



This document outlines the response expectations of the Yolo Operational Area due to a Flood.

# Flood Hazard Annex

An Annex to the County of  
Yolo Emergency Operations  
Plan

Version 1.0

Revised: May 2023

# PROMULGATION

This Emergency Support Function Annex to the County of Yolo Emergency Operations Plan describes how Yolo County will manage an emergency incident or disaster mitigation, preparedness, response, and restoration related to this Emergency Support Function. All Primary and Support agencies identified as having assigned responsibilities in this Emergency Support Function shall perform the emergency tasks described, including preparing and maintaining Standard Operating Guidelines and Procedures and carrying out the training, exercises, and plan maintenance needed to support the plan.

This Emergency Annex plan was developed using the Comprehensive Planning Guide 101 version 3 from the Federal Emergency Management Agency and California's emergency planning guidance documents. Adoption will occur following the established maintenance schedule; however, the plan may be modified in the interim without prior approval and formal adoption under the direction of the Director of Emergency Operations. The revised plan will be relayed digitally to all Primary and Support agencies with assigned responsibilities in this Emergency Support Function. The Primary assigned agency will coordinate the review and update of the plan with the Support agencies as needed at least every three years. This Emergency Support Function plan supersedes any previous versions.

This Emergency Support Function Annex applies to Primary and Support agencies within Yolo County who are assigned responsibilities in Section 4.5 Responsibilities by Emergency Support Function of the All-Hazard Emergency Operations Plan and identified within the Emergency Support Function Annex.

This plan replaces previous annexes of the same or similar title.

The County of Yolo Board of Supervisors chairperson will formally promulgate this annex. The County Ordinance empowers the County Board of Supervisors to review and approve emergency and mutual aid plans.

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Lucas Frerichs

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Date:

Chair of the Board of Supervisors

## **ACKNOWLEDGMENTS**

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# SECTION 1.0: INTRODUCTION

## 1.1 OVERVIEW

Yolo County is located in the Sacramento-San Joaquin Valley. Areas adjacent to rivers, sloughs, creeks, drainage canals, and other low-lying areas are subject to flooding. State and local protective facilities, such as dams, bypasses, and levees, afford a level of flood protection; however, the flood events of 1986, 1995, 1997, 1998, 2017, 2019, and 2022/23 demonstrated that there is still a significant flood threat in the valley.

The amount of water flowing through the hydraulic system in Yolo County is determined by environmental conditions, natural events, and human-caused infrastructure. An extensive system of dams, levees, overflow weirs, pumping plants, and flood-control bypass channels strategically located on the Sacramento River and the various creeks and streams has been established to protect the region from flooding. These facilities control floodwaters by regulating the amount of water passing through a particular reach of each river.

Yolo County is vulnerable to a number of flooding sources caused by river floods, levee failures, drainage pump failure, and dam failure. These may produce large losses to public infrastructure and private property. Flooding caused by levee failure or overtopping remains a significant threat to valley locations.

Floodplains are a common occurrence for communities adjacent to and in the lowlands of the Sacramento River, Cache Creek, and the Yolo Bypass in Yolo County.

Normally, wintertime storm floodwaters are kept within defined limits by levees and open lowlands, and cause no damage. Dams located outside Yolo County boundaries also help control floodwaters. Occasionally, however, a combination of frequent storms, extended heavy rain, and melting snowpack results in floodwaters exceeding normal high-water boundaries and causes damage.

The Table in Appendix B presents a record of water levels when Operational Area (OA)<sup>1</sup> jurisdictions come together with Yolo OES to start monitoring critical locations at several key monitoring stations throughout County. For more detailed information on flooding hazards, refer to the Yolo County Multi-Jurisdictional Local Hazard Mitigation Plan.

## 1.2 PURPOSE

The purpose of this Flood Hazard Annex is to provide a general description and overall concept of operations for the jurisdictions within the Yolo Operational Area in response to flood emergencies. This annex describes specific procedures in place that will guide the public safety response to areas affected by a flood emergency and how the jurisdictions will coordinate operations with other jurisdictions both internal and external to the Yolo Operational Area.

This annex also accomplishes the following:

- Identifies the specific agencies and their responsibility to protect the health and safety of the Yolo Operational Area during a flood emergency.
- Establishes the operational concepts associated with the organizational response to and

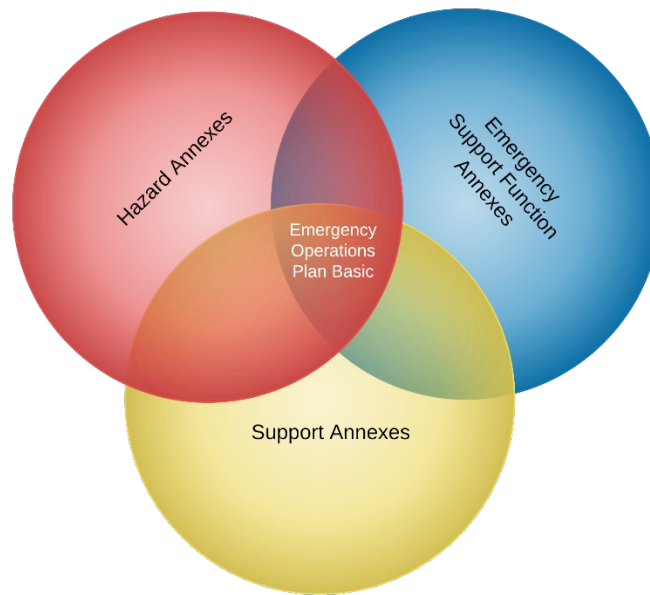
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<sup>1</sup> An Operational Area consists of a county and all political subdivisions within the county area – California Emergency Services Act- Article 9.

recovery from a flood emergency.

### 1.3 SCOPE

This Flood Hazard Annex is a part of the Yolo Operational Area suite of Emergency Operations Plans for the County of Yolo; Cities of Davis, West Sacramento, Winters, and Woodland; the Yocha Dehe Wintun Nation; the Housing Authority of Yolo County, Special Districts and the LMA plans listed throughout this annex including their respective appendices and attachments.



**Figure 1 – Emergency Plan Annex Relationship**

Flood hazard emergency planning involves preparing for realistic flood hazards and response requirements based upon a close analysis of historic information, hydrologic considerations, planned engineering activities, and resource availability.

This annex provides information on the Emergency Management organizations of the participating jurisdictions, including operational components such as command-and-control at the field level, the jurisdictional Emergency Operations Centers, and inter-agency communications systems to be implemented in large-scale flooding disasters.

This annex does not describe specific response procedures for dam failure, flood fighting on locally maintained flood-control levees and structures, or how to physically contain floodwaters in the event of a breach of those levees. Those operations are described in the emergency operations plans of Dam operators and levee-maintaining agencies (LMA's) responsible for flood-control infrastructure that can affect the Yolo Operational Area.

For information on dam failure response operations and levee flood fight operations, refer to the following documents, which are on file and can be requested from the Yolo Office of Emergency Services (OES)

- California Department of Water Resources – Oroville Facilities Emergency Action Plan
- Cal OES Oroville Dam Failure Response Plan
- Department of the Interior, Bureau of Reclamation – Central California Area Office Facilities Emergency Action Plan

- Department of the Interior, Bureau of Reclamation – Northern California Area Office Facilities Emergency Action Plan
- Yolo County Flood Control and Water Conservation District – Indian Valley Dam Emergency Action Plan
- Yolo County Flood Control and Water Conservation District – Cache Creek Dam Emergency Action Plan
- Cal OES Northern California Catastrophic Flood Response Plan
- Reclamation District 108 – Grimes Flood Safety Plan
- Reclamation District 150 – Merritt Island Flood Safety Plan
- Reclamation District 537 – Elkhorn Basin Flood Safety Plan
- Reclamation District 787 – Grimes Basin Flood Safety Plan
- Reclamation District 900 – Flood Safety Plan
- Reclamation District 999 – Netherlands Flood Safety Plan
- Reclamation District 1600 – Elkhorn Basin Flood Safety Plan
- Reclamation District 2035 – Conaway Flood Safety Plan
- Knights Landing Ridge Drainage District – Flood Safety Plan
- Sacramento West Side Levee District – Grimes Basin Flood Safety Plan
- DWR Sacramento Maintenance Yard, Yolo County Levee Systems Flood Safety Plan
- Yolo County Services Area 6 (CSA6) – Knights Landing Levee System Flood Safety Plan

## **1.4 PREPARING AND RESPONDING TO THE WHOLE COMMUNITY STRATEGY**

Yolo County strives to incorporate the Whole Community perspective in its emergency planning. By planning with the Whole Community, Yolo County’s planning strategy includes the complexities of its diversity.

Yolo County defines disabilities and those with access or functional needs as:

*Populations whose members may have additional needs before, during, and after an incident in functional areas, including but not limited to: maintaining independence and the ability to perform the activities of daily living, communication, transportation, supervision, and medical care. Individuals needing additional response assistance may include those with disabilities, who live in institutionalized settings, who are elderly, who are children, who are from diverse cultures, who have limited English proficiency or are non-English speaking, or who are transportation disadvantaged.*

Furthermore, the County and Operational Area are committed to maximizing compliance with the Americans with Disabilities Act and providing the best service to Yolo County residents and visitors. As such, the County adheres to the guidelines outlined below:

- County services and facilities are equally accessible and available to all persons.
- All the benefits the County offers are accessible to persons with disabilities and others with access and functional needs.
- The County and Operational Area partners will accommodate people with disabilities and those with access or functional needs in the most integrated setting possible.

- During all phases of disaster response, the County and its' agencies will make reasonable modifications to policies, practices and procedures, if necessary, to ensure programmatic and architectural access to all.
- The County and Operational Area partners will ensure that its shelters are accessible, both physically and programmatically, to afford people with disabilities and others with access and functional needs the opportunity to remain with family and friends in the most integrated setting possible.

## 1.5 ASSUMPTIONS

The following assumptions lay the foundation for preparation of this annex and the emergency operations plans and protocols that it references:

- Flood emergencies or disasters are most likely to occur in the fall, winter, and spring due to extended or extreme precipitation events. Melting snow and spring run-off are secondary and less likely events to initiate a flood event.
- Levees in Yolo County are subject to liquefaction from an Earthquake.
- Potential major flood emergencies or disasters in Yolo County pose serious threats to public health, property, the environment, and the local economy. Except in the immediate vicinity of a levee breach or in close proximity to water channels, relatively shallow flood depths pose a lesser threat of death or serious injury.
- Flood warning will be received by Yolo County public agencies through a variety of means: National Weather Service (NWS) announcements, State warning systems, California Data Exchange Center (CDEC), and National Oceanic and Atmospheric Administration (NOAA) radio broadcasts.
- Citizens will receive warning through multiple systems: standard radio, television, Emergency Alert System (EAS), and the Yolo-Alert (Emergency Mass Notification System [Everbridge]), the Federal Integrated Public Alert & Warning System (iPAWS), Wireless Emergency Alerts (WEA), loudspeaker notifications or in-person notifications.
- Yolo OES coordinates flood warning within the OA in coordination with the Yolo Emergency Communications Agency (YECA).
- A major flood emergency in Yolo County will require a multi-jurisdictional response highlighting the need for effective field coordination and policy coordination at the Yolo OA and between neighboring counties.
- In flood emergencies or disasters, the Standardized Emergency Management System (SEMS) and National Incident Management System (NIMS) will be implemented by responding agencies and expanded as necessary.
- Yolo OES will, through the Yolo OA and the Yolo Unified Command organizations, ensure efficient coordination of its response functions with the functions of the Cities, the LMA's, and State and Federal agencies operating in the area.
- Major flood emergencies or disasters may overburden local resources, necessitating the establishment of effective mutual-aid processes between neighboring jurisdictions and counties within pre-planned unified commands and operational areas.
- Major flood emergencies or disasters will generate widespread public and media interest. Effective working relations with the media must be maintained to facilitate emergency public information and warning.
- A major flood emergency or disaster may require extended commitments of Yolo OA personnel and resources.

## SECTION 2: ROLES AND RESPONSIBILITIES

This discussion of agency and jurisdictional responsibilities only addresses those most relevant to the specific flood response plans. The emergency operations plans for each partner jurisdiction provide additional discussion of general agency responsibilities.

### 2.1 LEVEE-MAINTAINING AGENCIES

Local agencies have primary authority for both the maintenance of levees and initial flood-fighting efforts. Levee maintenance is provided by public levee districts, local government entities, private levee owners, and in some cases the State of California Department of Water Resources (DWR) acting on behalf of a local agency. Collectively, these agencies are referred to as Levee Maintaining Agencies (LMAs). Refer to [Appendix B – LMA Trigger Chart](#), for a list of LMAs and their response triggers within the planning area. The Department of Water Resources also has LMAs called DWR Maintenance Areas (MA). These stretches of levee are located throughout Yolo County and are considered by DWR as a local LMA. Those areas specific to Yolo County are in the DWR Sacramento Maintenance Yard, Yolo County Levee Systems Flood Safety Plan.

Levee-Maintaining Agencies (LMA's) with infrastructure that can affect the Yolo OA are as follows:

- Reclamation District 108 – River Farms
- Reclamation District 150 – Merritt Island
- Reclamation District 307 – Lisbon Tract
- Reclamation District 537 – Lovdal District
- Reclamation District 765 – Glide District
- Reclamation District 787 – Fair Ranch
- Reclamation District 900 – West Sacramento
- Reclamation District 999 – Netherlands
- Reclamation District 1600 – Mull District
- Reclamation District 2035 – Conaway Ranch
- Knights Landing Ridge Drainage District (KLRDD)
- Sacramento West Side Levee District (SRWSLD)
- DWR Sacramento Maintenance Yard, Yolo County Levee Systems
  - Cache Creek
  - Putah Creek
  - MA 4 (Sacramento River)
  - Sacramento Bypass
  - Willow Slouth Bypass
  - Yolo Bypass (East and West Levees)
- Yolo County Services Area 6 (CSA6) – Snowball District

These LMA's have responsibility for the integrity, improvement, operations, and maintenance of their flood control infrastructure, such as levees and drainage systems, in a flood. Besides maintaining and implementing appropriate flood safety plans to meet those responsibilities, these LMA's are responsible for participating in the Yolo Unified Commands and Yolo OA.

During flood emergencies, an LMA is the organizer of levee patrols and levee flood fight activities in high hazard situations, and is responsible for organizing material and equipment for conducting flood fights. The LMA is also responsible for following established communications

protocols for informing the Yolo OES and the Yolo Unified Commands, assigned during the incident, of the situation on their levees.

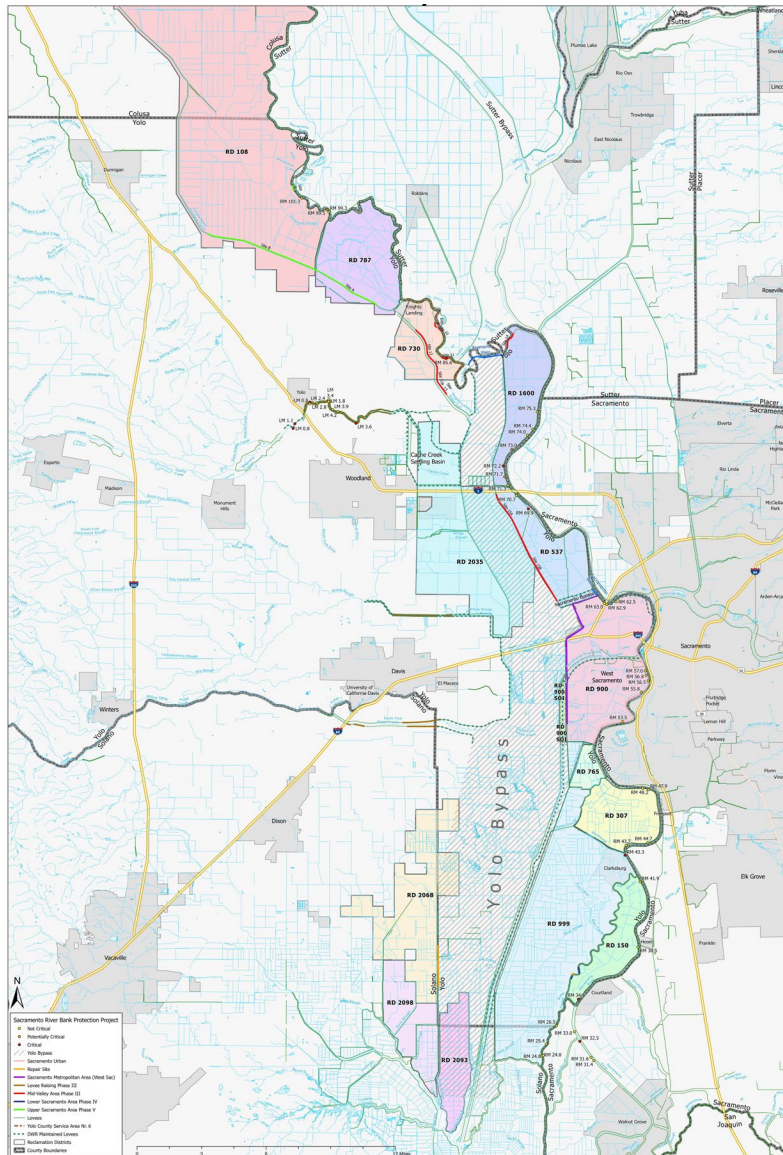


Figure 2 – Yolo LMA Areas of Responsibility

## 2.2 YOLO COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Since its creation in 1951, the Yolo County Flood Control & Water Conservation District has served the local community's needs by managing water resources for farming while stabilizing groundwater for other uses with progressive and proactive water planning.

