

State of California  
The Resources Agency  
DEPARTMENT OF WATER RESOURCES  
DIVISION OF FLOOD MANAGEMENT

## Informational Sheet

# State-Federal Flood Operations Center



June 2008  
Flood Operations Branch

## **Overview**

The mission of the Department of Water Resources (DWR) Division of Flood Management (DFM) is to prevent loss of life and reduce property damage caused by floods and to assist in recovery efforts following any natural disaster. The State-Federal Flood Operations Center (FOC) located in Sacramento, California is a component of the Division's Flood Operations Branch. Year-round the FOC is the focal point for the gathering, analysis, and dissemination of flood and water-related information to stakeholders. During emergency situations, the FOC provides a facility from which DWR can centrally coordinate emergency response state-wide.

## **River Forecasts**

As major storm systems approach California, forecaster's from the National Weather Service (NWS) and DWR forecast the location, amount, and timing of expected precipitation and make initial river forecasts. Once the storm arrives and runoff begins, forecasts are updated and issued as necessary to various federal, State, and local agencies. Reservoir operators adjust flood control releases as inflows increase or downstream channels swell with runoff. If runoff is sufficient to raise streams to threatening levels, the NWS and DWR issue these forecasts as "official public bulletins". Automated NWS and DWR computer systems disseminate bulletins and FOC personnel make high water notification calls to selected agencies. Depending on the severity of forecasted or actual flooding, DWR may declare a Flood Alert or Flood Mobilization.

## **High Water Notifications**

When streams are forecast to rise above certain pre-determined stages (water surface elevations) or flow rates; FOC personnel make high water notification calls to appropriate local flood system maintaining and emergency response agencies. Maintaining agencies are required to patrol their levees on a 24-hour basis as long as the water level is at or above monitor stage and until no threat remains to the levees.

## **Flood Alert**

Forecasts of sustained storm patterns resulting in the potential for flooding, the need for coordinated field operations, or requests for technical support from local agencies may require the FOB Chief to declare a Flood Alert to officially activate the FOC under the Standardized Emergency Management System (SEMS). Flood Management personnel from the Flood Operations and Hydrology Office, the NWS Sacramento Forecast Office, and when applicable the Information Services Branch of the Public Affairs Office, expand their regular duties to meet these needs. Additional DWR personnel, equipment, materials, and financial resources may be needed to respond to sustained severe storms and/or flooding. The Director may declare a Flood Mobilization to meet this need.

## **Standardized Emergency Management System (SEMS)**

SEMS was developed by the Governor's Office of Emergency Services to provide an organizational framework and common "language" for emergency response in California. SEMS was based on the Incident Command System originally developed by fire agencies for managing wildfire response in the Western United States. SEMS improves mobilization, deployment, utilization, communication, tracking, and demobilization of needed mutual aid resources in an emergency. SEMS is organized into the following five functions at the FOC:

**Management** – directs all FOC activities, responsible for overall policy and coordination, coordinates requests for emergency assistance, personnel safety, and provides public information support.

Operations – coordinates with Incident Command Posts, Mobilization Centers, and other field operations units including flood fight, technical assistance and emergency repairs.

The Operations Section coordinates the dispatch of joint DWR / U.S. Army Corps of Engineers technical teams to investigate potential flood threats. If a flood fight is needed, flood fight Incident Commanders may be dispatched. The California Department of Forestry and Fire Protection and the California Conservation Corps provide a majority of the crews.

Planning – collects, evaluates, documents and disseminates flood emergency information, prepares situation reports, incident reports, and action plans, provides primary interface with NWS weather and river forecasting programs, and provides Decision Support System and Geographic Information System support.

Information includes river and weather conditions and forecasts, reservoir operations, situation reports, levee and other flood-related incident reports and maps.

Logistics – provides services, personnel, equipment and facilities in support of all operations, tracks personnel and equipment resources.

Finance & Administration – overall responsibility for accounting, time-keeping, recovery, and FEMA claims.

