

# California Department of Water Resources

## Flood Operations Center Overview



**Liz Bryson, Chief**  
State-Federal Flood Operations Center  
Division of Flood Management  
California Department of Water Resources

# Purpose

Manage DWR's flood emergency response.

- Gather and disseminate information:
  - Forecasted meteorological and hydrological information
  - Flood system status
  - Emergency contacts
- Coordinate with federal, state, and local emergency response partners



# DWR

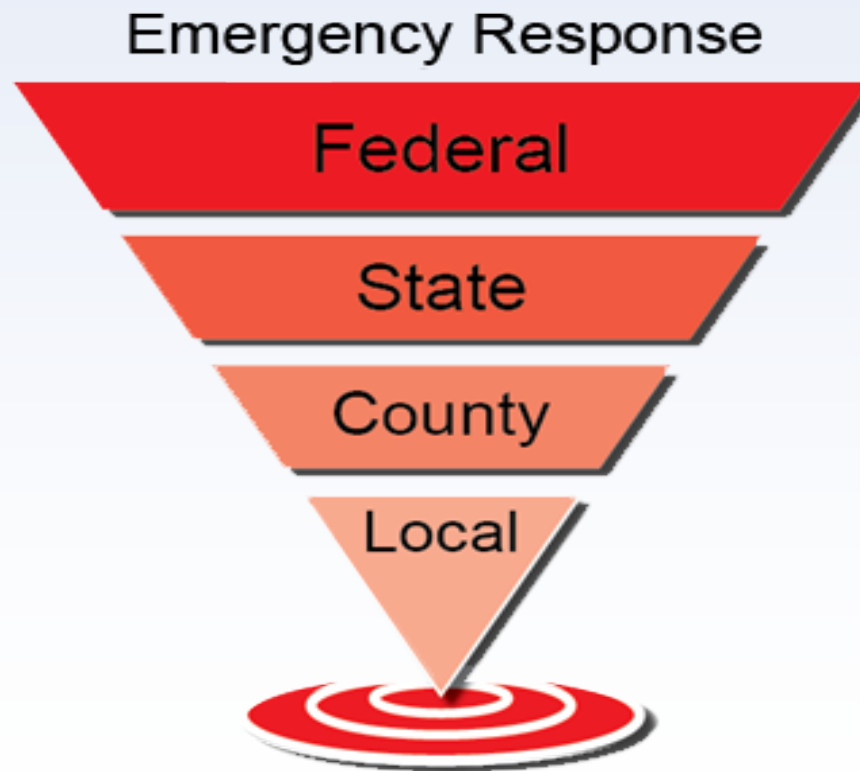
## Emergency Response Priorities

- Life, property, and infrastructure
- Water quality and water supply
- Environment
- Authority derived from:
  - CA Emergency Services Act (Govt. Code 8607)
  - State Emergency Plan
  - CA Water Code Section 128 (a)



# Role & Responsibility

- In accordance with SEMS...



# Flood Operations Center Coordination

## Coordinates:

- Local agency requests for State technical and direct assistance
- Flood fight activities
- Federal technical and emergency assistance under Public Law 84-99

## Does NOT:

- Declare emergencies
- Order evacuations
- Repair levees
- Coordinate recovery



# FOC Technical Data

- River stages
- Reservoir levels and releases
- Weather forecasts
- Precipitation data
- O&M maps  
and system maps
- Snow data



**CALIFORNIA NEVADA RIVER FORECAST CENTER**  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME HYDROLOGY WEATHER CLIMATE RESEARCH / OUTREACH LINKS SEARCH ABOUT US

Local forecast by "City, St" or ZIP Code  
  [Location Help](#)

**NOAA / NWS News and Local CNRFC Information**

**New Flood Forecast Point** - The CNRFC is now providing river guidance along the Mojave River at Barstow with an established flood stage of 5.0 feet. To view this forecast, use the map interface below or visit our [River Forecast](#) webpage.

**CNRFC Drought Information Page Updated** - Our [drought information page](#) has been updated and contains links to many climate-related resources including the U.S. Drought Monitor, local Drought Information Statements from various Weather Forecast Offices, and climate forecasts from NOAA's Climate Prediction Center.