Today, the District manages three dams, two hydroelectric plants, two reservoirs, more than 150 miles of canals and laterals, and one of the world's longest inflatable rubber dams. District boundaries encompass 195,000 acres of Yolo County, including the cities of Woodland, Davis, and Winters, the towns of Capay, Esparto, Madison, and other small communities within Capay Valley.

Yolo County's primary source of agricultural water comes from 50 miles away in Lake County. The District obtained the rights to store water in Clear Lake in 1967 when it purchased the privately owned Clear Lake Water Company and the Cache Creek Dam, allowing the District to release up to 150,000 acre-feet of water annually.

However, the District's water right to store water in Clear Lake did not provide enough water to supply farmers during dry years. Therefore, the District constructed the Indian Valley Dam and Reservoir in 1974-1975. With the completion of the Indian Valley Reservoir in 1975, the District's water resources became less vulnerable to the dry years which often limit water supplies in Yolo County. The six-mile-long, one-mile-wide reservoir, with a gross capacity of 300,600-acre feet, provides long-term irrigation storage. The District manages the reservoir's water by releasing it as needed. The dam includes a hydroelectric plant. The cost of the dam and reservoir exceeded \$9 million and were partially funded by two bond issues that were retired on time, leaving only a loan, originally scheduled to be retired in 2017. However, that loan was retired in 1998 due to careful financial management, making the project debt-free.

The total water supplies available to the District's users include surface water from Clear Lake, Indian Valley, and Cache Creek and groundwater recharged by the District's operations. In all, the District has surface water storage averaging nearly 200,000 acre-feet per year over the long term.

The Yolo Water and Power Company finished constructing Cache Creek Dam in 1914. It is situated five miles downstream of Clear Lake and was built to store winter water in Clear Lake that would normally run off into the Sacramento River. Cache Creek is the outlet from Clear Lake, but a rock ledge known as the Grigsby Riffle limits the rate at which water can flow past. In 1998, the spill gate of the dam was modified to increase safety and minimize damage from floating debris.

The Capay Diversion Dam is located approximately two miles above the town of Capay on Cache Creek. This dam was built by the Yolo Water & Power Company and it serves as the headworks for the canal system. Here, the water released from Clear Lake and Indian Valley Reservoir is diverted into the West Adams and the Winters canals, feeding the entire canal system. The Capay Dam underwent a major renovation in 1994, including the installation of one of the longest inflatable dams in the world. The inflatable dam improves safety and the District's ability to deliver water.

Located at the base of the western foothills, north of the town of Winters, the Chapman Reservoir is a small, 280-acre-foot dual-purpose reservoir the District maintains for flood control and irrigation purposes.

## **2.3 YOLO COUNTY, THE CITIES (DAVIS, WINTERS, WEST SACRAMENTO, AND WOODLAND), THE TRIBE, AND SPECIAL DISTRICTS**

The County is responsible for managing public safety response in the unincorporated area, while incorporated cities are responsible for public safety within their jurisdictions. The response actions associated with these responsibilities can change based on whether the primary flood incident is due to Levee or Dam failure. The Yocha Dehe Wintun Nation is responsible for the safety and security of their Tribal lands from a flood event. The Tribal Nation has many locations whose safety and security are critical to the tribal citizens, tribal lands, and trust lands. The Tribe's integration into the flood response plays a significant role and is a key partner with

the County and the surrounding communities near their tribal lands.

### **During Levee Failure**

All levels of government, such as special districts, state agencies, and federal agencies, share responsibilities for flood fighting or supporting flood fighting efforts. The necessity to initiate a flood fight may result from an overflow of natural waterways, overflow of waterways confined by levees, rising lake waters, dam overtopping, failure of a levee, or other circumstances. Flood fighting is initiated when flood control features (levees, channels, etc.) begin to exhibit signs of stress, such as seepage, boils, erosions, and slips, and can progress into a more critical issue resulting in a threat to life and property.

Flood fighting on levees is the responsibility of the LMA, which will assume the role of Incident Commander (IC) in most circumstances. The LMA will notify its Operational Area (OA) of the potential identified threat. The LMA will notify DWR's Flood Operations Center (FOC) about the potential identified threat and may ask for technical assistance. If a flood fight exceeds the capability of the LMA or if communities are threatened, the responsible city or county will assist with the flood fight as much as possible.

When this occurs, they may call upon Yolo County who assist in several ways. The first is to coordinate information, resources, and support to the unincorporated areas of Yolo County. The second is to provide that same support to Cities and Special Districts (local government) within the geographical boundaries of the County. The County, as the Operational Area coordinating agency will work with the affected jurisdictions to provide support for resources needed or technical assistance ordering through existing State Departments and private vendors. This coordination process is detailed in the Yolo County Emergency Operations Plan (EOP). For more information, refer to the County EOP, Basic Plan.

In Yolo County, there are special circumstances that need to be documented correctly, those are as follows:

- The RD 900 is a dependent District to the City of West Sacramento, and therefore, both agencies work closely together on a day-to-day basis and in an emergency situation when there is a threat to one of RD 900's levees. They also work collectively on a specific stretch of levee that flanks the Deep Water Ship Channel. This area is owned and maintained by the US Army Corps of Engineers and protects a critical area of the City. The City also works closely with DWR when the water in the Sacramento River reaches 29 ft. at the I Street Bridge. When this occurs, the Sacramento Weir gates are typically opened and DWR will need the support of West Sacramento public safety agencies (Law enforcement and Fire) to ensure the opening of the weir gates are safe.
- Additionally, the Cities of Davis and Woodland work closely with DWR for the levees they maintain near their jurisdictions. Close coordination with local, state and federal agencies is paramount in a flood response scenario.

### **During Dam Failure**

Depending on which dam(s) are affected, how full their corresponding reservoirs are, and the type of failure, the response within Yolo County may vary.

- Dams exist throughout Northern California that could cause a sheltering response within Yolo County without a physical inundation of water within the County boundary. This response will vary as to which jurisdictions assist with sheltering depending on the evacuation routes of the primary affected counties.

Three Dams within the County are not regulated by the Federal Energy Regulatory Commission (FERC) and therefore do not have Emergency Action Plans. These Dams are not anticipated to have adverse effects to populated areas due to either their size and/or control features:

- Davis Creek Dam
- Lower Bandy Dam
- Cache Creek Settling Basin Weir

Six additional Dams have the potential to cause the sheltering effect as described above as well as water inundation effects<sup>2</sup>:

**Cache Creek** – A failure of Cache Creek Dam could cause inundation over the length of Cache Creek itself and could overbank the creek at various points (especially low lying). This could cause evacuation by Yolo County of properties close to the creek and sheltering.

**Folsom** – Waters from a Folsom Dam failure will travel west to the Sacramento river. If the Sacramento Weir were opened to alleviate pressure, waters would flow into the Yolo Bypass as part of normal flood control design. A minimal direct affect within Yolo will be inherent. Jurisdictions within Yolo could be asked to assist with sheltering residents from Sacramento County.

**Indian Valley** – A failure at Indian Valley would cause flood waters to flow along Cache Creek. This would cause an evacuation of Yocha Dehe Wintun Nation citizens in the Tribe's primary housing area, evacuations throughout the unincorporated area from Rumsey through to Brooks, areas within Esparto and potentially inundate areas on the north west side of the cities of Woodland and Davis. The Cities of West Sacramento and Winters may be involved in shelter operations as they would not be affected by water inundation.

**Monticello** – Waters from a Monticello Dam failure will travel East along Putah creek. This would cause an evacuation of the entire City of Winters and most of the outlying residents in the unincorporated area (the responsibility of the County). The majority of the City of Davis and the University of California Davis would also be affected by inundation of varying heights. The Cities of West Sacramento and Woodland may be involved in shelter operations as they would not be affected by water inundation.

**Oroville** – A failure at Oroville Dam could cause water inundation from North to South in Yolo extending along the eastern border of the County. All jurisdictions within Yolo would need to work closely with Solano and Sacramento counties for a sheltering strategy if all jurisdictions were impacted at the same time. If flood waters only affect the critical infrastructure located east of Davis and Woodland and west of the Yolo bypass, all jurisdictions involved will engage in emergency response resource acquisition and allocation to ensure citizens can remain in their homes with as little impact as possible.

Cal OES maintains a buffer evacuation boundary within their ***Oroville Dam Failure Response Plan***, indicating an evacuation of Woodland, Davis & West Sacramento.

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<sup>2</sup> Inundation modeling of Dam's is based on a full reservoir and full failure of the primary Dam in most cases and therefore represents a worst case scenario.

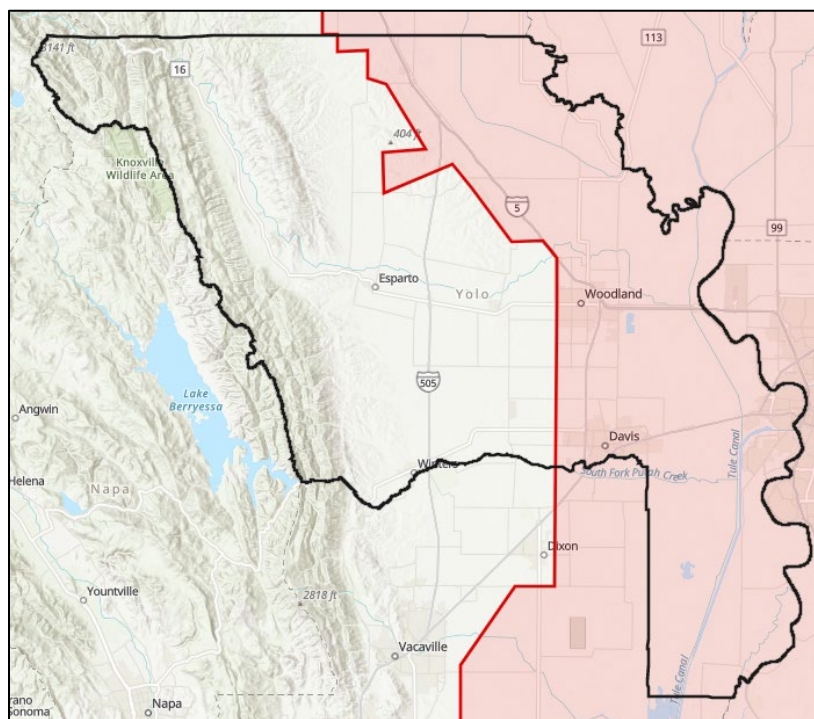


Figure 3 – Cal OES 2017 Oroville Dam Evacuation Buffer Zone

**Shasta—Waters travelling South from a failure at Shasta could affect the town of Dunnigan and West Sacramento if the Yolo Bypass levee system holds the waters to the east. The effects of inundation would be minor.** Jurisdictions within Yolo may be involved in shelter operations to assist counties to the north who may be evacuating.

## 2.4 YOLO OPERATIONAL AREA

Yolo OES takes the lead role within the Yolo OA to coordinate resource management and information flow among all local public jurisdictions involved in flood response efforts. The OA is the contact point for State of California response agencies.

Importantly, the Yolo OA will also establish and support, in conjunction with surrounding counties, unified flood fight commands among established local jurisdictions to integrate and coordinate field response operations of all public jurisdictions and more efficiently accomplish field response objectives.

Yolo OA will also maintain the Disaster Service Worker Program and work with jurisdictions to ensure that volunteers and other appropriate emergency staff are appropriately registered in the program upon activation or recruitment.

Yolo County maintains and hosts the Yolo County Emergency Operations Center (EOC) and other jurisdictions within the County. The EOC supports operations within their jurisdictional operational area, the Incident Commander(s), and the Yolo Unified Flood Fight Commands established during a flood emergency response. The EOC functions include prioritization and allocation of scarce resources, including mutual aid, information sharing, and conducting coordination processes in accordance with the Yolo Operational Area and the emergency operations plans of local jurisdictions. The County organization in the EOC will also provide

management and general staff support to the established unified flood fight commands directing field operations in the county's unincorporated areas.

The Yolo Operational Area Planning/Intelligence Section will participate in the disaster information-sharing process and provide situational status to participating jurisdictions upon an emergency's activation.

It is anticipated that whether the flood hazard be from a Levee or Dam incident that the County EOC will be transferred into the Operational Area EOC to provide coordination among all response agencies and interface with the State and Federal governments as identified in the California Government Code.<sup>3</sup> The OA EOC will also activate if flood waters and its neighboring jurisdictions do not directly impact Yolo to facilitate mass care and shelter operations within the County. Please see the Yolo County Mass Care and Sheltering Annex for additional information.

## **2.5 CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES**

The mission of the California Governor's Office of Emergency Services (Cal OES) is to oversee the State's ability to respond to emergencies that threaten lives, property, and the environment. Government Code § 8587 gives Cal OES the authority to coordinate the emergency activities of State agencies and to delegate power for response once local resources are exhausted. Cal OES supports local emergency operations through the respective Cal OES Regions. Yolo County reports information and resource needs to the Cal OES Inland Region. Cal OES also maintains two plans that, when activated, will cause a heavy level of interaction between the Yolo OA EOC and the Cal OES Inland Region.

During activating the Cal OES Northern California Catastrophic Flood Response Plan (NCCFRP), Yolo is placed in one of the northernmost Branches (Branch I). Yolo shares a hydrologic connection with two of the counties in Branch II via the Bypass system in the State Plan of Flood Control and shares cross-jurisdictional levee districts with Solano (Branch IV). Considerable interaction with these branches will be necessary.

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<sup>3</sup> California Government Code 8607 - Title 19, Division 2, Chapter 1 §2409 – Standardized Emergency Management System (SEMS) Regulations.

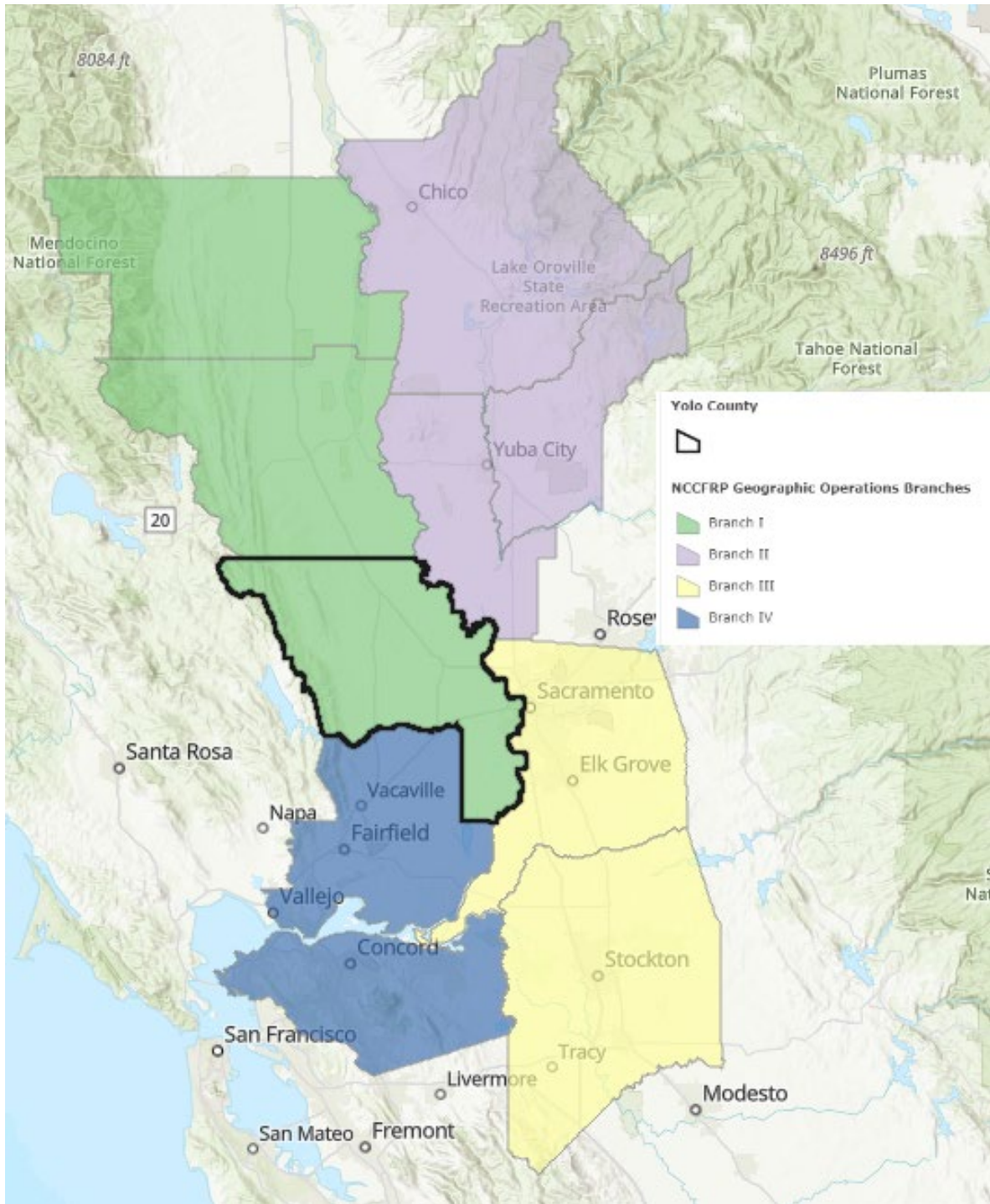


Figure 4 – Cal OES NCCFRP Geographic Operations Branch Divisions

Cal OES has also drafted a new ***Oroville Dam Failure Response Plan*** that divides response into two Area Commands as shown in Figure 5 below.