### **Flood Operations Center Information System**

The Flood Operations Center Information System (FOCIS) provides centralized databases to support the Department's SEMS-structured emergency operations and information / warning dissemination programs. FOCIS is accessed through a DWR Intranet website developed and maintained by the Flood Operations Branch.

The primary purpose of FOCIS is to automate and archive SEMS/ICS and other emergency operations reporting and tracking processes used at the FOC, Eureka Flood Center, and by other DWR Emergency Response and Incident Command Teams.

### **California Data Exchange Center**

The California Data Exchange Center (CDEC) provides a centralized database to store, process, and exchange real-time hydrologic information gathered by various cooperators throughout the State. CDEC then disseminates this information to the cooperators, governmental and private agencies, news media, and the general public. The data collected by CDEC enables forecasters to prepare flood forecasts and water supply forecasts; reservoir and hydroelectric operators to schedule reservoir releases; water suppliers to anticipate water availability, and flood emergency personnel to prepare and disseminate flood hydrology data and reports.

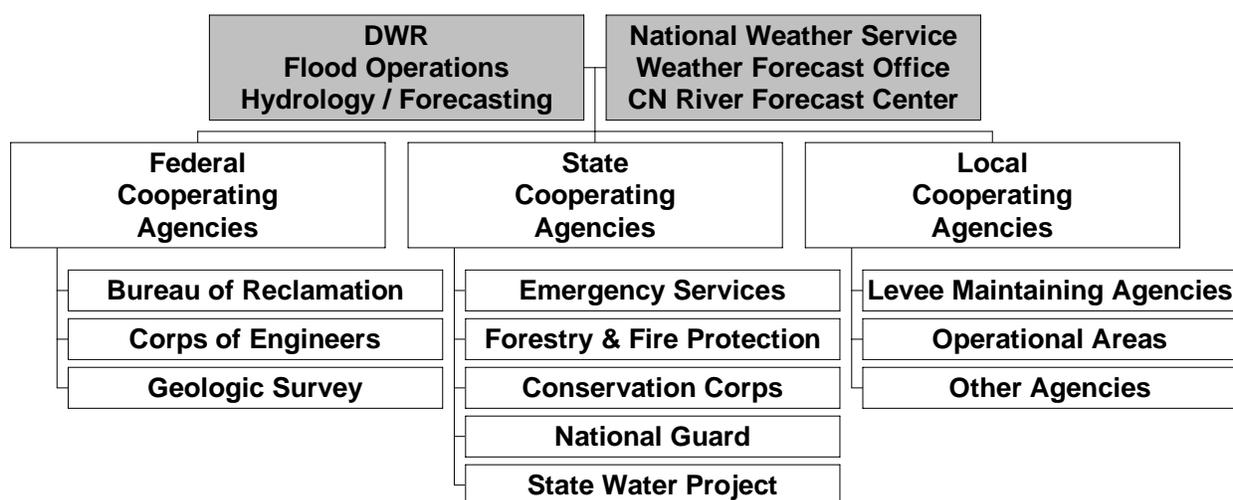
CDEC formats and manages data for public use via the World Wide Web. This extensive website is accessed by flood emergency personnel, private and public agencies, news media, and the general public. Value added information is created from the data and presented in a variety of formats including maps, plots, charts and publications. The website is a tremendous tool in monitoring current flood conditions.

Real-time data is collected from remote data stations via the State microwave radio network and GOES satellite system. Real-time data includes river stages, precipitation, snow water content, temperature, water quality, and full weather data.

CDEC operates a data exchange program with various federal and State agencies and other public agencies. This data exchange program involves the automated transfer and receipt of data and information via network connections.

### **Cooperating Agencies**

In addition to the NWS many agencies cooperate with DWR during flood emergencies and some send representatives to work at the FOC. The following figure provides an overview of federal, State, and local cooperating agencies with co-located agencies depicted by shaded boxes.



**National Weather Service (NWS)** – The mission of the NWS Hydrologic Services Program is to:

1. Provide river and flood forecasts and warnings for the protection of lives and property, and
2. Provide basic hydrologic forecast information for the nation’s environmental and economic well being. Eleven Weather Forecast Offices located in Medford (OR), Eureka, Reno and Las Vegas (NV), Sacramento, Monterey, Hanford, Oxnard, San Diego, Phoenix (AZ), and the California-Nevada River Forecast Center accomplish this, both Sacramento offices are co-located with the FOC at the Joint Operations Center.