**NORMAL** All River Guidance (Flood Forecast) Points Are Currently and Forecast to Remain Below Critical Stages **NORMAL**

Recently-Issued CNRFC Text Products:  ( ID) Date/Time Issued to Web

Home Page Version: [Interactive Map](#) | [Legacy](#)      Map Search

**Geographic Overlays**  CNRFC Boundary  States  Counties  Lakes  Rivers  
 Drainage Basins  National Parks  Burn Areas 2014  2013

**Rivers/Reservoirs**

Forecasts Show only critical stages (fst pts only)   
 Data updated: Wed Sep 30 2015 08:29 AM PDT  
 Ens. fst updated: Wed Sep 30 2015 07:34 AM PDT  
 Forecast Points  Other Points  Ensemble

**Observed Data**  
 Data updated: Wed Sep 30 2015 08:26 AM PDT  
 Show only critical stages (applies to fst pts only)   

	Latest Hour	1 Hr Ago	2 Hrs Ago	3 Hrs Ago
Forecast Points	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Points	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reservoirs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Forecast + Observed Data**  
 Fst data updated: Wed Sep 30 2015 08:29 AM PDT  
 Obs data updated: Wed Sep 30 2015 08:25 AM PDT  
 Forecast Points Show only critical stages   
 Link to  observed  forecast  

	Latest Hour	1 Hr Ago	2 Hrs Ago	3 Hrs Ago
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Significant River Flood Outlook**  
 Data updated: Tue Sep 29 2015 10:58 AM PDT  
 Valid: 09/29/2015 - 10/04/2015  
 Opacity:

Latest Flood Outlook Product (updated daily)

[Water Resources](#)  
[Snow Data](#)  
[Observed Precipitation \(QPE\)](#)  
[Forecast Precipitation \(QPF\)](#)  
[Observed Temperatures](#)  
[Forecast Temperatures](#)  
[Freezing Levels](#)

**Humboldt River Battle Mountain**  
 ID: H5M2  
 Latitude: 40.674N  
 Longitude: 116.93W  
 Elevation: 4500 Ft  
 Flood Stage: 9.5 Ft  
 Monitor Stage: 8.3 Ft  
 Forecast Issued: 09/30 at 14:13 UTC  
 Maximum Forecast Stage / Flow: 2.9 Ft / 8 cfs  
 Latest Observed Stage / Flow: 2.0 Ft / 0 cfs

Legend:  
 No Monitor or Flood Stage Available  
 Normal Conditions  
 Above Monitor Stage  
 Above Flood Stage  
 Above Danger Stage

The number inside each circle above represents the number of gages with forecast conditions inside that category.

# CNRFC

- River Stages
- River Forecasts
- Weather
  - Radar & Satellite Imagery
  - Precipitation
  - Watches/Warnings
- Climate
  - Forecasts
  - El Niño
  - Drought
- Historical Data

# CNRFC River Stages

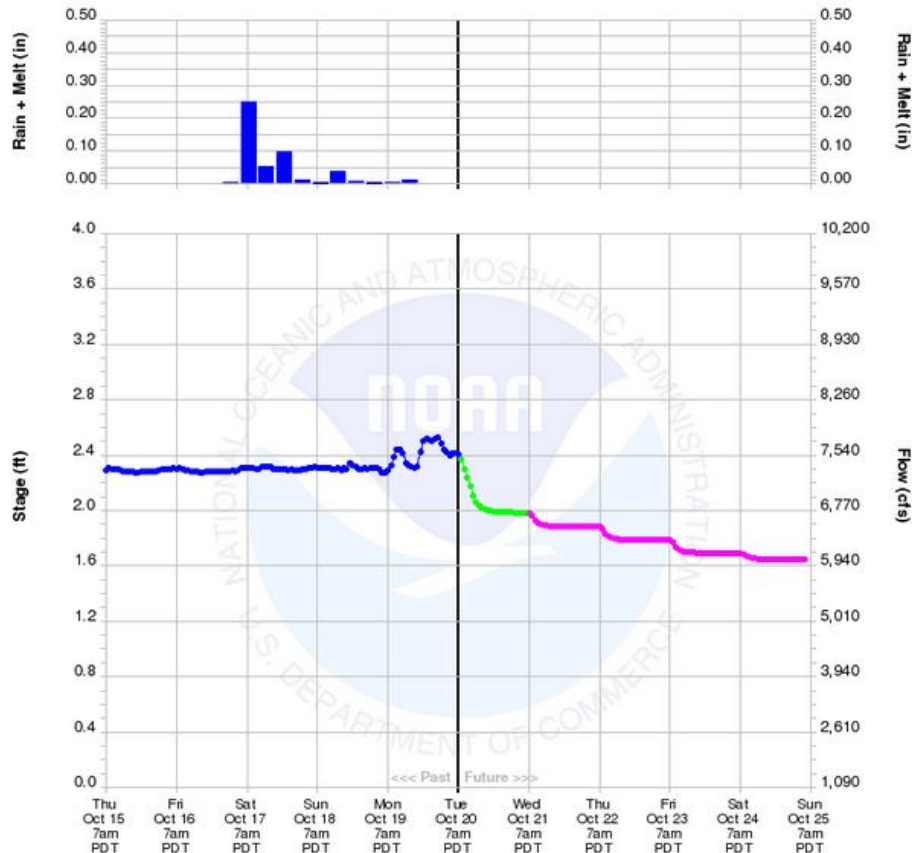
## SACRAMENTO RIVER - BEND BRIDGE (BDBC1)