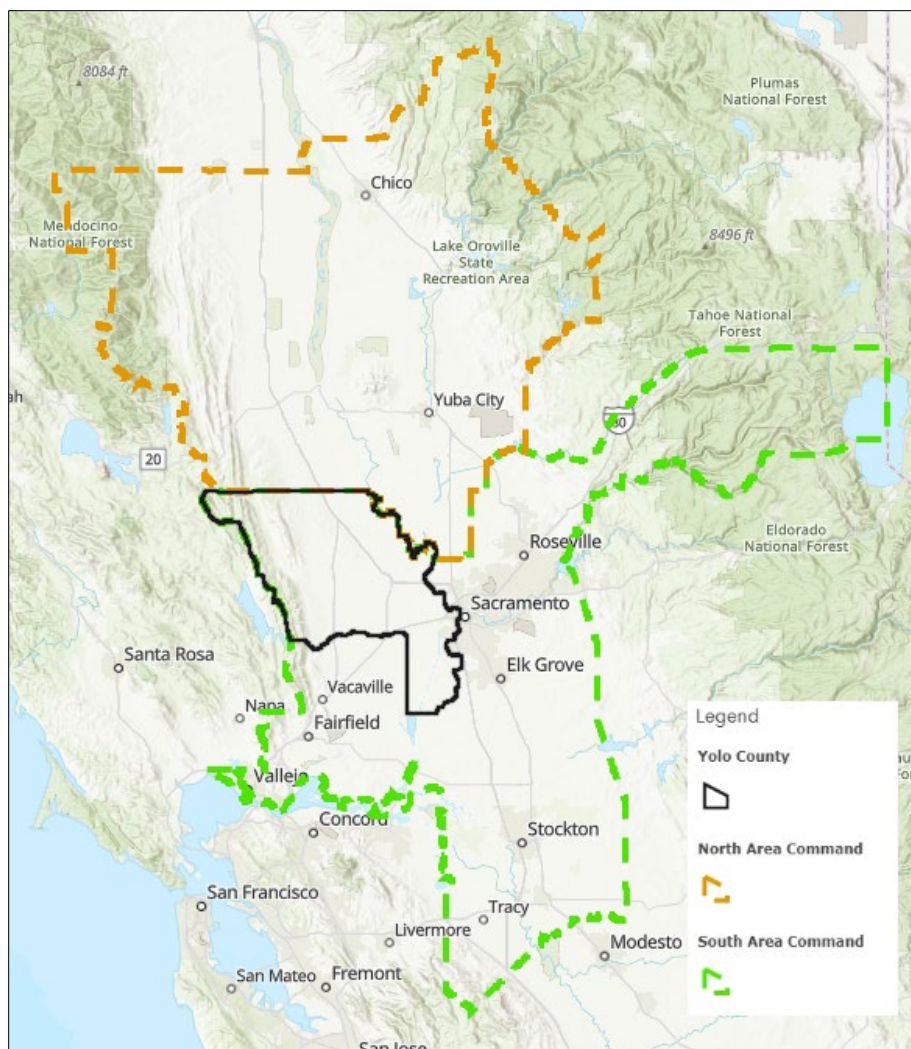


Figure 5 – Cal OES Oroville Dam Failure Response Plan Area Commands

If both plans are activated at the same time, Cal OES will need to work closely with Yolo to ensure that information and resources from Branch I and the South Area Command are incorporated into the response structures being used within the OA (7 EOC’s, at least 2 DOC’s and potentially 3 Unified Flood Fight Commands).

## 2.6 CALIFORNIA DEPARTMENT OF WATER RESOURCES

The mission of California Department of Water Resources (DWR) Division of Flood Management is to prevent the loss of life and reduce property damage caused by floods. The Department Flood Operations Center (FOC) in Sacramento will provide technical expertise and flood fight resources to local agencies through a request from local operational areas. Additionally, DWR’s Division of Safety of Dams (DSOD) is the responsible Operations and Maintenance agency for the Oroville Dam.

DWR provides flood fight technical and direct assistance to local agencies. Local agencies can request assistance per guidelines described in the Levee Threat Mitigation Process dated November 2013. The diagram in Appendix C shows an overview of the request and review process used by DWR to help prioritize resource allocation in the face of multiple requests for

assistance by local agencies across a large geographical area (e.g. Butte County to the South Delta). For more information, please consult the ***Levee Threat Mitigation Process Guidelines***.

Once a request is made to the State by an OA, DWR can provide technical advice and assistance concerning flood fight and emergency flood control measures. Examples of assistance include consultations with flood fight and geotechnical specialists to assess a levee issue, advice on flood fight methods, and/or providing flood fight materials (sand bags, plastic sheeting, flood barriers, twine, etc.).

DWR staff dispatched to the field from any DWR unit will work through the Yolo Unified Flood Fight Commands (UFFC) to ensure coordination of DWR activities with other response functions occurring in the County.

DWR has special authority under Water Code Section 128 to assist Reclamation Districts: Levee-Maintaining Agencies with flood fight operations. DWR maintains the State-Federal Flood Operations Center (FOC) to perform these functions and support the operations of other State and Federal agencies. The District will maintain communications with the FOC through telephone systems or at multiagency coordination activities within unified flood fight command where FOC representatives are present in order to receive and provide information with that facility, and request technical assistance.

The Delta Flood Emergency Preparedness, Response and Recovery Program (Delta ER) describes DWR's actions during flood emergency responses. The intent of this program is to have a coordinated and effective multi-agency response effort during a large-scale flood emergency where DWR works in concert with the other local, state, and federal flood emergency agencies. The program objectives are:

- Protect the lives, property, and infrastructure critical to the functioning of both the Sacramento- San Joaquin Delta and California.
- Protect water quality and restore water supply for both Delta and export water users.
- Reduce the recovery time of California's water supply from catastrophic floods to less than six months.
- Minimize impacts on environmental resources.

The following Table of agencies are involved in developing the Delta ER components:

Local and Regional Stakeholders	State	Federal
Five County Operational Area Emergency Managers (Contra Costa, Sacramento, San Joaquin, Solano and Yolo)	Governor's Office of Emergency Services ( <b>Cal OES</b> )	US Army Corps of Engineers ( <b>USACE</b> )
Local Reclamation Districts and Levee Districts	Central Valley Flood Protection Board ( <b>CVFPB</b> )  Delta Stewardship Council ( <b>DSC</b> )	California-Nevada River Forecast Center ( <b>CNRFC</b> )  National Oceanic and Atmospheric Administration ( <b>NOAA</b> )
State Water Contractors, Public Utilities	California Coast Guard ( <b>CCG</b> )  State Parks and Recreation	Federal Emergency Management Agency ( <b>FEMA</b> )  US Bureau of Reclamation
Delta Protection Commission	DWR: Operations and Maintenance (O&M), Executive	National Guard

**Table 1 – Delta Planning Partners**

## **2.7 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (DFW)**

The mission of the California DFW Office of Spill Prevention and Response (OSPR) is to provide response measures to spills of oil and other deleterious materials and restore and enhance affected resources. OSPR meets quarterly with United States Coast Guard (USCG) and other stakeholders to update the Area Contingency Plan (ACP) information such as the coordination of volunteers during an oil spill, local governments representation within the unified command, and sensitive site protection strategies. This ensures that information stays current, and best practices are being utilized efficiently.

To aid their mission, OSPR maintains a current database of water quality information relevant to emergency response operations. This database includes information on environmental resources identified by the ACP as at risk, assets of economic importance, strategies for protecting specific sites, and shoreline access points. Coordination with OSPR is an important tool for water quality response operations throughout the Delta region.

During catastrophic flooding events, water can be contaminated by many hazardous chemicals. Additionally, due to rapid hydraulic changes, water quality can be impacted as a result of salinity influxes.

## **2.8 FEDERAL EMERGENCY MANAGEMENT AGENCY**

The Federal Emergency Management Agency (FEMA) purpose is to coordinate the response of a disaster that has overwhelmed all resources of local and State authorities. The Governor of

California must proclaim a state of emergency and formally request FEMA and Federal assistance from the President to respond to the disaster. FEMA's Region IX operations section in Oakland, CA works closely with Cal OES to deliver Federal assistance in support of local and State response efforts. Region IX includes American Samoa, Arizona, California, Guam, the Commonwealth of the Northern Mariana Islands, Hawaii, and Nevada. This region has a Regional Response Coordination Center (RRCC) that serves as the Federal government's emergency coordination center. Within the RRCC, the Watch Center provides situational awareness for the entire Region IX area of responsibility. The Watch Center is a 24-hour, seven-days-per-week function that maintains situation awareness of incidences and provides FEMA Headquarters and Region IX with information on resource coordination to local, State, and Federal agencies.

## **2.9 U.S. DEPARTMENT OF THE INTERIOR – BUREAU OF RECLAMATION**

The mission of the Bureau of Reclamation (BOR) is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Originally conceived under the Reclamation Act of 1902 as a means to help settle the West by providing infrastructure for agricultural development, the Reclamation program focused on the construction of dams and facilities to store and convey water. Unlike other interior agencies that operate under an overall organic act or authority, BOR operates under specific authority for each project. As the potential for additional project purposes were identified by the states and local entities, Congress supplemented the Reclamation Act, which implemented hydropower production, flood control, municipal and industrial water, recreation, and fish and wildlife enhancement to the list of authorized project purposes.

The Bureau of Reclamation is the primary response agency for several of the dam's that could affect Yolo including:

- Folsom
- Monticello
- Nimbus

## **2.10 U.S. ARMY CORPS OF ENGINEERS**

The U.S. Army Corps of Engineers (USACE) flood disaster assistance program supplements and supports State and local interests upon their request for assistance to the Federal government. USACE is authorized to provide direct flood emergency response assistance relative to:

- Emergency operations, flood fight assistance (technical and direct assistance)
- Rehabilitation of damaged flood control projects
- Advance measures (technical and direct assistance)

When flood conditions exceed, or are predicted to exceed, the response capability of levee-maintaining and/or reclamation districts, local, and State governments, USACE has the authority under Public Law 84-99 to provide emergency flood response assistance without further specific authorization of Congress. USACE can furnish assistance for flood emergency preparation, flood fighting, and the repair or rehabilitation of flood-control works threatened or destroyed by flood. USACE assistance may also include the provision of flood fight personnel for technical

advice and equipment (such as sandbags, plastic sheeting, pumps, or other materials). In the event of an imminent threat of catastrophic flooding, USACE may provide equipment to protect against substantial loss of life and property.

USACE staff dispatched to the field will work through the Yolo Unified Flood Fight Commands to ensure coordination of USACE activities with other response functions occurring within the County.

When the State of California is unable to fulfill an OA's request for assistance, or if the State needs additional resources, serving as the State's liaison to USACE, DWR can request flood response assistance from the USACE under Public Law (PL) 84-99. USACE has primary federal authority for assisting states with flood fight efforts that meet the six key areas established by PL 84-99:

- Disaster Preparation
- Emergency Response
- Rehabilitation
- Water Assistance
- Advance Measures
- Hazard Mitigation

PL 84-99 is the first dedicated federal authorization for emergency flood preparedness, response, and recovery. Following the passage of PL 84-99, DWR established a Memorandum of Understanding (MOU) with USACE that designates DWR as the only California state agency that can make requests for assistance to local agencies under PL 84-99. Examples of the type of assistance USACE can provide are technical experts and materials to address flooding issues, emergency contracting, and directing flood fight operations.

#### **USACE, Sacramento Division, West Bank Yolo Bypass Levee**

The USACE is responsible for the maintenance and administration of a stretch of levee that runs along the west side of the Deep Water Ship channel, see location on the map in Figure 6. The Deep Water Ship Channel essentially divides the City, creating two basins – north and south. The north basin is a ring levee bounded by the Sacramento Bypass levee on the north, the Port North levee on the south, the Yolo Bypass levee on the west and the Sacramento River West North levee on the east. The south basin is an 'open' ring levee bounded north by the Port South levee and east by the Sacramento River West South levee. The South Cross levee and the Deep Water Ship Channel West levee provide some flood protection to the basin on the south and west, but the Deep Water Ship Channel provides a hydraulic open pathway for floodwaters to encroach into the south basin via backwatering during high stage events in the Yolo Bypass.

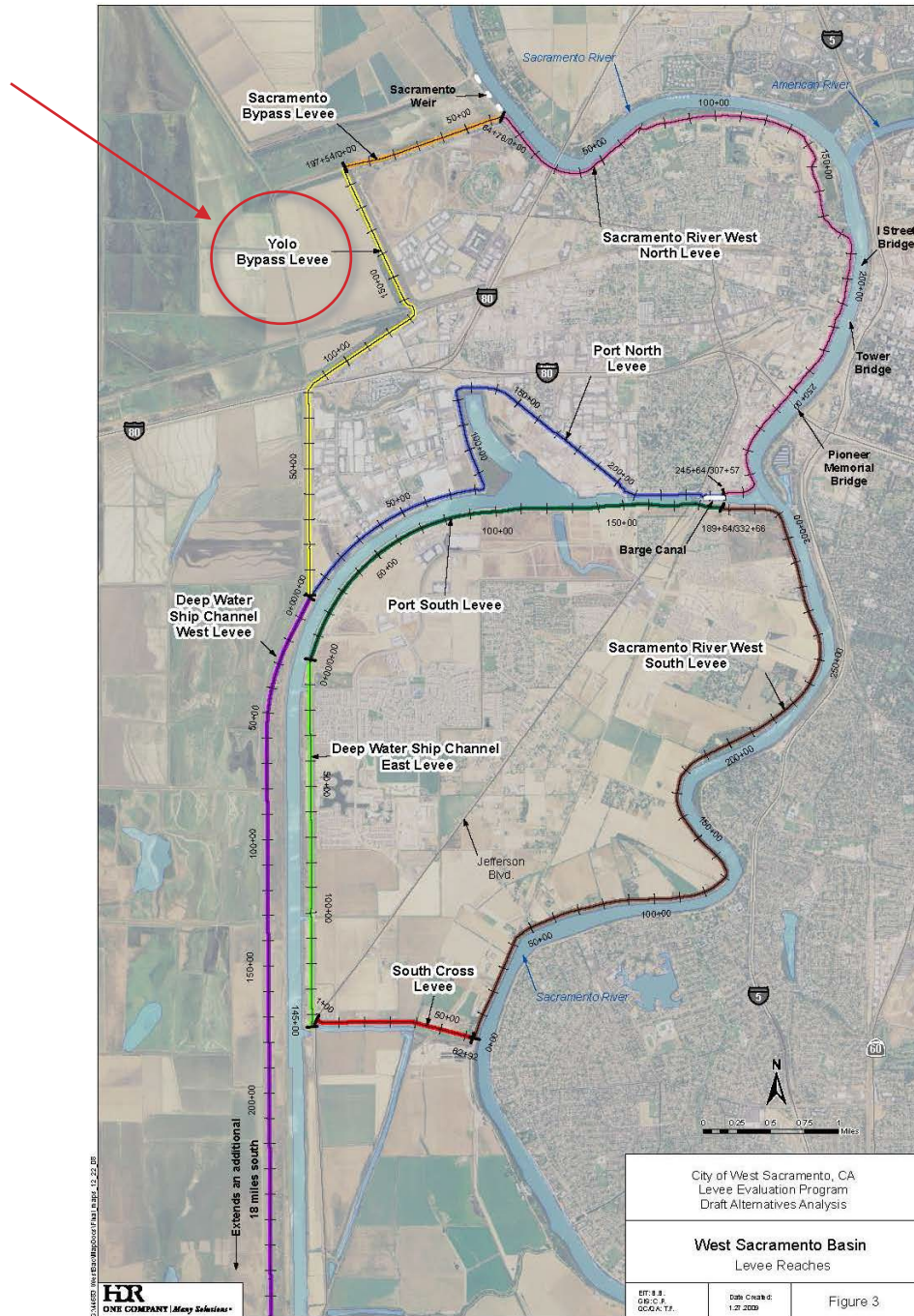


Figure 6 – West Sacramento Levee System

## 2.11 U.S. COAST GUARD

The Captain of the Port (COTP) for the U.S. Coast Guard’s (USCG’s) San Francisco Sector oversees marine activities in an Area of Responsibility (AOR) that covers most of Northern California. Within this AOR, the COTP is responsible for the maritime safety of its navigable waters, the maintenance of the aids to navigation within them, and the prevention of marine

pollution. The latter is part of the USCG's marine environmental protection mission. During incidents that impact these waters, including the entire San Francisco Bay and the Delta region, (including Yolo County and its major navigable tributaries), the COTP serves as the Federal On-Scene Coordinator. USCG can provide search-and-rescue (SAR) capabilities and spill response for oil and hazardous material throughout the Delta region as part of its response efforts.