**Governor’s Office of Emergency Services (OES)** – Coordinates the emergency activities of all State agencies. When requested by county Operational Areas, OES will direct (through the assignment of mission numbers) those State agency resources necessary to support flood fight operations. OES shall request, as directed by the Governor, a Presidential Emergency and/or a major disaster declaration. DWR representatives are dispatched as needed to OES’s Inland (Sacramento), Coastal (Oakland) and Southern (Los Alamitos) Regions, while OES representatives are assigned to the FOC.

**California Department of Forestry and Fire Protection (CAL FIRE)** – CAL FIRE provides a majority of the crews used in flood fight activities. CAL FIRE also assists OES by setting up

Mobilization Centers, mobile kitchens, and other facilities. CAL FIRE's expertise in the Incident Command System is a valuable resource during flood emergencies.

California Conservation Corps (CCC) – The CCC provides personnel for flood fight crews and levee patrols during emergencies. Standby crews are frequently stationed near sites where problems are anticipated due to storm activity, high river stages, high tides or large reservoir releases.

California State Water Project (SWP) – State Water Project operations personnel participate in daily briefing and planning activities and coordinated reservoir operations with respect to Lake Oroville and other SWP facilities.

U.S. Army Corps of Engineers (Corps) – In instances when the nature of the disaster exceeds the capabilities of State and local interests, the Corps may provide assistance under Public Law 84-99 to save human life, prevent immediate human suffering, or mitigate residential and commercial property damage. Assistance includes: acquisition of flood fight materials; geotechnical evaluation of levees and other flood operations structures, contracts for emergency flood fight and temporary repairs, clearance of drainage channels or blocked structures; technical assistance for development of plans; and upon request, inspection of non-Federal dams and flood control projects. The Corps also has jurisdiction over storage capacity seasonally reserved for flood control on most major reservoirs throughout the State.

U.S. Bureau of Reclamation – Although the Bureau of Reclamation is primarily involved in the irrigation and hydropower purposes of its federal water projects, many USBR reservoirs also provide flood control storage. In the Central Valley, these projects include Shasta Dam on the Sacramento River; Folsom Dam on the American River; New Melones Dam on the Stanislaus River, and Friant Dam on the San Joaquin River. Central Valley operations personnel participate in daily briefing, planning activities and coordinated reservoir operations.

U.S. Geologic Survey – The Survey participates in a flood emergency by measuring, processing and sharing streamflow data. The Survey cooperates with DWR and NWS in establishing and maintaining telemetered stream gages necessary for flood operations.

Levee Maintaining Agencies – Local agencies have primary authority for both maintenance of levees and flood fighting. Levee maintenance is provided by public levee districts, local government entities, private levee owners, and in some cases DWR. Collectively these agencies are referred to as Levee Maintaining Agencies or LMA's. Some levees are not maintained by private or public agencies.

Operational Areas – Representatives from the Sacramento Operational Area (Sacramento County being the geographic boundary) may be assigned to the FOC when county streams and levees are threatened. The FOC provides intelligence and planning support to Operational Areas as needed throughout a flood emergency.

## **Contacts**

The FOC provides a telephone bank of Flood Information Specialists to answer flood-related questions, assist with high water notification calls, and direct calls to other appropriate personnel. Media briefings and interviews are coordinated by Information Officers from the Public Affairs Office who augment DFM staff. This information is available on request to other agencies, the media, and the public by telephone or via the California Data Exchange Center.