Latitude: 40.29° N Longitude: 122.19° W Elevation: 286 Feet  
Location: Tehama County in California River Group: Upper Sacramento

Issuance Time: Oct 20 2015 at 7:43 AM PDT Next Issuance: Oct 20 2015 at 3:00 PM PDT

Monitor Stage: 22.0 Feet

Flood Stage: 27.0 Feet



Observed • Forecast • Guidance •  
Created: 10/20/2015 at 7:44 AM PDT (BDBC1 Forecast Run Time = 1432Z)  
California Department of Water Resources  
NOAA / NWS / California Nevada River Forecast Center

Verification - Historical Graphical RVF

Month: Oct Day: 14 Year: 2015 Cycle: 12z-18z Fetch

To view other verification locations, use our Historical Graphical River Forecast Interface.

- Location
- Historical impact data
- Monitor/Flood/Danger Stages
- Forecasted stages/flows
- Latest observed stages/flows

10/22/2015



# CNRFC River Stages

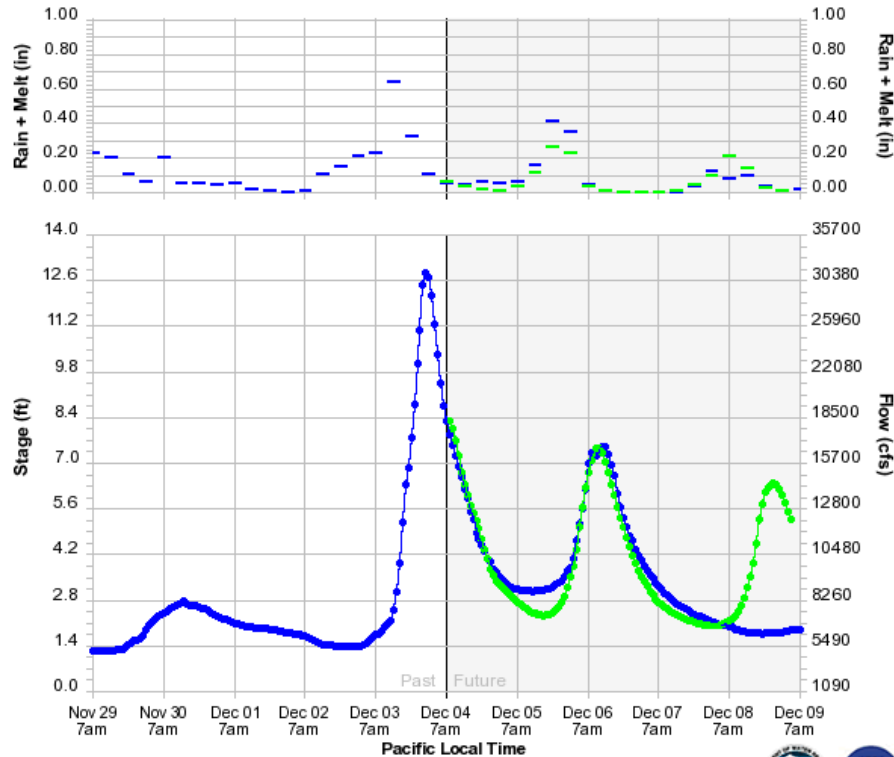
## SACRAMENTO RIVER - BEND BRIDGE (BDBC1)

Latitude: 40.29° N Longitude: 122.19° W Elevation: 286 Feet  
 Location: Tehama County in California River Group: Upper Sacramento