### **Closure of Delta Waterways**

Emergency situations such as projected high-water events, flooding, or emergency operations such as flood fighting may require restrictions on vessel movement in the Sacramento-San Joaquin Delta waterways.

The Deep-Water Ship Channel connects the Delta to the Port of West Sacramento. Flooding in this area can affect deep draft shipping and commerce vessels, impeding traffic to and from the Port of West Sacramento.

The U.S. Coast Guard has the authority to restrict commercial vessel traffic on navigable waterways. Below are the USCG established triggers for restricting vessel traffic:

- **First trigger point.** The San Francisco Bar Pilots or Vessel Traffic Service/Waterways have received reports that the Delta river areas are predicted to have unusually fast currents and/or high-water levels. Actions include monitoring flood conditions and issuing a Safety Marine Information Broadcast.
- **Second trigger point.** Reports indicate that conditions in the rivers have reached a state such that certain restrictions may be necessary to ensure safe transits through the affected area(s). Restrictions could include vessels only permitted to transit during daylight hours and within one hour of predicted low tide at either Rio Vista (Sacramento River) or Prisoners Point (San Joaquin River).
- **Third trigger point.** Reports indicate that conditions in the rivers have reached a state such that it is not safe to transit the area or damage to levees has occurred to the extent that transits by vessels may cause more damage. Actions include closure of the affected waterways.

**California State Parks, Division of Boating and Waterways** has the authority to restrict recreational boating and will issue all vessel restrictions and/or advisories to marinas throughout the Delta.

## **2.12 PRIVATE SECTOR CONSTRUCTION/EQUIPMENT COMPANIES**

Construction and/or large-equipment companies needed during flood response and recovery efforts will be obtained by the public agency responsibility for the problem that these private vendors are assisting. Procurement procedures, standard contracting forms, and documentation protocols are contained in the emergency operations plans of all public jurisdictions, and include LMA's in their emergency operations plan to ensure that such contracting can be done expeditiously by the appropriate jurisdiction.

## **2.13 DELTA WORKING GROUP**

Several local, state, and federal agencies operating within a patchwork of authorities, exercise their responsibilities for various aspects of emergency preparedness, response, and recovery efforts. In an effort to develop multi-agency coordination, particularly between agencies regarding the Delta and emergency response responsibilities, the Delta Working Group was

created under the Multi-Agency Coordination (MACS) which is a component of the Delta Emergency Response.

## SECTION 3.0: CONCEPT OF OPERATIONS

A key prerequisite of flood planning and response operations which the Yolo OA will maintain is ongoing consistency within the regional OA in regards to structure and content of local flood safety plans, structure and operation of pre-planned unified commands, flood-response training requirements and formats, and structure and operations of mutual aid systems. This consistency enhances regional cooperation and sharing of information and resources in an essential rural area with less than optimal response resources in place. Yolo OES will participate in and help maintain regional coordination agreements and processes to maintain this consistency.

Emergency response to floods is a three-party approach (local, state, and federal) with the local agency being primarily responsible for levee maintenance and flood fighting. Levee-maintaining agencies include levee and reclamation districts, other special districts, local government agencies, private levee owners, and State Maintenance Areas (MA) funded by property assessments and State Maintained Areas (ST) funded by general funds, which are both maintained by DWR.

The local agency has the responsibility to conduct flood fight operations and utilize all available agency personnel, materials, equipment, and financial resources. Once LMAs have exhausted their resources, flood fighting exceeds the LMA's capabilities, or if nearby communities are threatened, the LMA may then request assistance through their Operational Area (OA). The OA will initially provide aid within the county before seeking mutual aid, regional assistance, or statewide assistance using all available SEMS levels.

### 3.1 PHASES OF RESPONSE

This annex will be implemented in phases as outlined: 1) Preparedness, 2) Response and 3). Recovery.

#### **PHASE 1: PREPAREDNESS**

##### **NORMAL PREPAREDNESS**

The Yolo OA will prepare its own specific operating procedure and checklists for a flood emergency, including coordinating strategies with other departments and jurisdictions. Yolo OES will maintain the Yolo OA procedures, while the cities, tribes, and LMAs will maintain their own specific jurisdictional emergency operations plans. These activities will be performed in accordance with written criteria for periodic review and updates.

Yolo County OES will participate in ongoing regional coordination activities to ensure consistency of the flood safety plan, unified command, and mutual aid structure and content within the region. These coordination activities include:

- Hosting of the annual pre-season winter weather preparedness meeting each fall
- Coordination of, at least, one Flood Fight Methods course (taught by DWR)
- Regular training in procedures and systems used by Emergency Management such as the participation in training and exercises<sup>4</sup>

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<sup>4</sup> Online training for digital systems is available at - <http://www.yolocounty.org/general-government/general-government-departments/office-of-emergency-services/training>

Normal preparedness activities will also include a periodic audit to ensure that jurisdictions are current with their plans, and periodic reviews of this annex and the Yolo Unified Flood Fight Command protocols.

The Yolo Office of Emergency Services and its participating jurisdictions will ensure that the following information is collected and maintained prior to flood events:

- Nature and location of hydraulic features—such as lakes, rivers, streams, creeks, and sloughs—that are intended to possibly convey flood flows in the case of failure of flood-control infrastructure.
- Nature, location, and condition of flood-control infrastructure, such as levees, pump stations, dams, diversion points, culverts, and drains.
- Flood history, historic flood elevations, and historical levee breaches.
- Fire perimeter history, identify areas that may suffer mud and debris flows that can possibly affect the Flood Control System.
- Points of past or potential vulnerability in flood-control infrastructure due to seepage, erosion, excessively high-water elevations, or other conditions exceeding flood-control structure specifications.
- Topography and nature of flood flows from foreseeable failure of the flood-control infrastructure.
- Elevation, location, and vulnerability of critical infrastructure to flood flows.

This information will be collected by LMA's and public agencies, and will be displayed on the GIS-based flood contingency maps that constitute the hazard-specific flood annex of their jurisdictional emergency operations plan (flood safety plan). Yolo County OES is responsible for ensuring that LMA's collect and maintain this information in accordance with their plan update schedule. Yolo OES is also responsible for ensuring that the County maintains the maps in a central location, so that this information can be promptly retrieved.

Key jurisdictions such as the county, cities, Tribe, and LMA's will maintain emergency operation plans in accordance with FEMA. Key response procedures and information will be maintained and managed by Yolo OES. GIS map files and systems will be structured in a format that will allow for real-time information to be collected and displayed on GIS display maps as needed upon initiation of a flood response. Yolo OES has developed a Damage Assessment Suite that is used to collect damage information before and after a disaster. A regional GIS Technical Manual will be maintained by the surrounding counties in the Sacramento River Region to ensure the information objectives are attainable and consistent within the GIS file structures. This GIS system will comply with the Regional GIS Technical Manual of the Mid and Upper Sacramento River Flood Response Project<sup>5</sup>.

### INCREASED PREPAREDNESS

At the beginning of flood season, Operational Area jurisdictions will work in conjunction with Yolo OES and other local jurisdictions to implement flood preparedness activities reflected in their respective department, and begin pre-planned monitoring to evaluate information and initiate appropriate response. For the Yolo Operational Area, this would also include a review of the unified command protocols and systems, and preparation efforts to ensure that “just-in-time” flood-response training can be provided expeditiously to local responders.

The Operational Area EOC and West Sacramento EOC will be activated on a Duty Officer status and daily monitoring by OES will commence (if not already started) via any one of the

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<sup>5</sup> Edits to the MUSR GIS manual will be requested as systems are updated in future years.

following systems:

- California Nevada River Forecast Center (CNRFC)
- California Data Exchange Center (CDEC)
- National Weather Service (NWS)
- River Forecast
- Local Levee Maintaining Agency Staff Gauges\*
- Yolo County Arc GIS Daily Briefing web mapping application

\* The LMAs monitor and analyze (in the field, at local staff gauges placed in district or through the California Nevada River Forecast Center) throughout the flood season the water conditions, elevations, and forecasts for waterways affecting their levees for the purpose of promptly identifying heightened threats to the integrity of levee and drainage systems. The objective of this monitoring effort is to identify objective conditions that warrant additional actions beyond routine flood season preparedness activities. See LMA Trigger Char on *Appendix B* to identify the gauges.

Local jurisdictional partners will be encouraged to review the Just in Time training on-line modules as a refresher to in-person trainings that were previously received to prepare for potential response. To access these on-line modules, please visit <https://musrflood.squarespace.com>.

### EMERGENCY PREPAREDNESS

When it is determined, through monitoring of pre-established trigger conditions, that a potential flood situation will occur, Yolo OES will implement the following actions:

- Confirm and monitor formal designation of jurisdictional incident commanders as jurisdictions reach pre-planned trigger conditions for this action.
- Ensure that EOC's can be opened in a timely manner and jurisdictional plans can be expeditiously implemented.
- Confer with surrounding operational areas to identify and activate appropriate unified flood fight commands to coordinate field response.
- Initiate "just-in-time" flood response training for local responders that have not had minimum required training prior to the event.
- Work with jurisdictions and LMA's that rely on volunteers and emergency hires to register such personnel in the Disaster Service Worker Volunteer Program as appropriate.
- Provide information to Yolo County departments, the Cities, Yocha Dehe Wintun Nation, other special districts, and local jurisdictions regarding the threat, potential flood severity, and areas affected.
- Advise departments to report action being planned or taken, and anticipated deficiencies in critical emergency resources.
- Prepare to receive or render mutual aid.
- Keep departments and jurisdictions promptly notified of any changes in the operational picture.

Yolo OES will participate in teleconferences and in-person meetings whenever possible to be able to relay information to as many jurisdictional partners as possible. These typically include:

- UFFC meetings
- FOC teleconferences

- NWS teleconferences
- Cal OES Task Force meetings
- Meetings with private contractors & engineering firms
- Public Meetings

Local jurisdictional partners will be encouraged to review the on-line training available for the Survey123 Damage Assessment Application to accurately record damages within the flood control system.

### **Sacramento Weir and Bypass**

When the Sacramento River at I Street reaches 29.9 feet and is forecast to rise, the California Department of Water Resources will then typically begin opening the Sacramento weir gates to prevent the stage at the I Street gage from exceeding 31 feet, or to hold the stage at the downstream end of the weir to 29.9 feet. The number of gates to be opened is determined by the NWS/DWR river forecasting team. Once all 48 gates are open, the Sacramento River stages from Verona to Freeport may continue to rise during a major flood event. Once the stage at the weir drops below 27 feet, the gate will be closed as fast as possible.

### **George Kristoff Water Treatment Plant**

When the Sacramento Weir gates are projected to open, a notification is made to the City of West Sacramento Public Works Department to inform of the Weir opening/closing. This notification is critical as the inlet pipe to the plant needs to be shut off until the water in the Sacramento River stabilizes.

### **Public Alert and Warning**

Yolo OES and/or the Yolo Emergency Communications Agency (YECA) will promptly work with jurisdictions to initiate alert and warning systems to the general public during the preparedness phase and upon identification of a threat within Yolo County. Yolo OES will provide information on the characteristics of the threat and, if requested, will assist in notifying the public utilizing the Yolo-Alert system. Yolo Alert is the County's emergency mass notification system. All field alerts and in-person warnings to the general public will be carried out through the Yolo Unified Flood Fight Commands and local Law Enforcement, as established under the coordination of the Yolo Operational Area EOC. For further information reference the Area Alert & Warning Support *Annex*.

The Operational Area Public Information Officer (PIO) will be activated as soon as possible during an emergency. The PIO establishes a Joint Information Center (JIC) with all participating jurisdictions to coordinate with media sources for news releases. News release procedures will be agreed upon and established for the Yolo County Operational Area and Yolo Unified Flood Fight Commands. The PIO will disseminate emergency messages to the public regarding preparedness measures to take, evacuation areas and routes (if applicable), emergency resources, measures that County OES is taking during the event, and recovery assistance information.

### **Flooding Notifications Strategies for the Public**

The National Weather Service (NWS) releases notifications to media outlets and public agencies. They use standard terminology for watches and warnings:

- **Flash Flood Watch** means it is possible that rain will cause flash flooding in specified areas.

- **Flash Flood Warning** means flash flooding is either imminent or is occurring.
- **Flood Watch** means long-term flooding is possible in specified areas.
- **Flood Warning** means long-term flooding is either imminent or is occurring.

The activation process will commence when the Sacramento Weir opens their gates, and/ or the NWS sends out their notifications utilizing FEMA’s Integrated Public Alert and Warning System (iPAWS) and Wireless Emergency Alerts (WEA) to alert county citizens of an emergency. Although this notification is directed towards those individuals whom may be in the vicinity of the affected area, it is important to consider that notifications might also be received by other people outside of the affected area. Yolo OES will include annual pre-season information in its Phase 1 efforts to educate the public on this notification.

A flood incident planning and ESF response matrix is included under Appendix D which outlines the issues and considerations based upon the level of awareness indicated by the NWS, (e.g., Flood Watch, Flood Advisory, Flood Warning, and Flash Flood Warning). The matrix includes specific decision points for each level of awareness and the responsibilities of each Emergency Support Function (ESF).

For more information regarding notifications procedures, refer to the ***Yolo Operational Area Alert and Warning Support Annex***.

## **Phase 2: Response**

### **EMERGENCY PHASE**

When water elevations or conditions are expected to cause flooding, the jurisdictional emergency organizations will perform the following broad functions, as required, to cope with the specific operational situation:

- Develop and maintain an overall Common Operating Picture (COP) – this is done through a combination of Situational Status reporting and adding information to the Survey123 Damage Assessment Application.
- Elevate the activation level of the Operational Area EOC to a level commensurate with the hazard assessment<sup>6</sup>, and activate jurisdictional EOC’s and jurisdictional response plans necessary for response.
- Mobilize, allocate, position, and assign personnel and materials in accordance with jurisdiction plans and unified command decisions and objectives. During this function, special attention will be given to the availability of flood fight stockpiles and their deployment locations for the duration of the event.
- Protect, control, and allocate vital response and community public safety resources
- Relocate, restore or activate essential facilities and systems
- Participate in Unified Flood Fight Command organizations established to coordinate field response among involved public jurisdictions
- Send out notifications to the public to alert them of the situation and how they should respond

Implementation of the jurisdictional flood response plans will be coordinated through joint protocols of the Yolo Unified Flood Fight Commands and the Yolo OA. When local resources of these key jurisdictions and other public safety agencies are committed to the maximum, and additional materials and/or personnel are required to control or alleviate the emergency, requests for mutual aid will be initiated through the Yolo Unified Flood Fight Commands to the

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<sup>6</sup> For the activation levels of the EOC please reference the ***Yolo County EOP***.

Yolo OA EOC.

