implementation of the National Incident Management System to my Emergency Council no later than June 1, 2005.



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 eighth day of February 2005.

/s/ Arnold Schwarzenegger

Governor of California

August 3, 2005

To: Interested Parties

SUBJECT: SEMS/NIMS INTEGRATION UPDATE

The Governor's Office of Emergency Services (OES) is committed to providing you with up-to-date information and guidance regarding compliance with the National Incident Management System (NIMS). Our goal is to keep you informed of NIMS compliance issues, provide you with policy guidance and materials, and assist you in your efforts to achieve NIMS compliance. Moreover, because we recognize that there could be significant work efforts related to NIMS compliance, it is critical that the information and guidance we provide you meets California's needs and recognizes federal government requirements.

California has made significant progress to date and, through our Standardized Emergency Management System (SEMS) Maintenance System, is initiating those actions we need to take individually and collectively to demonstrate NIMS compliance by the end of federal fiscal year (FY) 2006. NIMS compliance is a condition for receiving FY 2007 federal preparedness grants.

For purposes of SEMS/NIMS integration, we are measuring NIMS compliance against those requirements set forth in the official policy letter to Governors from the Department of Homeland Security (DHS) dated September 8, 2004. The DHS letter listed the minimum NIMS requirements to be accomplished by states in FY 2005. There are no NIMS requirements for local government in FY 2005; however, DHS does encourage state, local, and tribal governments to support NIMS implementation by initiating those activities as listed in the letter.

Based upon these NIMS requirements, we have enclosed several documents that have been developed to provide you with more detail on: 1) the approach the State is taking to address NIMS compliance overall, 2) information on NIMS compliance and training, and 3) some suggested actions you can take now to support NIMS compliance (please see enclosures 1-3).

In addition, we have received updated information from the NIMS Integration Center (NIC), the agency charged to oversee all aspects of NIMS. They have informed us that NIMS implementation guidance is forthcoming that will address specific FY 2006 requirements across the entire spectrum of NIMS. We understand that the guidance will address, in part, a NIMS-compliant Emergency Operations Plan, formal recognition and adoption of NIMS, and training courses to be taken in FY 2006. OES

will regularly provide written guidance and direction specific to California to assist you in NIMS implementation activities and compliance.

As you undertake activities to achieve NIMS compliance, you will find that there are a number of contractors offering to provide training, consultative, or other NIMS-related services, stating that they are NIMS certified. We encourage you to use due diligence when choosing contractors and to examine their credentials. OES serves as the designated agency in California, in coordination with the Governor's Office of Homeland Security. OES is responsible for statewide NIMS compliance and implementation and should be considered the State's official resource for NIMS compliance requirements.

California's Standardized Emergency Management System provides a structured framework for responding to and managing emergencies and disasters of all kinds. California paved the way for the rest of the nation with SEMS and for nearly a decade we have used the system successfully. Through the SEMS Maintenance System, we can continue to incorporate lessons learned and enhance SEMS to further address NIMS compliance.

I believe California has the most comprehensive emergency management system in the nation. You should be proud of the system you helped create.

Sincerely,

ORIGINAL SIGNED BY:

HENRY R. RENTERIA
Director

Enclosures:

- 1: SEMS/NIMS Integration Status
- 2: NIMS Compliance – Training
3. NIMS - Actions You Can Take Now

Appendix C

Debriefing Questionnaire

2005/06 High Water Event After-Action Evaluation

Please complete this form return it via Email, inter-office mail, or FAX to the Flood Operations Center. An Emailed attachment is preferable as it allows us to compile your input more quickly. Form sections expand as you type. 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: kelcock@water.ca.gov

Personal Information

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:

2005/06 High Water Event After-Action Evaluation

EVALUATION—AREAS/SUBJECTS THAT WORKED WELL 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:

2005/06 High Water Event After-Action Evaluation

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

Glossary

AAR – After Action Report
BDO – Bay-Delta Office
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
DFS – Division of Fiscal Services
DHS – U.S. Department of Homeland Security
DMS – Division of Management Services
DOE – Division of Engineering
DPLA – Division of Planning & Local Assistance
DWR – Department of Water Resources
EPSM – Emergency Preparedness and Security Manager
F/A – Finance/Administration Section
FEMA – Federal Emergency Management Agency
FIS – Flood Information Specialists
FOC – Flood Operations Center
FOCIS – Flood Operations Center Information System
IC – Incident Commander
ICP – Incident Command Post
ICT – Incident Command Team
IT – Information Technology
LAO – DWR Legislative Affairs Office
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
PO – DWR Purchasing Office
PSA – Protective Services Advisor
RD – Reclamation District
REOC – Regional Emergency Operations Center
SEMS – Standardized Emergency Management System
SOC – State Operations Center
TO – DWR Training Office
USBR – U.S. Bureau of Reclamation