Forecast — Observed —

Previous Forecast	Next Forecast
Thursday 12/04/2014 00-06 UTC	Thursday 12/04/2014 18-00 UTC
Selected Date: Thursday 12/04/2014 12-18 UTC	

BDBC1 - SACRAMENTO - BEND BRIDGE, ABV, RED BLUFF, NR (MS: 22.0 / FS: 27.0)  
 Forecast Issuance: December 04, 2014 at 07:59 AM PST



Observed ● Forecast ●  
 FCTime: 1559Z ID: BDBC1  
 Created: 12/10/2014 at 1:21 AM PST (Source = C)

California Department of Water Resources  
 NWS / California Nevada River Forecast Center



# CDEC

- Historical data
- Precipitation
- River forecasts
- River stages
- Reservoirs
  - Storage
  - Releases
- Snow data

The screenshot shows the homepage of the California Data Exchange Center (CDEC). At the top, there is a navigation bar with the CA.GOV logo, the text "Department of Water Resources CALIFORNIA DATA EXCHANGE CENTER", and a search bar. Below the navigation bar is a large aerial photograph of a reservoir with a dam, labeled "CDEC Home". A green arrow icon points to the text "WELCOME TO CALIFORNIA DATA EXCHANGE CENTER". Below this, a paragraph describes the CDEC's role in installing, maintaining, and operating an extensive hydrologic data collection network. To the right, there are buttons for "MOST POPULAR PAGES" and "RELATED PAGES". Below the welcome message, there are two columns of links: "CURRENT CONDITIONS" and "MORE INFORMATION". At the bottom, there is a "BROWSE CDEC" section with a grid of letters A through Z, and an "ANNOUNCEMENTS" section. On the right side, there is a "Save Our WATER" logo and social media icons for Wi-Fi, Facebook, and Twitter, with the text "STAY CONNECTED".

CA.GOV Department of Water Resources CALIFORNIA DATA EXCHANGE CENTER

HOME QUERY TOOLS PRECIPITATION RIVER FORECAST RIVER STAGES RESERVOIRS SNOW STATIONS WEATHER

WELCOME TO CALIFORNIA DATA EXCHANGE CENTER

The California Data Exchange Center (CDEC) installs, maintains, and operates an extensive hydrologic data collection network including automatic snow reporting gages for the Cooperative Snow Surveys Program and precipitation and river stage sensors for flood forecasting.

>> CDEC Brochure

**CURRENT CONDITIONS**

- » River Conditions
- » River Guidance Plots
- » Water Supply
- » Statewide Water Conditions
- » Daily Drought Information Summary
- » Daily Statewide Hydrologic Update (Interactive) **NEW**

**MORE INFORMATION**

- » What's New **UPDATED**
- » General Information About CDEC
- » Contact CDEC Staff
- » Flood System Inspection Reports
- » Local Maintaining Agency Annual Report
- » Public System Documents
- » Current/Archived Reports in Alphabetic Order
- » Flood Academy Website **NEW**