Flood Damage/Safety Assessment is the basis for determining the need to request State and/or Federal operational and financial assistance. The Initial Damage Estimate (IDE) is developed during the flood emergency phase to support a request for a Governor's proclamation and for the State to request a presidential declaration. The collection of IDE amounts throughout the Operational Area is facilitated by the use of the Survey123 Damage Assessment Suite<sup>7</sup>:

- Step #1 - Field-level staff enter damages through a mobile application platform
- Step #2 – EOC or designated jurisdictional partners verify each entry into the system and assign it a damaged dollar value
- Step #3 – The system cumulates all values and summarizes them in the Damage Assessment Dashboard

The application can recap damage numbers within the entire OA based on shape files loaded into the system. Entries will be filtered for each respective jurisdiction either by reporter name or jurisdictional shape file to create breakdowns of IDE's as specified by the State or Federal government for access to Recovery funding sources.

### **Yolo Unified Flood Fight Command (UFFC) System**

Yolo County and other public jurisdictions involved in flood response will establish a unified flood fight command to direct and coordinate field response activities. The unified commands will be established and operated according to the protocols of the Yolo Unified Flood Fight Command System Operations Manual and associated Unified Command Map. For more information refer to the ***Yolo County Unified Flood Fight Command System Operations Manual*** for more detailed information.

Yolo Operational Area will organize its flood response command-and-control system based on the following key assumptions:

- Jurisdictions will perform their functions by established plans. For the Yolo Operational Area, several jurisdictional or joint plans/protocols are in place such as the Yolo Unified Flood Fight Command protocols.
- The multi-jurisdictional nature of flood response requires a unified command field organization to complement the higher-level multi-jurisdictional operational area system.
- Key tactical decisions (whether to evacuate, how to address a flood-control structure problem, how to contain flood waters, etc.) will be made in a field environment due to the need for rapid decision-making and the fact that the information or expertise needed to make those decisions is found in the field in proximity to the flood-control infrastructure.
- Policy decisions, overall tracking of the operational picture, recovery operations, and decision-making will occur at the jurisdictional level in the respective EOCs.

Based on those assumptions, the Yolo Operational Area will maintain the below key components to its overall command and control system:

- The Yolo OA has a protocol for assigning a single incident commander to supervise jurisdictional operations when the Yolo Flood Fight Unified Commands are activated. Yolo OES will ensure that they implement this protocol at the time of a flood warning in accordance with NIMS protocols. Below for reference is the organizational structure as described previously:
- The Operational Area will maintain unified command organizations (Yolo East and West Side Unified Commands) to direct and control both flood fight (failure prevention or containment of flood flows) and public safety tactical operations (physical warning, evacuation, rescue, etc.) in the field. All jurisdictions with field response functions will participate in this unified command to ensure coordination of all activities are taking place in the field.
- The Yolo UFFC structure will also work with the Colusa Basin UFFC in a flood emergency that has the potential to affect Yolo County.
- The County, city and Tribal jurisdictions will maintain an organization at their emergency operations centers (EOC) capable of the following:
  - Maintaining an overall operational picture
  - Ensuring prompt, joint policy decision-making
  - Providing planning/intelligence, logistics, and administrative support to the unified command operating in the field.

Yolo OES will maintain protocols to ensure the timely and effective activation of the above command-and-control systems.

The LMA will notify its Operational Area (OA) and DWR's FOC of the potential identified threat and may ask for technical assistance. If a flood fight exceeds LMA capabilities or if communities are threatened, the county may assist with the flood fighting operation. A DWR representative (Levee Inspector/Flood Fight Specialist/Geotechnical Specialist) may perform a site visit, document the levee stress, and recommend first response mitigation measures such as monitoring techniques or possible placement of sandbags.

The Department of Water Resources Sacramento Maintenance Yard has direct levee-maintaining responsibilities for State maintenance areas and State-maintained levees. Sacramento Maintenance Yard will designate an incident commander to direct State operations on flood-control structures for which it is responsible. This incident commander or representative will work directly with local unified commands to coordinate State operations with other LMA's and local public safety agencies. The Sacramento Maintenance Yard will work through local operational areas for mutual aid and other needs.

### **Safety and Security**

During a potential threat or actual event, employee safety and operational security will be key concerns for the Yolo Operational Area. The Yolo Unified Flood Fight Commands will establish appropriate safety procedures to be followed by all responders, and such procedures and directions will be documented on the UFFC Incident Action Plan. Security and safety procedures will also be implemented at all command posts and other tactical facilities and operational work sites. Incident commanders will implement safety briefings for all operational work activities.

Yolo County, the incorporated cities of Davis, Winters, West Sacramento and Woodland and the Yocha Dehe Wintun Nation are responsible for the public safety functions of warning, evacuation, rescue, shelter, and medical care. LMA's are responsible for the public safety functions of maintenance of flood control infrastructure and containment of flood flows. Sound organization and conduct of these operations will depend on the following:

- Efficient, integrated organization of field operations to address the limited resources available to local agencies
- Thorough knowledge of local conditions affecting the conduct of such operations
- Close coordination with the LMA’s responsible for levee maintenance. Efficient operations also require knowledge of details of the following:
  - Local road and highway conditions and the ability of public works agencies to maintain traffic ability of such arteries.
  - Unified Command organization and assignments to achieve most efficient response.
  - Population locations and characteristics that would affect warning and evacuation operations.
  - Conditions in surrounding counties that would affect the ability to evacuate and shelter County populations.

Evacuations are the responsibility of the local law enforcement agency.

### **Phase 3 - Recovery**

Local governments manage and coordinate the overall emergency recovery activities within their jurisdictions. Yolo County understands the needs of its community, their own recovery capacity, and can request assistance from partners to expedite the recovery process as needed. Yolo OES maintains a protocol for transitioning the Operational Area to recovery operations within the ***Yolo Operational Area Recovery Framework***. The Yolo OA recovery priorities are noted in the following table:

Yolo OA Recovery Priorities	
<b>Immediate, Short-Term Recovery Priorities</b>	<ul style="list-style-type: none"> <li>• Communications and Public Information</li> <li>• Mass Care/Sheltering</li> <li>• Volunteer and Donations Management</li> <li>• Debris Clearance</li> <li>• Damage Assessments</li> <li>• DWR Stockpile replenishments</li> <li>• Temporary/Interim Infrastructure</li> <li>• Fuel Systems</li> <li>• Behavioral Health</li> <li>• Public and Environmental Health</li> <li>• Continuity of Operations Plan</li> <li>• Succession Plan</li> <li>• Risk Assessment</li> </ul>
<b>Intermediate Recovery Priorities</b>	<ul style="list-style-type: none"> <li>• Interim housing</li> <li>• Debris management</li> <li>• Infrastructure restoration</li> <li>• Business reestablishment</li> <li>• Preservation and restoration of natural and cultural resources</li> <li>• Continuity of health care</li> <li>• Schools and social services;</li> <li>• Non-governmental assistance</li> <li>• Mitigation strategy</li> </ul>
<b>Long-Term Recovery Priorities</b>	<ul style="list-style-type: none"> <li>• Sustainable communities;</li> <li>• Resilient communities;</li> <li>• Economic revitalization;</li> <li>• Restored health care; and</li> <li>• Climate adaptation.</li> </ul>

Flood debris removal and flood emergency response costs incurred by the affected entities should also be documented for cost recovery purposes under the Federal programs. Flood debris removal will be conducted in accordance with the Yolo Operational Area Debris Removal. It will be the responsibility of Yolo County, the LMA's, and other special districts within the Operational Area to collect documentation of these damages and submit them to the Recovery Manager for their jurisdiction.

Damage documentation should include the location and extent of damage, as well as estimates of costs for debris removal, before-and-after photographs, emergency work, and repairing or replacing damaged facilities to a non - vulnerable and mitigated condition. The cost of complying with building codes for new construction, repair, and restoration will also be documented. The cost of improving facilities may be provided under Federal mitigation programs.

Documentation is the key to recouping expenditures related to emergency response and recovery operations. For each jurisdiction and special district, documentation must begin at the field response level and continue throughout the operation of their Emergency Operations Center as the disaster unfolds.

## **Document and Recovery**

Recovery efforts requested from FEMA, USACE, CalOES, or the Department of Water Resources, will request documentation of levee damage sites, flood fight methods, and at all stages of emerging, progressing, and final levee damage sites must be documented. Documentation can occur on hard copy logs, and flood contingency maps, and shared via Survey12. Three main items must be recorded regarding damage sites in order to make the recovery process more seamless. This include:

### **1. PHOTOGRAPHS OF DAMAGE SITES**

- Photograph of all stages of levee damage: initial signs of damage, progression of damage, and the final damage condition.
- Include relevant dimensions, especially those that are changing. This will help convey the rate at which damage is progressing.
- Photograph flood fight supplies, materials, and equipment used on site.
- Date and *time* of a photograph so that it can later be correlated with river stage, ideally locally used or forecasting gage station.
- Photographs should be geolocated with latitude and longitude coordinates. This can be easily done with Survey123.
- If feasible, provide a description of the angle it was taken from (i.e. "looking north approximately 100' away from south end of seepage extents").

### **2. DOCUMENT MATERIALS REQUESTED / INSTALLED**

- Document all assistance requests, specifically: the types and quantities of supplies, materials, labor, and equipment requested.
- Document the supplies, materials, labor, and/or equipment that was received, and that which was actually used or installed.
- Document the agency(s) that provided supplies, materials, and/or equipment.
- If equipment is used (i.e. vehicles, trucks, heavy equipment, etc.) document the name of the operator, specific vehicle identifier, and times in which they were used.

- In lieu of loose sheets that can be easily lost or misplaced during an event, the inside door of a ConEx Container can be used to keep track of flood fight supplies that are used, received, or lent to another agency. ConEx containers are Yolo County's flood fight containers.

### 3. LABOR

- Timecards must be kept
- Document the names, date, time of **safety briefings** at each incident command.
- Document the name, date, time of flood **fight training** at each incident command.
- Document the name, and **agency which they represent**, of individuals in flood fight training assistance crews.

### 4. PROCUREMENT PROCESSES

- LMAs should document how proper procurement policies were followed (resolutions, board minutes, etc.) per their respective Emergency Operations Plans (EOPs).

## PL 84-99 - USACE Assistance

As part of the Civil Emergency Management (CEM) Program, levees, referred to as Flood Control Works (FCW) and/or Projects by the USACE, can receive various forms of aid from the USACE under PL 84-99.

- **Advance Measures:** pre-flood assistance, such as **levee fortification, channel dredging, debris clearance**, etc. if imminent danger is anticipated (See publication EP 500-1-1 Ch.7 for criteria)
  - **Eligibility:** Technical or direct assistance may be offered if the need exceeds the capability of local and state government to address. Situations include but are not limited to imminent danger/flooding due to abnormally high snowpack, channel obstruction, levee overtopping, or dam failure.
  - **How to Request:** Governor makes request to Major Subordinate Command (MSC: USACE level above district authority), who then takes it to US Army Corps of Engineers Headquarters (HQUSACE). USACE needs to see that state has committed all available resources. If approved, a Cooperation Agreement will be executed and aid will be rendered.
  - **Cost Share:** Funding will be in accordance with ER-11-1-320. (See EP 500-1-1 Ch7-3 for details.)
- **Response Activities:** **Technical, flood fight, or direct assistance** during a flood – generally only if there is a perceived imminent threat to human life, property, or considerable economic impact. (See EP 500-1-1 Ch.4)
  - **Eligibility:** Any levee (federal, non-federal) regardless of whether it is active or non-active in the Rehabilitation Inspection Program (RIP). In Yolo County, requests are made to CA DWR, who then pushes up requests to USACE.
  - **How to Request:** Request for response assistance must follow SEMS/NIMS channels; local resources must be exhausted before DWR can request assistance from the USACE.
  - **Cost Share:** ER 11-1-320 prescribes general funding procedures for PL84-99 emergency operations Category 200 activities.

- **Rehabilitation:** Post-flood assistance; typically involves restoring a levee to its pre-flood condition. (See EP 500-1-1 Ch.5)
  - o **Eligibility:** Federal and Non-Federal Levees that are **active**, or are going through the SWIF process, in the Rehabilitation and Inspection Program (**RIP**).
  - o **How to Request:** USACE sends out a notice immediately after flood event to advise of 30-day window to request aid.
  - o **Cost Share:** Federal FCWs are repaired at 100% Federal cost. Non-federal FCWs have a 20% local cost share responsibility.

**Rehabilitation and Inspection Program (RIP)**

In order to receive **rehabilitation** aid, the levee segment must be: considered “active” under RIP. Active status for both Federal and Non-Federal levees is retained by achieving acceptable scores during Continuing Eligibility Inspections (CEI) conducted by the USACE every 2 years. FCWs with historically high marks may choose to move to a three (3) year approval period. If an LMA has been deactivated, it can apply to be readmitted to the RIP program through a System Wide Improvement Framework (SWIF) which is further discussed below. In some cases, an accepted Letter of Intent (LOI) to apply for a SWIF will suffice to gain eligibility for rehabilitation assistance.

Non-federal levees who have never been part of the RIP program and would like to be included, must have their public sponsor request an Initial Eligibility Inspection (IEI) to become eligible. If passed, the non-federal FCW is considered “active”. USACE provides inspection results within 30 days.

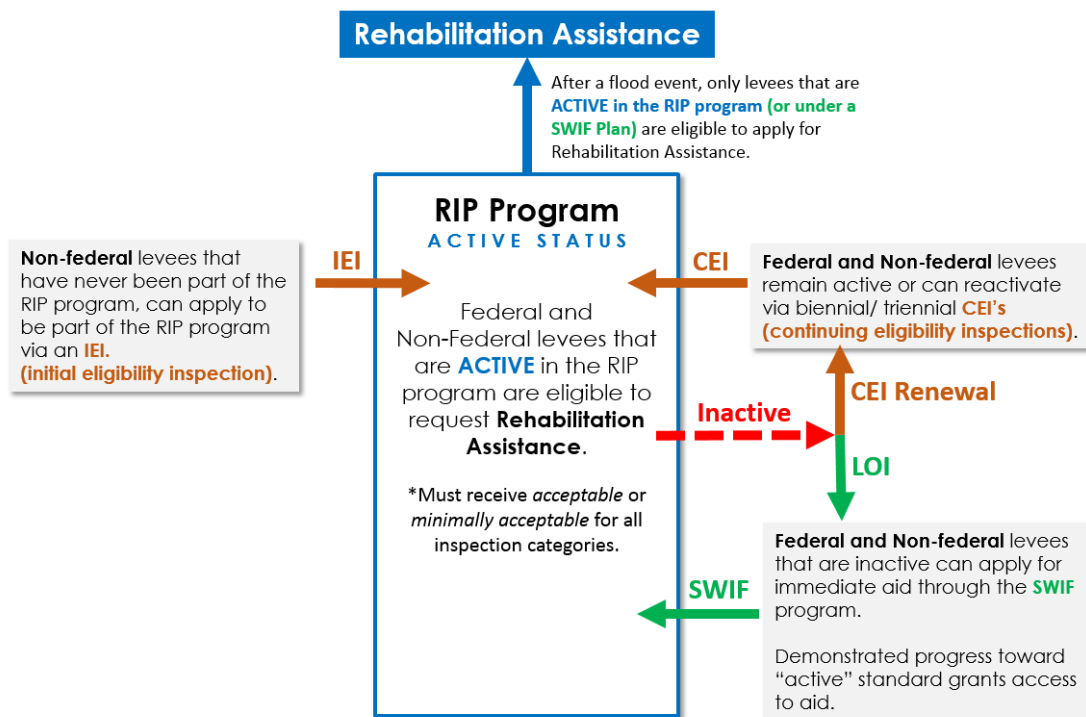


Figure 6 below provides a brief overview of the RIP program’s pathways to active status to gain eligibility for rehabilitation assistance, specifically.

### **Requesting Rehabilitation Assistance After a Flood**

USACE immediately sends out a notice to public sponsors (i.e. CVFPB) after a flood event starting **the 30-day window available to request aid**. LMA's can request aid if:

1. They are “**active**” in the RIP program at the time of the flood or under a SWIF plan, or (in some cases) an accepted LOI\* for the SWIF;
2. **Damages must exceed \$15,000** and have a favorable **Benefit Cost Ratio (BCR) greater than 1**.

Eligible FCWs will be restored to pre-flood conditions. **Betterments are not covered under this program**.

Federal FCWs are repaired at 100% Federal cost. Non-federal FCWs have a 20% local cost share responsibility. (See EP 500-1-1 Ch.5 S.III)

### **Documentation for PL84-99 Rehabilitation Assistance Request**

USACE requires detailed documentation of any issues in order to approve requests and most effectively offer assistance. Most info about various projects can be found in the **National Levee Database** at [nld.usace.army.mil](http://nld.usace.army.mil).

General Project Info:

- National Levee Database ID<sup>8</sup>
- LMA / Public Sponsor
- Rehabilitation Program Eligibility
- Location (County, city, waterway, etc.)

