

October 10, 2018

A Working Vision: The Central Valley Flood Protection Plan



*Water Education Foundation
Northern California Tour*

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TODAY'S DISCUSSION

California Central Valley Flood Issues

- Historical and Spatial Context
- Recent Trends

2017 Central Valley Flood Protection Plan Update

- What it is and says
- Components

Recent Implementation Efforts and Programs

- Work underway
- Where we are headed

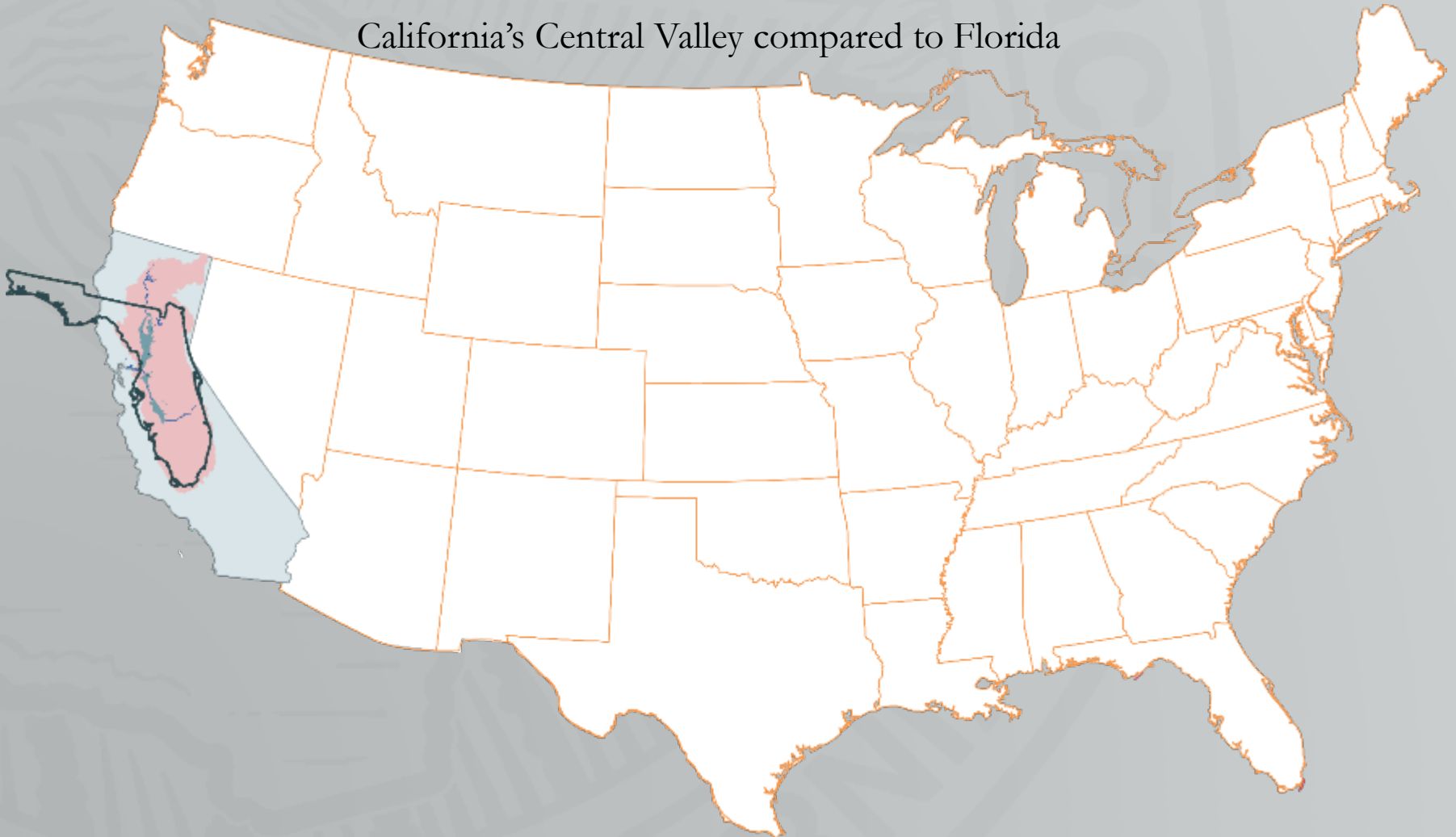
California Central Valley Flood Related Issues



Image: Looking Over Highway 70 Overpass, Plumas Lake Area During 1997 Flood and Present Day