### **State-Federal Flood Operations Center**

Toll-free public lines ..... (800) 952-5530, recordings (menu on page 2)  
*(24-hour emergency contact via answering service)*  
Business line ..... (916) 574-2619  
TDD service ..... (800) 900-3582  
Shared Email Address ..... flood\_center@water.ca.gov

### **Hydrology and Flood Operations Office**

Gary Bardini, Hydrology and Flood Operations Office Chief ..... (916) 574-2612  
William Croyle, Flood Operations Branch Chief ..... (916) 574-2611  
Rick Burnett, Flood Fight Specialist ..... (916) 574-1203  
Elissa Lynn, Senior Meteorologist ..... (916) 574-2221  
Sean Mann, Flood Operations Center Chief and staff ..... (916) 574-2619  
Anna Fong, Decision Support Section Chief ..... (916) 574-2632  
B.G. Heiland, Flood System Analysis Section ..... (916) 574-2616  
Tawnly Pranger, Response and Security Section ..... (916) 574-2793  
Arthur Hinojosa, Hydrology Branch Chief ..... (916) 574-2613  
Michael Mierzwa, River Forecasting Section Chief ..... (916) 574-2617  
Boone Lek, Reservoir Coordinated Operations Section Chief ..... (916) 574-2633  
Jeremy Arrich, Flood Project Integrity and Inspection Branch Chief ..... (916) 574-1730  
David Parker, CDEC Chief ..... (916) 574-2630  
CDEC Help Desk ..... (916) 574-1777  
  
Sonny Fong, DWR Emergency Preparedness and Security Manager ..... (916) 654-6135

### **DWR Websites**

California Data Exchange Center (CDEC) .....  
    For governmental agencies ..... <http://cdec4gov.water.ca.gov>  
    World Wide Web ..... <http://cdec.water.ca.gov>  
Flood Operations Center Information System (FOCIS) ..... <http://focis.water.ca.gov>  
Division of Flood Management ..... [www.dfm.water.ca.gov](http://www.dfm.water.ca.gov)  
Delta ..... [www.delta.ca.gov](http://www.delta.ca.gov)  
Department of Water Resources ..... [www.water.ca.gov](http://www.water.ca.gov)

**National Weather Service (Sacramento)**

NWS Weather Forecast Office (public) ..... (916) 979-3051  
 NWS Weather Forecast Office website ..... [www.wrh.noaa.gov/sto](http://www.wrh.noaa.gov/sto)  
 Kathryn Hoxsie, Warning Coordination Meteorologist .....(916) 979-3041, x223  
 Cindy Matthews, Senior Service Hydrologist ..... (916) 979-3049

**RECORDED RIVER AND FLOOD CONDITIONS MENU**  
**(800) 952-5530 (toll-free, 24-hour)**

Main Menu

Press 0 to transfer to staff (answering service after hours)  
**Press 4 for recorded river & reservoir conditions & forecasts**

River & Reservoir Conditions Menu

Press 2 for Sacramento Valley and Northern Delta  
     Press 1 for Upper Sacramento River to Tisdale Weir  
     Press 2 for Lower Sacramento River (Fremont Weir to Rio Vista) Feather,  
     Yuba, American Rivers, tributaries, Yolo Bypass  
 Press 3 for San Joaquin River Basin  
 Press 4 for Russian and Napa Rivers  
 Press 5 for North Coastal Rivers  
 Press 6 for Central Coast Rivers  
 Press 7 for Tulare Lake Basin

**Flood Condition Level (Proposed)**

The Division of Flood Management has developed Flood Condition (FLOODCON) Levels to indicate our level of readiness and/or activities based on the potential flooding and actual flood incidents. These levels are currently in the review process but are anticipated to be approved before the 2008/2009 flood season. In the future these levels will be included in situation reports, briefings and so forth internally and externally. The FLOODCON levels are outlined in the table below:

FLOODCON Level	Typical Conditions	Typical Activities
FLOODCON 1	No significant concerns	Preparation
FLOODCON 2	Flood Season (10/15 – 4/15) or Site of significant interest	Briefings
FLOODCON 3	Significant weather event expected or Significant site requiring constant monitoring/patrols	Frequent briefings Coordination calls Levee patrols Increased FOC staffing
FLOODCON 4	Single significant incident	1 ICT deployed FOC staffed 24/7
FLOODCON 5	Multiple significant incidents	2 or more ICTs deployed FOC staffed 24/7