USACE also needs:

- Location (lat./long.) of damage *from beginning to end* (vs. just a single point),
- Notes to describe the nature and extent of damage,
- A map showing location of the damage site(s), and
- As many photographs as are needed to thoroughly document each issue **as it progressed**.

If local repairs are enacted while awaiting approval, the LMA or sponsor must be able to **illustrate the scope of the damage immediately following the flood** if reimbursement is expected.

### **System Wide Improvement Framework (SWIF)**

The System Wide Improvement Framework was developed in 2011 for FCWs with an inactive status that require USACE rehabilitation assistance. The SWIF plans detail how the local sponsor, typically a levee maintaining agency (LMA), plans to address the deficiencies cited in their inspection report. To enroll in this program:

1. The LMA submits a Letter of Intent (LOI), involving a 10-page criteria checklist, which is reviewed by USACE District, Division, and Headquarters.
2. SWIF plan is developed by LMA within two (2) years of LOI approval.
3. Sponsor receives a Monitoring Plan detailing how progress will be tracked (1yr assessments).
4. USACE Headquarters (HQUSACE) approves SWIF Plan. (Plan is revised annually as needed and requires HQ approval every 2 years.)

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<sup>8</sup> <https://levees.sec.usace.army.mil/#/>

5. Eligibility for active status under SWIF contingent on sponsor's progress/improvements. HQUSACE must have a SWIF LOI approved by District Commander on file to be eligible for aid.

<b>PL84-99 STATUS OVERVIEW<sup>9</sup></b>			
<b>LMA</b>	<b>Federal / Non-Federal</b>	<b>Active / Inactive in RIP Program</b>	<b>Eligible for PL84-99 Rehabilitation Assistance?</b>
<b>Grimes Basin</b>			
SRWSLD	Federal	Active via SWIF	Yes (SWIF)
RD108 - River Farms	Federal	Active via SWIF	Yes (SWIF)
RD 787 - Fair Ranch	Federal	Active via SWIF	Yes (SWIF)
<b>Knights Landing Levee System</b>			
County Service Area 6	Federal	Active via SWIF	Yes (SWIF)
KLRDD - Left Bank	Federal	Active via SWIF	Yes (SWIF)
KLRDD - Right Bank	Federal	No, LOI in Progress	No
<b>RD 900 - City of West Sac</b>			
RD900 – Sac River	Federal	Active/SWIF LOI	Y
RD900 – Ship Channel	Federal	Active/SWIF LOI	Y
RD900 – Ship Channel Cross Levee	Federal	Active/SWIF LOI	Y
<b>Clarksburg Basin</b>			
RD 307 - Lisbon	Federal	Inactive	No
RD 765 - Glide	Federal	Inactive	No
RD 999 - Netherlands	Federal	Inactive	No
<b>RD150 - Merritt Island</b>			
<b>Elkhorn Basin</b>			
RD 537 - Lovdal	Federal	Inactive	No
RD 1600 - Mull	Federal	Inactive	No
<b>RD 2035 - Conaway</b>			
<b>RD 2068 - Yolano</b>			
<b>RD 2093 - Liberty Island</b>			
<b>DWR Sac Maintenance Yard</b>			
Cache Creek Levees -Left Bank	Federal	Inactive	No
Cache Creek Levee - Right Bank	Federal	Inactive	No
MA-4	Federal	Inactive	No
Putah Creek - Left Bank	Federal	Active	Yes

<sup>9</sup> NOTE: LMAs may have multiple segments, each with a different status under PL84-99. Refer to Yolo County Flood ER Phase I Geodatabase for levee segment designations.

	Putah Creek - Right Bank	Federal	Inactive	No
	Sacramento Bypass	Federal	Inactive	No
U4	Willow Slough - Right Bank	Federal	Active	Yes
Levee U1	Yolo Bypass West Side	Federal	Active	Yes
	Yolo Bypass east Side Levee	Federal	Inactive	No

**DELTA LEVEES MAINTENANCE SUBVENTIONS PROGRAM OVERVIEW**

**Background**

This is a cost-share program that provides technical and financial assistance to local agencies in the legal Delta for the **maintenance and rehabilitation of non-project** levees in the legal, primary delta. Since the passage of SB 541 (Way Bill) in 1973, the Department of Water Resources (DWR) has invested over \$180 million in flood control and habitat projects carried out by local agencies in the Delta through the Subventions Program.

**Note:** Project levees in the Delta secondary zone are not eligible for this program.

**Applying for Maintenance or Rehabilitation Assistance**

LMA must apply each year that they wish to receive technical or financial assistance. Copies must be provided to both DWR and CA Dept. of Fish and Wildlife. Each application package must include:

- A letter of intent to participate.
- A statement outlining long-range plans reflecting current levee conditions.
- The LA’s annual routine maintenance work plan (Article 2-3).
- The LA’s rehabilitation work plan (see Article 2-4).
- A statement defining land use of the area protected by the levee and any planned changes.
- Various other details and qualifications (see Article 3-1 for a complete list).

Technical and financial assistance can be sought through this program if an application for federal aid, such as FEMA disaster reimbursement was denied. Proof of federal disaster assistance application/cost must be included with subventions application documents, whenever eligible.

Local agencies can also apply for reimbursement for an easement purchase (see articles 3-2, Article 7).

Applications must be submitted to DWR by **April 1** for the corresponding fiscal year. (Exceptions made for applications submitted pursuant to CA Water Code § 12993 and 12994.)

DWR reviews the application and makes a recommendation to the Central Valley Flood Protection Board (CVFPB). The CVFPB then approves in whole or in part or denies the application. The following must be satisfied for approval:

- **Engineering** – All engineering plans and reports shall be prepared and signed by a Civil Engineer licensed by the California Board of Registration for Professional Engineers, Land Surveyors, and Geologists. The engineering plans shall indicate which activities will be performed under the supervision of a duly licensed Civil Engineer.
- **CDFW Review** – Pursuant to CA Water Code § 12987, CDFW shall review all local agency plans. The local agency must have completed all of the requirements of CA Water Code § 12987 and § 79050 to the satisfaction of CDFW in its previous agreements with the CVFPB to be eligible for current funding under this program.

Local agencies are also responsible for ensuring compliance with CEQA and all applicable environmental laws and regulations.

**Plans for Maintenance and Improvements of Eligible Levees**

Local agencies maintaining project or non-project levees are eligible for reimbursement upon submission and approval by the **CVFPB** of the following plans:

- Long-Range Plans
- Annual Routine Maintenance Plans\*
- Levee Rehabilitation Plans\*

*\*Significant changes to Maintenance or Rehabilitation plans must be sent to DWR in writing and may in some cases require DWR approval.*

The CVFPB reviews the plans for completion based on the following:

- a) Plans shall be provided to DWR in both hard copy and digital format prior to the local agency receiving final reimbursement, if requested.
- b) Plans shall not call for the use of channel islands or berms with significant riparian communities as borrow sites for levee repair material, unless fully mitigated.
- c) Plans shall not result in a net long-term loss of riparian, fisheries, or wildlife habitat.
- d) Local agencies will comply with the net habitat improvement mandates of CA Water Code § 12987.
- e) Plans should reflect the priorities of and be consistent with the Delta Plan and the CA Water Code § 12986(c).

**Reimbursement Provisions**

The local agency must pay \$1,000 per levee mile before receiving program aid. Beyond that up to 75% of eligible costs will be reimbursed. Payments through this program are consistent with the Delta Plan and CA Water Code § 12986(c). Local agencies cannot use other state funds to cover their share of project costs. Those receiving funds must display signage informing the public. (For full details see Article 4-1.)

**Funding Priorities** (For full details see Article 4-2.)

**PRIORITY 1 - MAINTENANCE**  
***up to \$20,000 per levee mile***

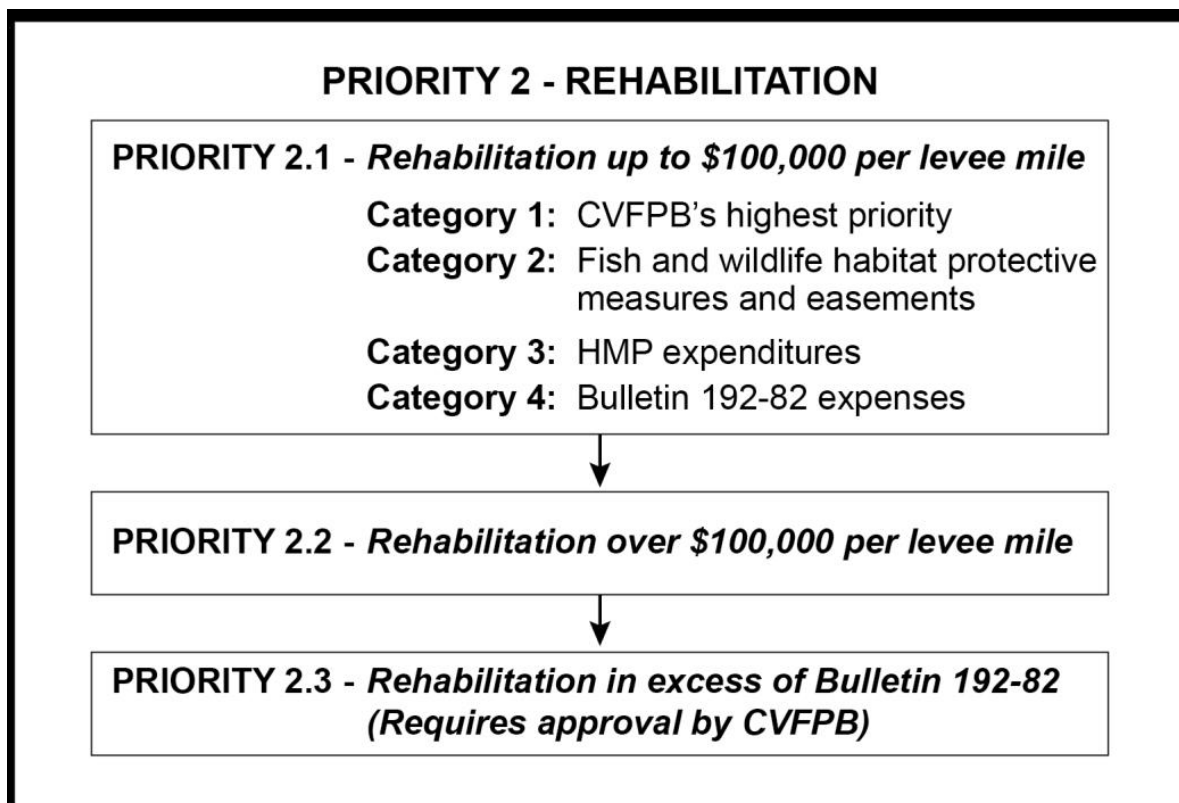


Figure 8 – Levee Subventions Funding Priorities<sup>10</sup>

### FLOOD WATER REMOVAL

With overtopping or failure of a levee flood protection system, the lands protected by the levee system may become partially or fully inundated. Depending on the situation, there may be an immediate need to dewater that area to prevent further flooding, protect the overall integrity of the flood protection system, or remove the water to recover the area to pre-flood conditions. Flood water removal is an integral part of flood emergency response and needs to be considered in planning for floods.

LMAs have primary responsibility for dewatering operations.

### **Priorities**

Considerations include:

- How many people are affected by the flooding?
- What is the value of the flooded area?
- What are the long-term consequences and ramifications?

### **Alternative 1 – No Immediate Dewatering Needed**

Based on the situation, it may be advisable to take no immediate action. For example, an inundated agricultural area with no threat to life and property may be left flooded until waters

<sup>10</sup> (Figure 1. Of DWR 2016 Guidelines)

naturally recede. For some areas, this decision can be made in advance of a flood event. The LMAs, Cities, Yolo County, DWR, USACE, and Cal OES must work together to ensure everyone understands the reasoning and supports the choice.

**Alternative 2 – Close Breach; No Water Removal**

Closing the opening in a failed levee is generally the first step of any levee breach repair. It may be necessary to wait for the inflow of water to slow down before taking this action. Rock and suitable materials must be available to armor the ends of the break before closing the opening with additional suitable material. LMAs will obtain the necessary materials to perform this work using their pre-established contacts. If those materials are unavailable, the LMAs will request resource aid in accordance with SEMS protocols.

Once the breach is closed, a cost-effective solution might include allowing the ground dry out on its own depending on the extent of flooding. Equipment and contractors must be mobilized, the ends of the breach must be able to be accessed, and material for the closure must be available.

**Alternative 3 – Repair Breach and Remove Water by Pumping**

After the breach is closed, an alternative would remove water using available on-site or portable pumps. For large, flooded areas, the time and expense for this can be extensive.

**Alternative 4 – Repair Breach and Remove Water by Making a Relief Cut**

The situation may warrant excavating a second breach in a levee system to allow flood waters to drain from behind the land side of a levee. This effort may also limit the depth of those flood waters behind the levee and prevent further flooding of areas within the basin and may be employed under emergency conditions.

**Environmental Considerations**

Flood Water Removal projects are generally exempt from the California Environmental Quality Act (CEQA). Statutory exemptions include “emergency projects such as actions required to restore damaged facilities or mitigate an emergency” (*CEQA Guidelines Section 15269*). Nevertheless, the legal counsel for each jurisdictional partner will need to review before making a final decision.

## SECTION 4.0: COMMUNICATIONS

### 4.1 COMMUNICATIONS ORGANIZATION

Yolo County will maintain adequate communications equipment to implement this emergency plan. This section identifies equipment and/or systems available for communications:

- Between Yolo County staff, contractors, and other staff working under County supervision
- With public agencies operating within the Operational Area
- With neighboring LMA's
- With the Inland Region Regional Emergency Operations Center (REOC)
- With the State Flood Operations Center

Yolo County will maintain communications with other jurisdictions by cellular telephone, radio, satellite phone, ham radio, and by participation in meetings of the Yolo Unified Flood Fight Commands.

### 4.2 INTER-AGENCY AND INTER-JURISDICTIONAL COMMUNICATIONS

Jurisdictions will be individually responsible for maintaining a plan and necessary equipment for effective internal communications between their administrative components and staff.

Under Senate Bill 27 the Sacramento-San Joaquin delta Interoperable Radio System was established to enhance radio communications throughout the Delta. The system design includes 3 radio tower sites which are on a Simulcast system located at:

- Twitchell Island, 1580 W Twitchell Island Road, Isleton, CA 95641
- Brentwood PD, 9100 Brentwood Blvd, Brentwood, CA 94513
- San Joaquin County Ag Center, 2101 E Earhart Ave # 100, Stockton, CA 95206

Each radio site includes four 800 MHz repeaters, two UHF repeaters and one VHF simplex base station. The system also includes computer-based radio consoles in each of the Delta counties. The Yolo County console is housed at the Yolo Emergency Communications Agency (YECA) where it is monitored by 9-1-1 dispatch personnel<sup>11</sup>.

For more specific information on radio channels and systems used throughout Yolo County, refer to YECA's *Tactical Interoperability Communications Plan (TICP)*.

### 4.3 YOLO COUNTY OPERATIONAL AREA EOC

Yolo County will maintain communications systems within its EOC to ensure proper communications with other jurisdictions and agencies. These systems include cellular telephones, public safety radio systems, the OASIS satellite phone system, the internet, and scheduled meetings of the Yolo County Operational Area management group.

As part of the Everbridge Mass Notification System a group is maintained in the Employee Alert portal of all LMA contacts. This group is updated at least once a year when the Resource

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<sup>11</sup> The current VHF signal does not reliably reach into Yolo County.

Directory is published as part of Phase 1. This allows notifications to be sent directly to LMAs regarding status changes, UFFC meeting notifications and situational awareness.

#### 4.4 NATIONAL WEATHER SERVICE (NWS)

The NWS provides notification releases to media outlets and to public agencies. They use standard terminology for watches and warnings:

- **Flood Watch** is issued when conditions are favorable for flooding and it is possible that flood can occur.
- **Flood Advisory** is issued when flooding is not expected to be bad enough to issue a warning, but if caution is not exercised, it can cause significant inconvenience.
- **Flood Warning** is issued when flooding is imminent or already happening.
- **Flash Flood Warning** is issued when a flash flood is imminent or occurring. A flash flood is a sudden violent flood that can take minutes to hours to develop.

The activation process will commence when the Sacramento Weir opens their gates. NWS will send out their notifications utilizing FEMA's Integrated Public Alert and Warning System (iPAWS) and Wireless Emergency Alerts (WEA). Although this notification is directed toward those individuals who may be in the vicinity of the Yolo Bypass, it is important to consider that the flash flood notification might also be received by other people outside of the Yolo Bypass. Yolo OES will include annual pre-season information in its Phase 1 efforts to educate the public on this notification. For more information, refer to the ***Yolo Operational Area Alert and Warning Support Annex***.