Understanding the Scale

California's Central Valley compared to Florida



Flood Hazards in CA



Tsunami Flooding



Engineered Structure Failure Flooding



Coastal Flooding



Debris Flow Flooding



Stormwater Flooding



Slow Rise Flooding



Flash Flooding



Alluvial Fan Flooding



Potential Occurrence by County

Absent Present Likely

100 Years of Evolving Flood Management



1917
Local
Leadership Era

2017
Partnerships and
Obtaining Sustainable
Funding



Protect agriculture

Need

Flood control for urban areas and agriculture, plus water supply, ecosystem, recreation

Predominantly rural agriculture

Land Use

Widely varied: urban centers, industry, small communities, rural agriculture, public infrastructure

Locally available materials and practices, trial and error, as needed

**Design and
Construction
Standards**

Engineered structures with design life, advanced geotechnical practices and materials

No reservoirs, scouring flows

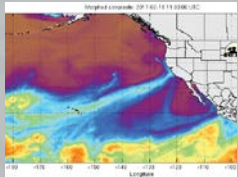
**Storage and
Flows**

Many reservoirs, coordinated operations, regulated flows for multiple objectives

Central Valley Flood Risks and Trends



Future growth will increase risk



Climate change increases flood risk



Habitat, processes, and species declining



Societal expectations emphasize a multi-benefit approach



Operations and maintenance is underfunded and complex

2017 Central Valley Flood Protection Plan Update



Los Angeles Times

By **The Times Editorial Board**

SEPTEMBER 2, 2017, 5:00 AM

“

We should take hope and inspiration from the little-discussed but crucially important Central Valley flood management plan.

Yolo Bypass serves as model for future California flood protection



By *Ellen Knickmeyer, Associated Press, and Democrat staff* POSTED: 08/26/17, 9:39 AM PDT

“It’s rare and powerful for such a dramatic change in California water policy to be driven by a consensus in the stakeholder community.” – Jacob Katz, Cal Trout

Planning Context



Flood management plan for the **entire State of California**



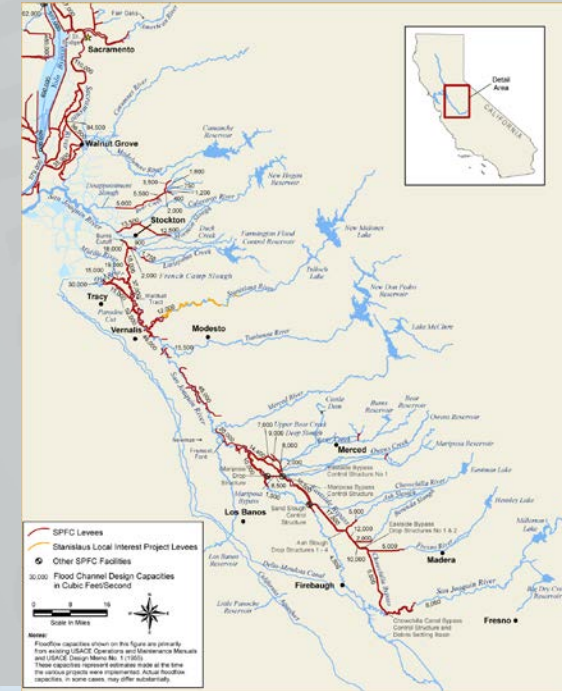
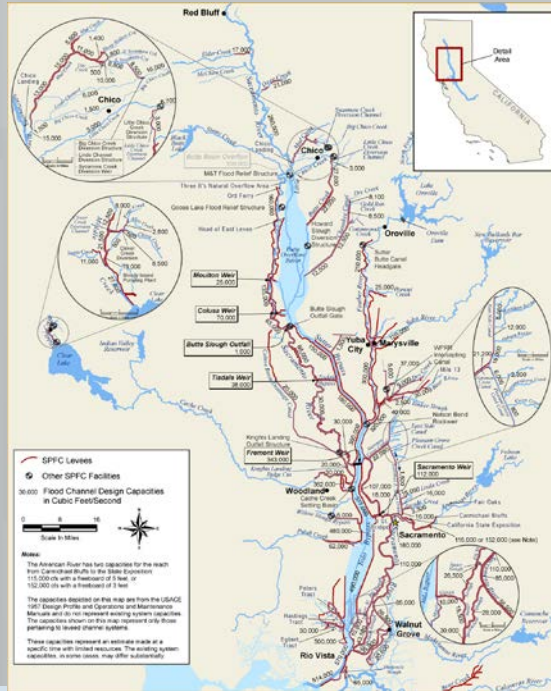
Flood management plan for **State Plan of Flood Control facilities and planning area**