**BROWSE CDEC**

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z

**ANNOUNCEMENTS**

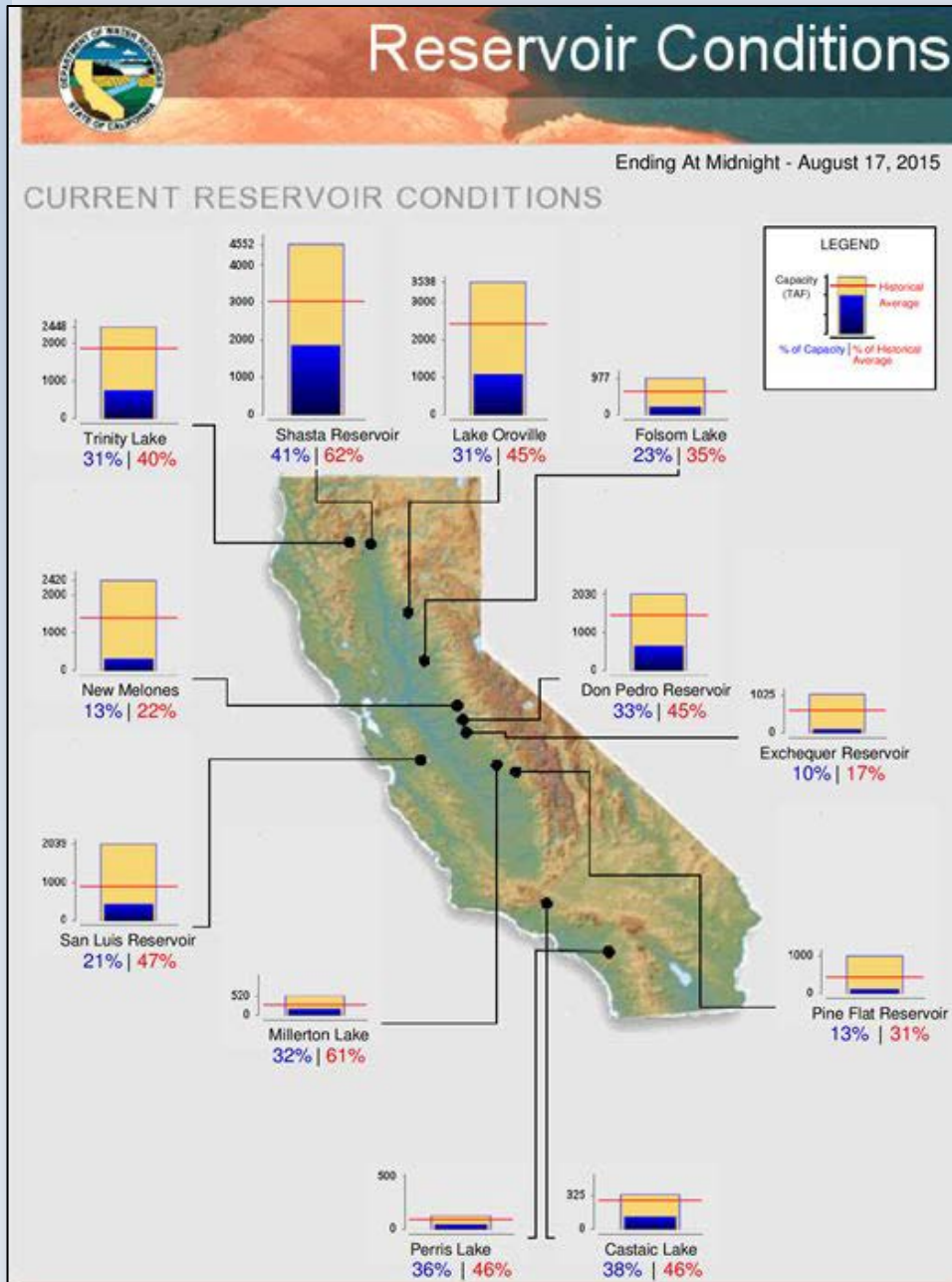
Save Our WATER

STAY CONNECTED



10/22/2015

# CDEC Reservoir Conditions



- Reservoir capacity
- Percent of historical average

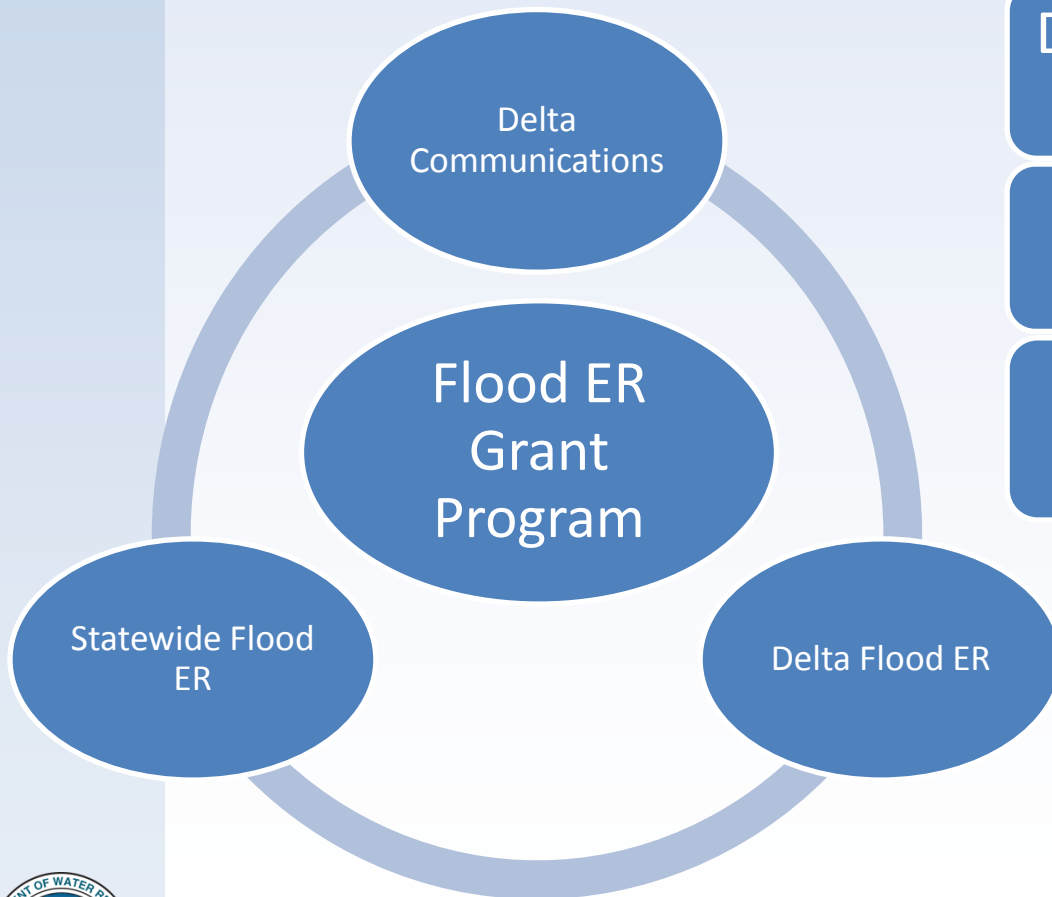


# Information and Contacts

- Flood Center (916) 574-2619 [flood\\_center@water.ca.gov](mailto:flood_center@water.ca.gov)
- Eureka Flood Center (707) 445-6576
- Recorded Conditions and Forecasts (800) 952-5530
- Public CDEC access – <http://cdec.water.ca.gov>
- Agency access – <http://cdec4gov.water.ca.gov> (call (916) 574-1777 to apply)
- Webcast Weather/Hydrology Briefings – [wx\\_webcast-request@water.ca.gov](mailto:wx_webcast-request@water.ca.gov)
- FERIX – <http://ferix.water.ca.gov>
- Directory of Flood Officials and Emergency Contact Cards: 916-574-2619 or [flood\\_center@water.ca.gov](mailto:flood_center@water.ca.gov)
- Flood Operations Center Chief:
  - Liz Bryson (916) 574-1358 or [Elizabeth.Bryson@water.ca.gov](mailto:Elizabeth.Bryson@water.ca.gov)



# Current Flood ER Grant Types



Delta Communications – \$5 Million in Prop. 84 funding

Statewide Flood ER – \$10 Million in Prop. 84 funding

Delta Flood ER - \$5 Million in Prop. 1E Funding



# Eligibility for Flood ER Grant

California public agencies with  
**primary responsibility for flood emergency response**