## SECTION 5.0: ANNEX MAINTENANCE

### 5.1 ANNEX MAINTENANCE

The Office of Emergency Services (OES), in coordination with the Procurement Department, and other essential stakeholders identified in this document from the County and the Operational Area, is responsible for the maintenance, review, and update of this Annex. They will—at a minimum—review this Annex every year and update the Annex every 3 years. It is essential that the Office of Emergency Services make revisions and updates, in collaboration with participating persons, local jurisdictions, and other planning partners identified in this Annex to ensure accuracy and validity. If this Annex requires an immediate change due to lessons learned from trainings, exercises, or actual incidents, County OES will identify a course of action for the review, update, and implementation of the necessary changes.

### 5.2 FLOOD-RELATED TRAINING AND EXERCISES

Yolo County coordinates with other public agencies, neighboring counties, State, and Federal governments for all hazards training and ongoing exercises to test and validate emergency policy plans and procedures. At a minimum, such training and exercises shall focus on flood hazards and flooding within Yolo County once a year.

The Yolo Operational Area maintains a robust Emergency Management Training Program which is outlined in the five-year Training and Exercise Planning schedule<sup>12</sup>. This program carefully analyzes probable incident complexity that local agencies would need to manage and identifies needed training components throughout the OA. This program also uses unique warning aspects of flood events to provide a number of formats and approaches, giving responders the flood-specific training necessary for effective response, including just-in-time training resources.

Each year, the preseason preparedness meeting is held in a workshop-based format to review any existing damage locations, train responders on communication protocols and review flood safety planning and tools. This workshop is included in the Operational Area Training and Exercise Plan as part of the training strategy for flood response.

At least one, in-person, Flood Fight Methods course is coordinated annually by Yolo OES within the OA and is taught by the Department of Water Resources. This course provides a refresher opportunity for those who have had the course before as well as entry level experience for those new to flood fighting.

On-line flood fight and Just-in-Time training is available at <https://musrflood.squarespace.com>. The courses available on this website were developed by a joint coordination of several counties and are recommended for any persons involved in flood fight operations annually.

### 5.3 AFTER-ACTION REVIEW

After every exercise or disaster, an After-Action Report (AAR)/Improvement Plan (IP) should be completed. The AAR/IP has two components: the AAR, which captures observations and recommendations based on incident objectives as associated with the capabilities and tasks;

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<sup>12</sup> Updated each year during the Annual Training and Exercise Planning Workshop and submitted to Cal OES annually.

and the IP which identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion.

## SECTION 6.0: AUTHORITIES AND REFERENCES

The Yolo Operational Area policy is to maintain mitigation efforts and emergency plans and procedures, at the level required to be eligible for disaster assistance under the Federal Stafford Act, the PL84-99 program, and the California Disaster Assistance Act. Emergency operations will be conducted and documented in compliance with conditions of those programs for reimbursement of disaster expenses.

### 6.1 FEDERAL

Federal Civil Defense Act of 1950 (Public Law 920, as amended)

Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 93-288, as amended)

Department of the Interior, Bureau of Reclamation – Central California Area Office Facilities Emergency Action Plan

Department of the Interior, Bureau of Reclamation – Northern California Area Office Facilities Emergency Action Plan

### 6.2 STATE

Section 9650 California Water Code (AB 156)

California Emergency Services Act (Chapter 7, Division 1 of Title 2 of the Government Code)

Standardized Emergency Management System Regulations (Chapter 1 of Division 2 of Title 19 of the California Code of Regulations)

Northern California Catastrophic Flood Response Plan (NCCFRP)

California Department of Water Resources – Oroville Facilities Emergency Action Plan

Cal OES Oroville Dam Failure Response Plan

### 6.3 MULTI-AGENCY COORDINATION (MAC)

Mid and Upper Sacramento River Unified Flood Fight Command System Operations Manual

Mid and Upper Sacramento River Flood Response Training Program Manual

Regional GIS Technical Manual of the Mid and Upper Sacramento River Flood Response Project

### 6.4 LOCAL

Yolo County Emergency Operations Plan

Yolo Multi-Jurisdictional Hazard Mitigation Plan

Yolo Tactical Interoperability Communications Plan

Yolo OA Alert and Warning Support Annex

Yolo OA Flood Resources Directory

Emergency Operations Plans for the following:

- Davis, West Sacramento, Winters and Woodland
- Yocha Dehe Wintun Nation
- Yolo County Housing

Yolo County Flood Control and Water Conservation District – Indian Valley Dam Emergency Action Plan

Yolo County Flood Control and Water Conservation District – Cache Creek Dam Emergency Action Plan

- Reclamation District 108 – Grimes Flood Safety Plan
- Reclamation District 150 – Merritt Island Flood Safety Plan

- Reclamation District 307 – Lisbon Flood Safety Plan
- Reclamation District 537 – Elkhorn Basin Flood Safety Plan
- Reclamation District 787 – Grimes Basin Flood Safety Plan
- Reclamation District 900 – Flood Safety Plan
- Reclamation District 999 – Netherlands Flood Safety Plan
- Reclamation District 1600 – Elkhorn Basin Flood Safety Plan
- Reclamation District 2035 – Conaway Flood Safety Plan
- Knights Landing Ridge Drainage District – Flood Safety Plan
- Sacramento West Side Levee District – Grimes Basin Flood Safety Plan
- DWR Sacramento Maintenance Yard, Yolo County Levee Systems Flood Safety Plan
- Yolo County Services Area 6 (CSA6) – Knights Landing Levee System Flood Safety Plan

## APPENDIX A: LIST OF LEVEE MAINTAINING AGENCY PLANS

Each LMA listed on the following page has an Emergency Operations Plan - Basic Plan (EOP), contains an Annex A (also known as their Flood Contingency Map) and corresponding Public Safety Map. The table shows those LMAs that are part of a joint plan or map. Additionally, public safety maps and citizen maps were developed for the cities and unincorporated communities within Yolo County.

Overview of Flood Safety Plans and Maps						
Flood Safety Plan	Emergency Ops Plan (EOP)	Flood Contingency Map (FCM)	Public Safety Map (PS Map)	Citizen Map (CM)	Prelim Engineering Designs (PED)	
<b>Clarksburg Basin</b>						
RD 307 - Lisbon	Lisbon EOP	<b>Clarksburg Basin FCM</b>	---	---	---	
RD 765 - Glide	Glide EOP		---	---	---	
RD 999 - Netherlands	Netherlands EOP		Clarksburg PS Map	Clarksburg CM	<b>1X</b>	
<b>DWR Sac Maintenance Yard</b>						
Cache Creek Levees MA-4	<b>SacMY Yolo Levee Systems EOP</b>	<b>SacMY Yolo Levee Systems FCM</b>	Woodland PS Map	---	---	
Putah Creek			---	---	---	
Sacramento Bypass			Davis PS Map	---	---	
Willow Slough Bypass			---	---	---	
Yolo Bypass West/East Levee			---	---	Knights Landing CM	---
					---	---
<b>Elkhorn Basin</b>						
RD 537 - Lovdal	<b>Elkhorn Basin Joint EOP</b>	<b>Elkhorn Basin Joint FCM</b>	---	---	<b>1X</b>	
RD 1600 - Mull			---	---	<b>1X</b>	
<b>Grimes Basin</b>						
SRWSLD	<b>Grimes Basin Joint EOP</b>	<b>Grimes Basin Joint FCM</b>	---	---	---	
RD108 - River Farms			---	---	<b>3 X</b>	
RD 787 - Fair Ranch			---	---	Knights Landing CM	<b>1X</b>

Overview of Flood Safety Plans and Maps					
Flood Safety Plan	Emergency Ops Plan (EOP)	Flood Contingency Map (FCM)	Public Safety Map (PS Map)	Citizen Map (CM)	Prelim Engineering Designs (PED)
<b>Knights Landing Levee System</b>					
County Service Area 6					---
KLRDD - Left Bank	<b>Knights Landing Levee System Joint EOP (KLLS EOP)</b>	<b>Knights Landing Levee System Joint FCM (KLLS FCM)</b>	<b>Knights Landing PS Map</b>	<b>Knights Landing CM</b>	<b>1X</b>
KLRDD - Right Bank					<b>1X</b>
<b>RD150 - Merritt Island</b>	Merritt Island EOP	Merritt Island FCM	---	---	<b>1X</b>
<b>RD 900 - City of West Sac</b>	RD 900 EOP	W Sac FCM	See City of W Sac PS Map	See City of W Sac Map	---
<b>RD 2035 - Conaway</b>	Conaway EOP	Conaway FCM	---	---	<b>2X</b>
<b>RD 2068 - Yolano</b>	Yolano EOP	Yolano FCM	---	---	<b>1X</b>

CITIES	Flood Contingency Map (FCM)	Public Safety Map (PS Map)	Citizen Map (CM)	Prelim Engineering Designs (PED)
<b>City of Davis</b>	<i>Refer to SacMY FCM (Putah Creek)</i>	Davis PS Map	Davis CM	---
<b>City of West Sacramento</b>	<i>Refer to RD900 FCM (Sacramento River)</i>	W Sac PS Map	W Sac CM	---
<b>City of Winters</b>	<i>Refer to SacMY FCM (Putah Creek)</i>	Winters PS Map	Winters CM	---
<b>City of Woodland</b>	<i>Refer to RD2035 EOP and SacMY FCM (Cache Creek)</i>	Woodland PS Map	Woodland CM	<b>5X</b> Muscle Wall Deployment
<b>Yocha Dehe Wintun Nation</b>	<i>Refer to SacMY Yolo Levee Systems FCM (Cache Creek)</i>	Yocha Dehe PS Map	Yocha Dehe CM	---

UNINCORPORATED COMMUNITIES	Flood Contingency Map (FCM)	Public Safety Map (PS Map)	Citizen Map (CM)
<b>Brooks</b>	<i>N/A No Levee No LMA</i>	Yocha Dehe PS Map	Yocha Dehe CM
<b>Clarksburg</b>	<i>Refer to RD900 and RD150 FCMs</i>	Clarksburg PS Map	Clarksburg CM
<b>Esparto</b>	<i>N/A No Levee No LMA</i>	Yocha Dehe CM	Yocha Dehe CM
<b>Knights Landing</b>	<i>Refer to KLLS FCM</i>	Knights Landing PS Map	Knights Landing CM
<b>Madison</b>	<i>N/A No Levee No LMA</i>	Yocha Dehe CM	Yocha Dehe CM
<b>Yolo</b>	<i>N/A No Levee No LMA</i>	Yolo PS Map	Yolo CM

## APPENDIX B: LEVEE MAINTAINING AGENCY TRIGGER CHART

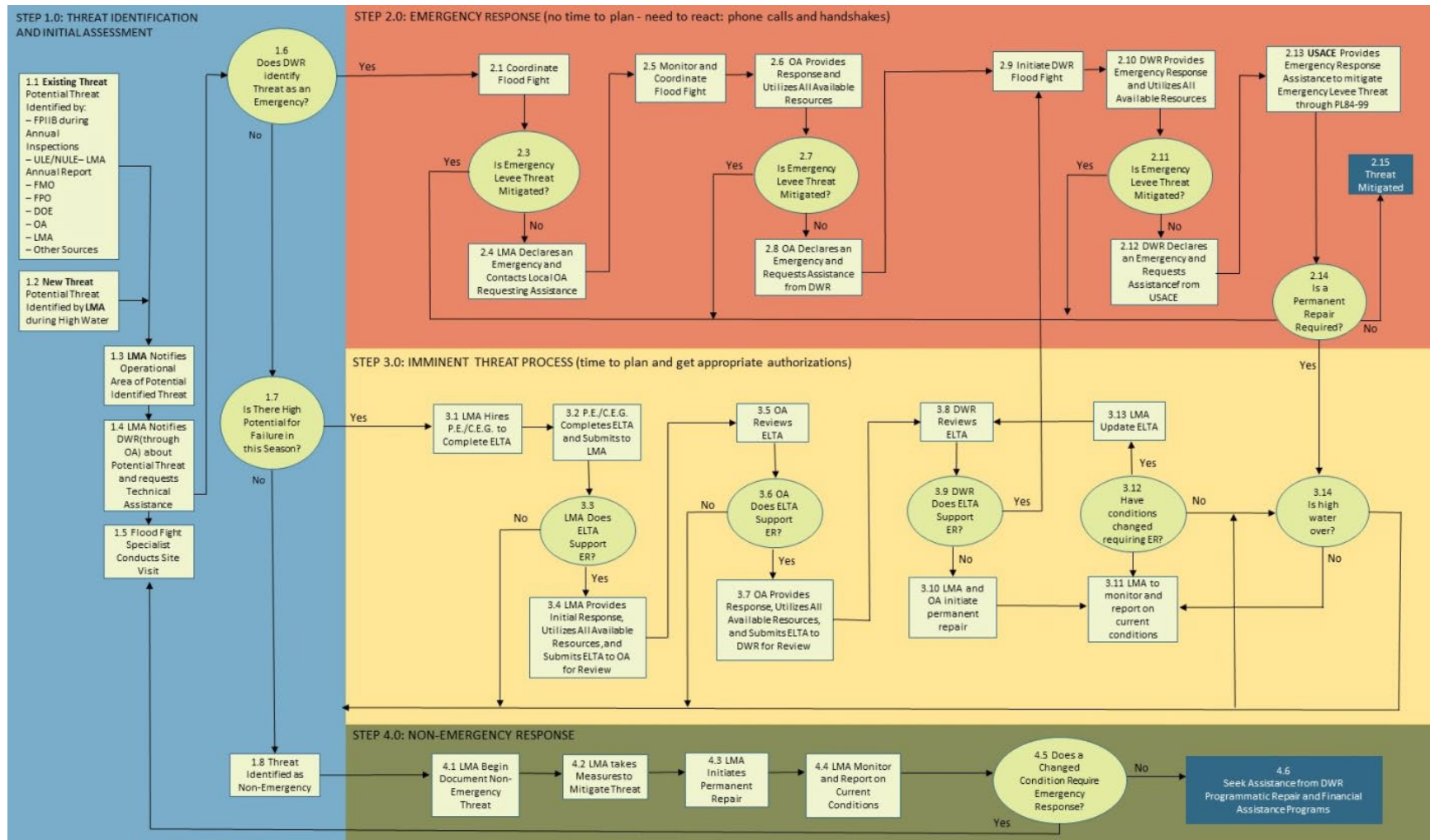
This LMA trigger chart document is a comprehensive listing of data for each LMA. The actual document is housed in the EOC ESF 3 tools folders for each EOC throughout Yolo County.

Gauge Name	LMA / City	Gage Owner	Ht. Aware	Monitor	Flood	Danger	Gauge Owner
<b>SACRAMENTO RIVER</b>		CDEC/ Staff		ft	ft	ft	
Clarksburg Marina Staff Gauge	RD 150	Local Staff	--	17	24	25	Staff
	RD 999	Local Staff	--	17	24	25	Staff
<b>FRE</b> Sac River @ Fremont Weir (NAVD88)	RD 537	CDEC		34	39.5	40.3	DWR/NCRO
	RD 1600	CDEC		34	37.5	40.3	DWR/NCRO
	RD 2035	CDEC		40 F	40	40.5	DWR/NCRO
	Sac MY (YBWSL)	CDEC		32	39.5	40.5	DWR/NCRO
<b>IST</b> Sac River at I Street Bridge (NAVD88)	RD 150	CDEC		27.5	33.5	--	DWR/NCRO
	RD 307	CDEC		27.5	33.5	34.5	DWR/NCRO
	RD 537	CDEC		29.5	33.5*	34.5**	DWR/NCRO
	RD 765	CDEC		27.5	33.5	34.5	DWR/NCRO
	RD 900	CDEC		27.5	33.5	34.5	DWR/NCRO
	RD 999	CDEC		27.5	33.5	34.5	DWR/NCRO
	RD 1600	CDEC		29.5	33.5*	34.5**	DWR/NCRO
	Sac MY - MA-4	CDEC		27.7	33.5	34.5	DWR/NCRO
	Sac MY - Sac Bypass	CDEC		29	33.5	34.5	DWR/NCRO
<b>KNL</b> Knights Landing Bridge Staff	CSA-6	CDEC Staff	--	37	41	43	DWR
<b>WLK</b> Sac River Below Wilkins Slough	SRWSLD	CDEC	--	47.6	51	--	USGS

Flood Hazard Annex

Gauge Name	LMA / City	Gage Owner	Ht. Aware	Monitor	Flood	Danger	Gauge Owner
<b>YBY</b> Yolo Bypass Near Woodland	RD 1600	CDEC	--	18	21.6	--	DWR
	RD 537	CDEC	--	18	21.6	--	DWR
<b>CACHE CREEK</b>							
<b>RUM</b> Cache Creek @ Rumsey Bridge	Sac MY Cache Creek Levees	CDEC	--	14.5	16.5	--	USGS/DWR
<b>COLUSA DRAIN</b>							
<b>KLG</b> Colusa Drain @ Knights Landing	RD108	CDEC	33	34.5	37 OR 34.5 + 20mph winds	--	DWR/NCRO
	RD787	CDEC	33	34.5		--	DWR/NCRO
	KLRDD	CDEC Staff	33	34.5		--	DWR/NCRO

# APPENDIX C: DEPARTMENT OF WATER RESOURCES FLOOD RESPONSE DIAGRAM



# APPENDIX D: FLOOD INCIDENT PLANNING AND ESF RESPONSE MATRIX

	Flood Preparedness Activities	Flood Watch	Flood Advisory	Flood Warning	Flash Flood Warning
Forecast Event	No flood expected	Potential flooding but no imminent threat	Flooding that is an inconvenience but not an imminent threat	Flooding is imminent or occurring	Flooding that occurs 6hrs after rain event
Major Weather Events	Flooding threats exist with all possible rain associated events and dam breaches.	Flood Watch is issued when conditions are favorable for a specific hazardous weather event to occur and when conditions are favorable for flooding. It does not mean flooding will occur, but it is possible.	Flood Advisory is issued when flooding is not expected to be bad enough to issue a warning.  However, it may cause significant inconvenience, and if caution is not exercised, it could lead to situations that may threaten life and/or property.	Flood Warning is issued when flooding is imminent or occurring.	<b>Flash Flood Warning</b> is issued when a flash flood is imminent or occurring. If you are in a flood prone area move immediately to high ground.  <b>Flash flood</b> is a sudden violent flood that can take from minutes to hours to develop. It is even possible to experience a flash flood in areas not immediately receiving rain.

<p><b>ISSUES &amp; CONSIDERATIONS</b></p>		<ul style="list-style-type: none"> <li>· Are Special Events scheduled for the geographic area(s) potentially impacted?</li> <li>· Will EOC need to be activated?</li> <li>· To what extent will local school systems be impacted by potential flooding?</li> </ul>	<ul style="list-style-type: none"> <li>· Are Special Events scheduled for the geographic area(s) potentially impacted?</li> <li>· Will EOC need to be activated?</li> <li>· To what extent will local school systems be impacted by potential flooding?</li> </ul>	<ul style="list-style-type: none"> <li>· Are Special Events scheduled for the geographic area(s) potentially impacted?</li> <li>· Is flooding anticipated to affect major metropolitan areas/transportation hubs during normal business hours?</li> </ul>	<ul style="list-style-type: none"> <li>· Are Special Events scheduled for the geographic area(s) potentially impacted?</li> <li>· Is flooding anticipated to affect major metropolitan areas/transportation hubs during normal business hours?</li> </ul>
<p><b>Decision Points</b></p>		<ul style="list-style-type: none"> <li>· Decision to convene an SJ MAC Group Conference Call?</li> <li>· Decision to provide pre-alert for EOC Section Chiefs</li> </ul>	<ul style="list-style-type: none"> <li>· Decision to Activate EOC? If so, what level?</li> <li>· Decision to convene SJ MAC Group Call?</li> <li>· Decision to initiate Wireless Emergency Alerts?</li> <li>· Decision to recommend cancellation of Special Events?</li> <li>· Decision to notify local school superintendents of potential weather impacts?</li> </ul>	<ul style="list-style-type: none"> <li>· Decision to Activate EOC? If so, what level?</li> <li>· Decision to establish a Joint Information Center?</li> <li>· Decision to proclaim a local emergency</li> <li>· Decision to initiate Wireless Emergency Alerts?</li> </ul>	<ul style="list-style-type: none"> <li>· Decision to Activate EOC? If so, what level?</li> <li>· Decision to proclaim a local emergency</li> <li>· Decision to initiate Wireless Emergency Alerts?</li> </ul>

<p><b>NWS Meteorologist</b></p>	<ul style="list-style-type: none"> <li>· Monitor weather models, NOAA products, local broadcast meteorologist forecast, radar trends, and etc.</li> <li>· Monitor YC weather activities and disseminate information on any existing / threatening storms.</li> </ul>	<ul style="list-style-type: none"> <li>· Monitor YC weather activities and disseminate information on any existing / threatening storms.</li> <li>· Share information with Director of Emergency Operations / appointee on whether any course of action needs to be taken.</li> </ul>	<ul style="list-style-type: none"> <li>· Consult with the Director of Emergency Operations on what course of action should be taken.</li> </ul>	<ul style="list-style-type: none"> <li>· Continue day-to-day activities.</li> <li>· Consult with the Director of Emergency Operations on courses of action, including:             <ul style="list-style-type: none"> <li>· Notify local OES Directors, area field coordinators, area school safety coordinators, and SJC Weather Distribution List;</li> <li>· Meet with Public Affairs Officer to construct proper messaging.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>· Continue day-to-day activities.</li> <li>· Consult with Director of Emergency Operations on courses of action including:             <ul style="list-style-type: none"> <li>· Notify local OES Directors, area field coordinators, area school safety coordinators, and SJC Weather Distribution list;</li> <li>· Meet with Public Affairs Officer to construct proper messaging.</li> </ul> </li> </ul>
<p><b>ESF 1 Transportation</b></p>	<ul style="list-style-type: none"> <li>· Actively monitor current weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>· Actively monitor current weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>· Actively monitor current weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC activation.</li> <li>· Cleaning and checking storm drains</li> <li>· Close roads as needed.</li> <li>· Post signage as needed.</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC activation.</li> <li>· Monitor roadway conditions</li> <li>· Response as needed</li> <li>· Cleaning and checking storm drains</li> </ul>

<p><b>ESF 2</b> <b>Communications</b></p>	<ul style="list-style-type: none"> <li>· Continue Planning Activities.</li> <li>· Continue Equipment Maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>· Identify communications resources to support potential Resource Requests and post-disaster operations.</li> <li>· Preparatory actions to ensure all available disaster response communications equipment is prepared for deployment.</li> </ul>	<ul style="list-style-type: none"> <li>· Identify communications resources to support potential Resource Requests and post-disaster operations.</li> <li>· Monitor communications infrastructure and provide information updates to EOC. Begin restoration efforts.</li> </ul>	<ul style="list-style-type: none"> <li>· Identify and possibly deploy communications resources to support requesting operational response.</li> <li>· Monitor communications infrastructure and provide information updates to EOC.</li> <li>· Finalize and distribute the ICS Form 205 (Incident Radio Communications Plan) to all responding agencies.</li> </ul>	<ul style="list-style-type: none"> <li>· Identify and deploy communications resources to support requesting operational response.</li> <li>· Monitor communications infrastructure and provide information updates to EOC.</li> </ul>
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<p><b>ESF 3</b> <b>Public Works/</b> <b>Engineering</b></p>	<ul style="list-style-type: none"> <li>· Continue to Monitor Water Quality.</li> <li>· Continue Planning Activities.</li> </ul>	<ul style="list-style-type: none"> <li>· Continue to Monitor Water Quality.</li> <li>· Continue Planning Activities.</li> </ul>	<ul style="list-style-type: none"> <li>· Continue to Monitor Water Quality</li> <li>· Continue Planning Activities.</li> </ul>	<ul style="list-style-type: none"> <li>· Continue to Monitor Water Quality.</li> <li>· Continue Planning Activities. Develop ESF Staffing Roster for EOC Activation.</li> <li>· Prepare templates for Public Notification Advisories.</li> <li>· Identify all Drinking Water, Wastewater and Dams in the potentially impacted area.</li> <li>· Coordinate with major Public utilities if aid is needed</li> <li>· Coordinate with ground water system reps to monitor water quality</li> </ul>	<ul style="list-style-type: none"> <li>· Continue to Monitor Water Quality.</li> <li>· Continue Planning Activities.</li> <li>· Develop ESF Staffing Roster for EOC Activation.</li> <li>· Send out Weather Alerts and Notifications Received from the EOC.</li> <li>· Alert primary and support agencies to continue to monitor the weather and be prepared to respond to resource requests.</li> <li>· Coordinate with drinking water and wastewater facilities, and advise them to inventory their resources, to make assessments and/or resource requests.</li> <li>· Monitor Dams for potential flood issues</li> </ul>
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<p><b>ESF 4</b> <b>Firefighting</b></p>	<ul style="list-style-type: none"> <li>· Maintain situational awareness of current and future weather conditions.</li> </ul>	<ul style="list-style-type: none"> <li>· Maintain situational awareness of current and future weather conditions.</li> </ul>	<ul style="list-style-type: none"> <li>· Direct Assistance to jurisdiction when requested</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Send out to primary and support agencies the Weather Alerts and Notifications Received from the EOC.</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for potential EOC Activation.</li> <li>· Send out to primary and support agencies the Weather Alerts and Notifications Received from the EOC.</li> <li>· Provide support to the EOC and other ESF partners.</li> </ul>
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<p><b>ESF 5</b></p> <p><b>Emergency Management</b></p>		<ul style="list-style-type: none"> <li>· Determine potential for EOC Activation Level - 3 (Low Level)</li> <li>· Actively monitor current weather conditions.</li> <li>· Review and evaluate Damage Reports.</li> <li>· Coordinate Resource and Mutual Aid Requests.</li> </ul>	<ul style="list-style-type: none"> <li>· Determine potential for EOC Activation Level - 3 (Low Level)</li> <li>· Actively monitor current weather conditions.</li> <li>· Review and evaluate Damage Reports.</li> <li>· Coordinate Resource and Mutual Aid Requests.</li> <li>· Consider need to assign point of contact to coordinate with LMAs</li> </ul>	<ul style="list-style-type: none"> <li>· Determine EOC Activation Level for anticipated event</li> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Publish Awareness Statement to all County Employees, and all emergency management agencies.</li> <li>· Notify ESFs to increase response planning.</li> <li>· Notify necessary Staff to report to the EOC.</li> <li>· Create Incident in WebEOC.</li> <li>· Participate in OA, State Agency, and NWS Conference Calls.</li> <li>· Review and evaluate Damage Reports.</li> <li>· Coordinate Resource and Mutual Aid Requests</li> </ul>	<ul style="list-style-type: none"> <li>· Determine EOC Activation Level</li> <li>· Publish Awareness Statement to all County Employees, and all emergency management agencies.</li> <li>· Notify ESFs to increase response planning.</li> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Notify necessary Staff to report to the EOC.</li> <li>· Create Incident in WebEOC.</li> <li>· Participate in County, State Agency, and NWS Conference Calls.</li> <li>· Review and evaluate Damage Reports.</li> <li>· Coordinate Resource and Mutual Aid Requests.</li> </ul>
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				Consider need to assign point of contact to coordinate with LMAs	
<p><b>ESF 6</b></p> <p><b>Mass Care &amp; Shelter</b></p>		<ul style="list-style-type: none"> <li>Maintain situational awareness of current and future weather conditions.</li> <li>Maintain email and phone communication with the EOC.</li> <li>Direct Assistance when requested.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain situational awareness of current and future weather conditions.</li> <li>Maintain email and phone communication with the EOC.</li> <li>Direct Assistance when requested.</li> </ul>	<ul style="list-style-type: none"> <li>Develop Staffing Roster for EOC Activation.</li> <li>Coordinate with ARC as required.</li> <li>Direct Assistance when requested.</li> <li>Maintain situational awareness of current and future weather conditions.</li> <li>Provide support as needed.</li> </ul>	<ul style="list-style-type: none"> <li>Develop Staffing Roster for EOC Activation.</li> <li>Coordinate with ARC as required.</li> <li>Direct Assistance when requested.</li> <li>Maintain situational awareness of current and future weather conditions.</li> <li>Provide support as needed.</li> </ul>

<p><b>ESF 7</b> <b>Logistics &amp; Resources</b></p>		<ul style="list-style-type: none"> <li>· Monitor situation for possible support requirements</li> </ul>	<ul style="list-style-type: none"> <li>· Monitor situation for possible support requirements.</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Monitor situation for possible support requirements.</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Activate the purchasing and contracting portion of ESF-7.</li> <li>· Alert vendors and consider locating vendors (generators, water &amp; tarps) for rapid response.</li> <li>· Provide support as needed.</li> </ul>
<p><b>ESF 8</b> <b>Public Health and Medical Services</b></p>			<ul style="list-style-type: none"> <li>· Monitor Licensed Healthcare agencies for needs</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Monitor Licensed Healthcare agencies for needs</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Monitor Licensed Healthcare agencies for needs.</li> </ul>
<p><b>ESF 10</b> <b>Oil &amp; Hazardous Materials</b></p>		<ul style="list-style-type: none"> <li>· Maintain situational awareness of current and future weather conditions.</li> </ul>	<ul style="list-style-type: none"> <li>· Maintain situational awareness of current and future weather conditions.</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Maintain situational awareness of current and future weather conditions.</li> <li>· Identify potential Hazmat threats in</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Maintain situational awareness of current and future weather conditions.</li> <li>· Identify potential Hazmat threats in</li> </ul>

				the potentially affected areas.	the potentially affected areas.
<p><b>ESF 11</b></p> <p><b>Food and Agriculture</b></p>		<ul style="list-style-type: none"> <li>· Maintain situational awareness of current and future weather conditions.</li> </ul>	<ul style="list-style-type: none"> <li>· Maintain situational awareness of current and future weather conditions.</li> </ul>	<ul style="list-style-type: none"> <li>· Maintain situational awareness of current and future weather conditions.</li> <li>· Be prepared to coordinate damages assessments if needed.</li> <li>· Be prepared to provide technical assistance to public Natural, Cultural and Historic properties during damages assessment and request for assistance if needed.</li> </ul>	<ul style="list-style-type: none"> <li>· Maintain situational awareness of current and future weather conditions.</li> <li>· Be prepared to coordinate damages assessments if needed.</li> <li>· Be prepared to provide technical assistance to public Natural, Cultural and Historic properties during damages assessment and request for assistance if needed.</li> </ul>

<p><b>ESF 15</b></p> <p><b>Public Information</b></p>	<ul style="list-style-type: none"> <li>· Continue planning activities.</li> <li>· Continue equipment maintenance.</li> <li>· Social Media: Maintain situational awareness of weather by monitoring twitter feeds/Facebook pages of NWS offices, local meteorologists.</li> <li>· Website: Continue monitoring day- to-day activities. No changes to the website. Homepage reflects the most notable weather conditions for that time of year.</li> </ul>	<ul style="list-style-type: none"> <li>· Social media: Maintain situational awareness of weather by monitoring Twitter feeds/Facebook pages of NWS offices, local meteorologists.</li> <li>· Website: Continue monitoring day- to-day activities. No changes to the website. Homepage reflects the most notable weather conditions for that time of year.</li> </ul>	<ul style="list-style-type: none"> <li>· Social media: Maintain situational awareness of weather by monitoring Twitter feeds/Facebook pages of NWS offices, local meteorologists.</li> <li>· Website: Continue monitoring day- to-day activities. No changes to the website. Homepage reflects the most notable weather conditions for that time of year.</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Coordinate with meteorologist, Operations and EOC Leadership on messaging.</li> <li>· Provide talking points for local partners.</li> <li>· Social media: Maintain situational awareness of weather by monitoring Twitter feeds/Facebook pages of NWS offices, local meteorologists.</li> <li>· Website: Continue monitoring day-to-day activities. Through coordination with meteorologist and Operations, the Homepage may reflect the enhanced risk with addition of appropriate map and links to NWS products.</li> </ul>	<ul style="list-style-type: none"> <li>· Develop Staffing Roster for EOC Activation.</li> <li>· Coordinate with meteorologist, Operations and EOC Leadership on messaging.</li> <li>· Provide talking points for local partners.</li> <li>· Social media: Maintain situational awareness of weather by monitoring Twitter feeds/Facebook pages of NWS offices, local meteorologists.</li> <li>· Website: Continue monitoring day- to-day activities. Through coordination with meteorologist, Operations and Leadership, the homepage may reflect the moderate risk with addition of appropriate map</li> </ul>
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					and links to NWS products. · Provide news releases and respond to media requests accordingly.
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## APPENDIX E: VERSION HISTORY

Change Number	Section	Date of Change	Individual Making Change	Description of Change
0.1	All			Initial draft of Flood Annex
0.2	All	02/22/18	Yolo OES	Add edit notes
0.3	All	06/11/18	KSN & HCI	Make edits requested by OES
0.4	All	08/18/21	Yolo OES	Final OES edits
0.5	All	10/14/21	Partner Agencies	Revision requests from partner agencies throughout Yolo incorporated
0.6	Maps & Charts	11/19/21	Yolo OES	Made changes throughout to remove RD 785 & RD 827 due to those RD's combining with others
1.0	All	08/1/2024	Yolo OES	Update All Sections