Local Maintaining Agencies

Reclamation Districts

Flood Control Districts

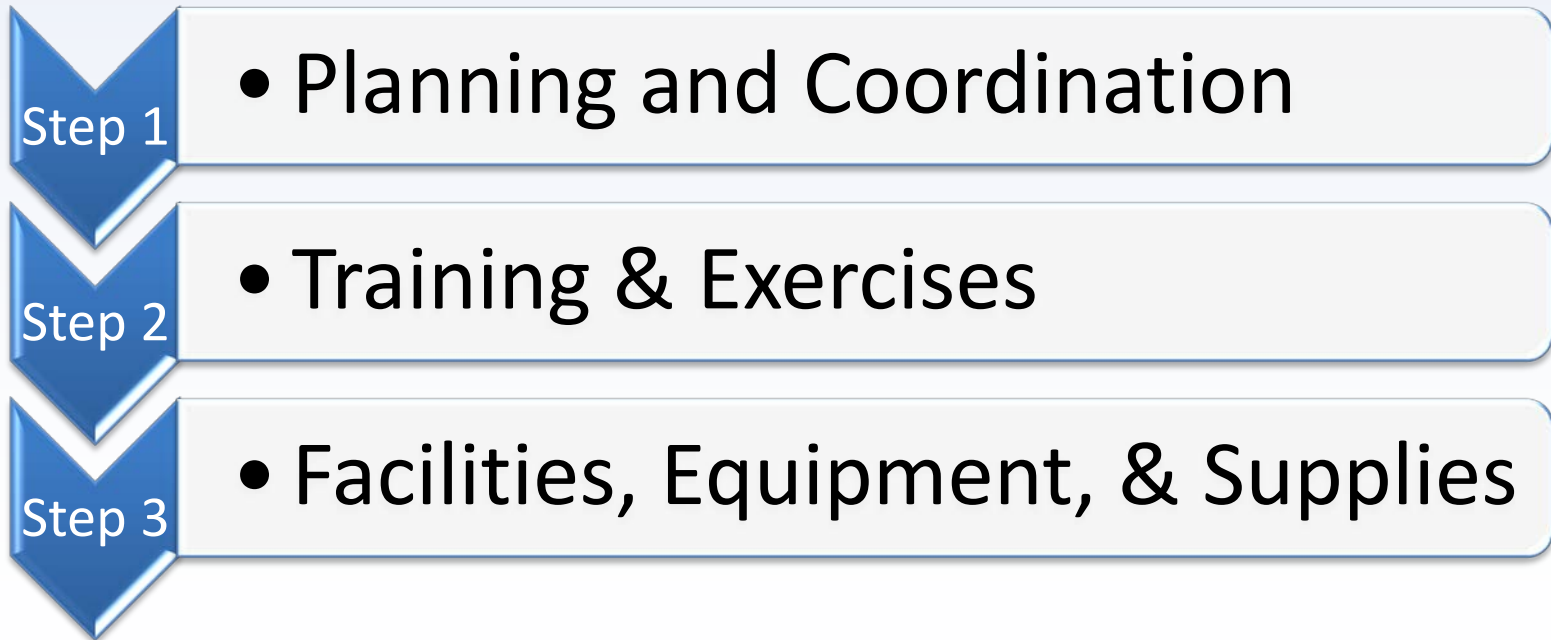
Cities

Counties

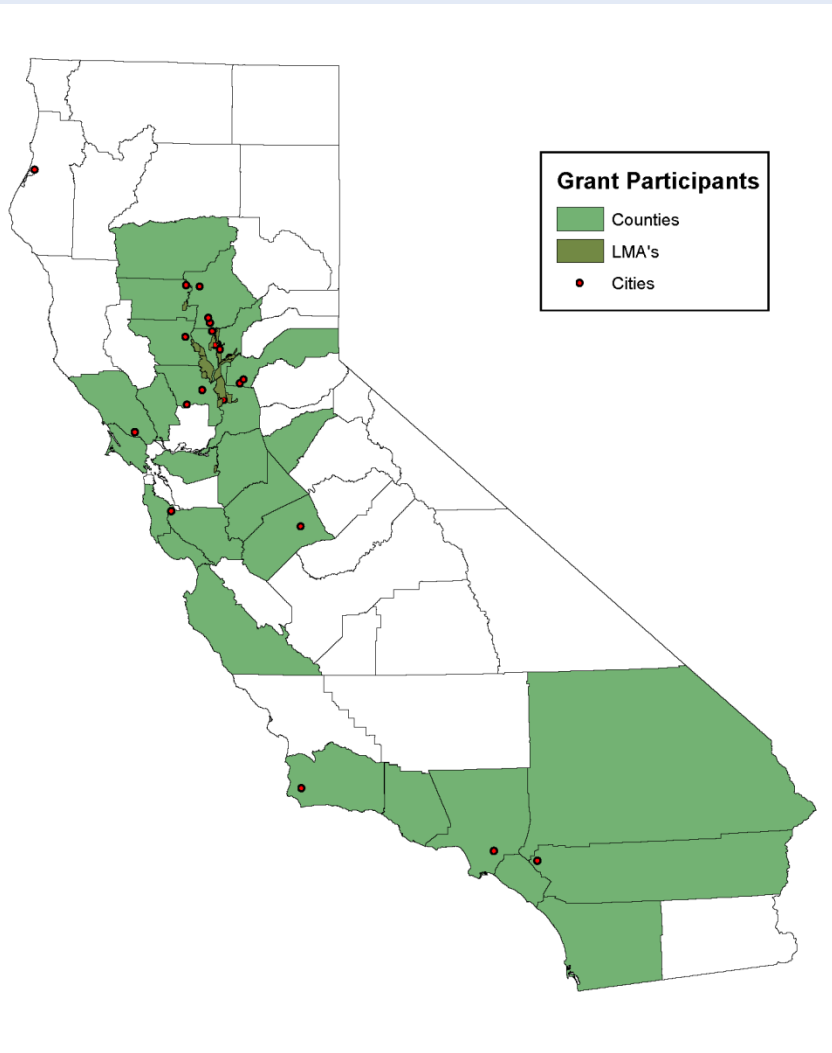
Joint Power Authorities

# Funded Activities

Statewide/Delta Flood ER Grant (Prop. 84 & 1E)  
Funding activities prioritized in 3 steps



# Statewide Flood ER Grant Awardees



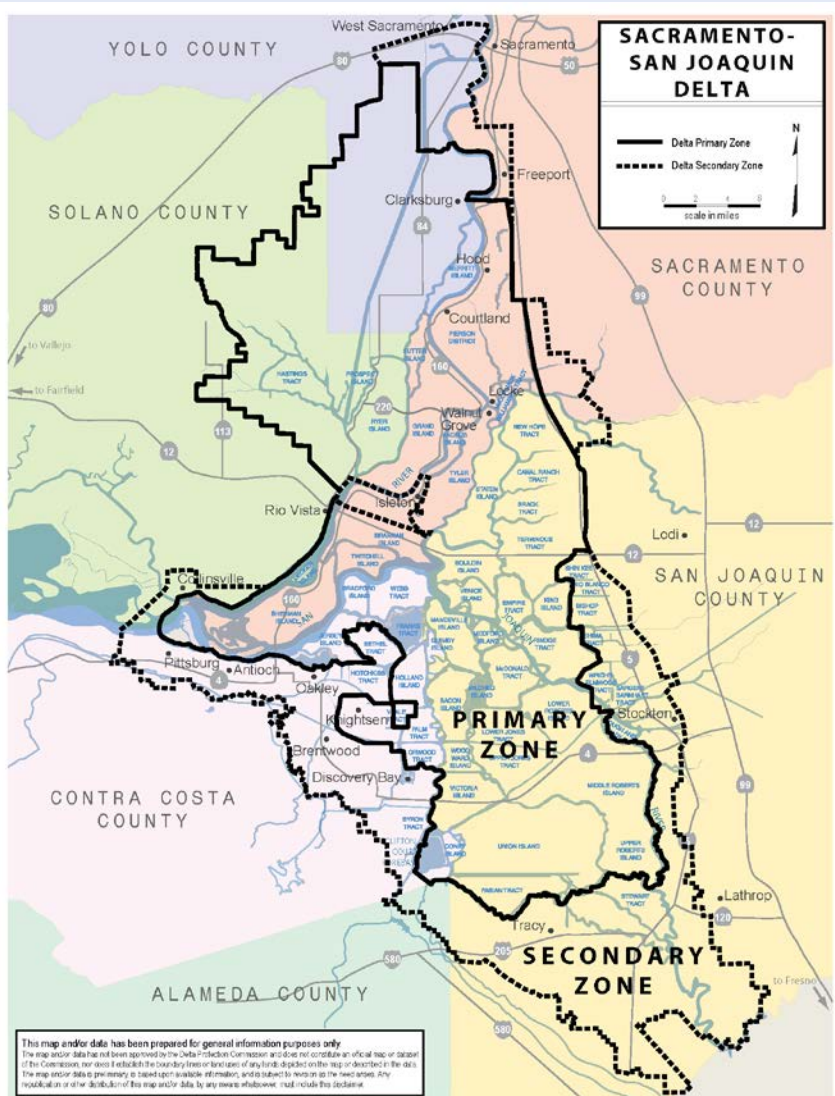
34 Projects Funded

189 Participating Agencies

Over \$24 million in requested funds



# Delta Flood ER Grant Awardees



6 Projects Funded

125 Participating Agencies

Over \$8.5 million in requested funds

Focused on Planning & Coordination

# Flood ER Grant Process

## Flood ER Grant Schedule



# Future Grant Opportunities

Additional rounds of funding for Statewide and Delta grants

**Third Statewide Grant proposal solicitation package expected 2016**

**Second Delta Grant proposal solicitation package anticipated spring 2016**

**Increased potential for non-planning project activity type funding**

**Up to \$5000 in application cost reimbursement for successful applicants**

# Available Resources

## Webpage:

[www.water.ca.gov/floodmgmt/hafoo/fob/floodER](http://www.water.ca.gov/floodmgmt/hafoo/fob/floodER)

For more information or to be added to the email notification list contact

## Statewide Grants:

Liz Bryson  
(916) 574-1358  
Elizabeth.Bryson@water.ca.gov

## Delta Grants:

Zachary Jojola  
(916) 574-0381  
Zachary.Jojola@water.ca.gov