Scope defined by Central Valley Flood Protection Act of 2008

Example of Large-Scale Public Infrastructure Project: State Plan of Flood Control

Key Elements:

- 1,600 miles of Federal-State levees
- Extensive system of bypasses & floodways
- 2 completely different river basins, each w/ over 5 major rivers
- 5 major urban centers, plus additional adjacent urban areas
- Dozens of small communities
- Dozens of endangered species
- Over million people living in floodplains
- +\$80B property / assets at risk



2017 Update to the CVFPP

- Refines SSIA
- Refines capital and ongoing costs, funding, and implementation phasing
- Identifies and seeks to address long-standing policy issues
- Establishes an outcome-based planning framework



CVFPP Planning Process, Assessments

Regional Flood Management Plans



Conservation Strategy



Basin-Wide Feasibility Studies



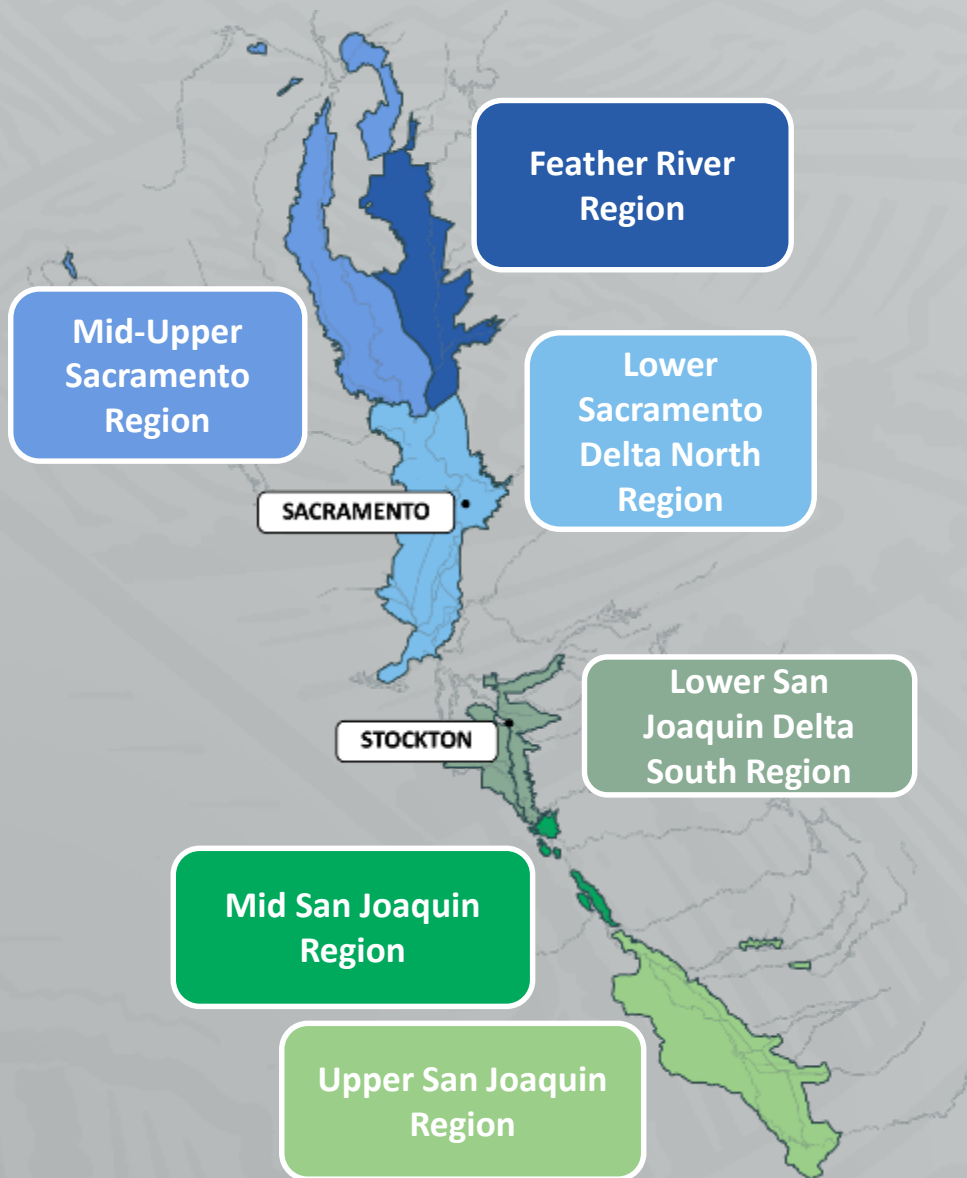
OMRR&R Workgroup Technical Memo



Investment Strategy

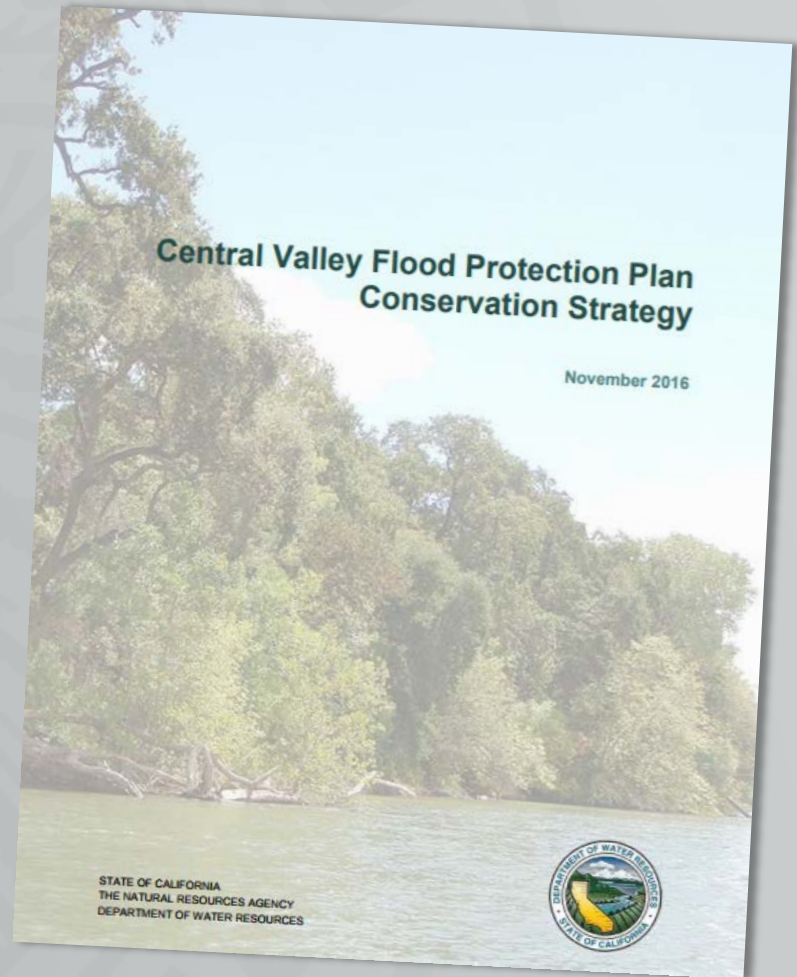


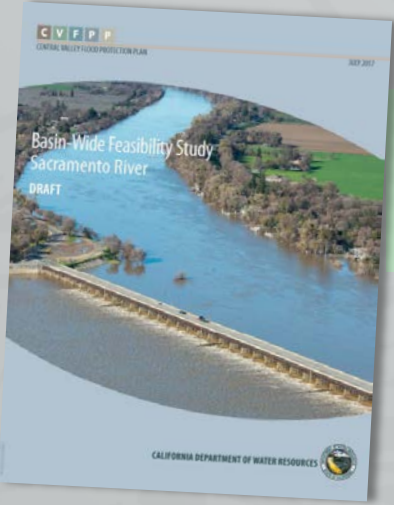
Regional Planning for CVFPP Update



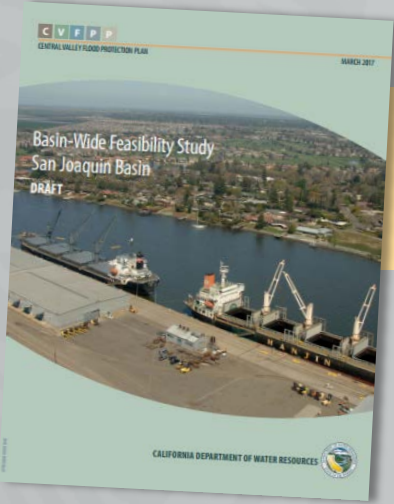
Conservation Strategy

- Long-term approach for improving riverine and floodplain habitats
- Provides guidance, data and tools for multi-benefit planning
- Identifies measurable ecological objectives





Sacramento River Basin-Wide Feasibility Study



San Joaquin River Basin-Wide Feasibility Study

Operations & Maintenance Needs

- Operations, Maintenance, Repair, Rehabilitation & Replacement (OMRR&R)
- Aging Structures
- Current Funding Gap

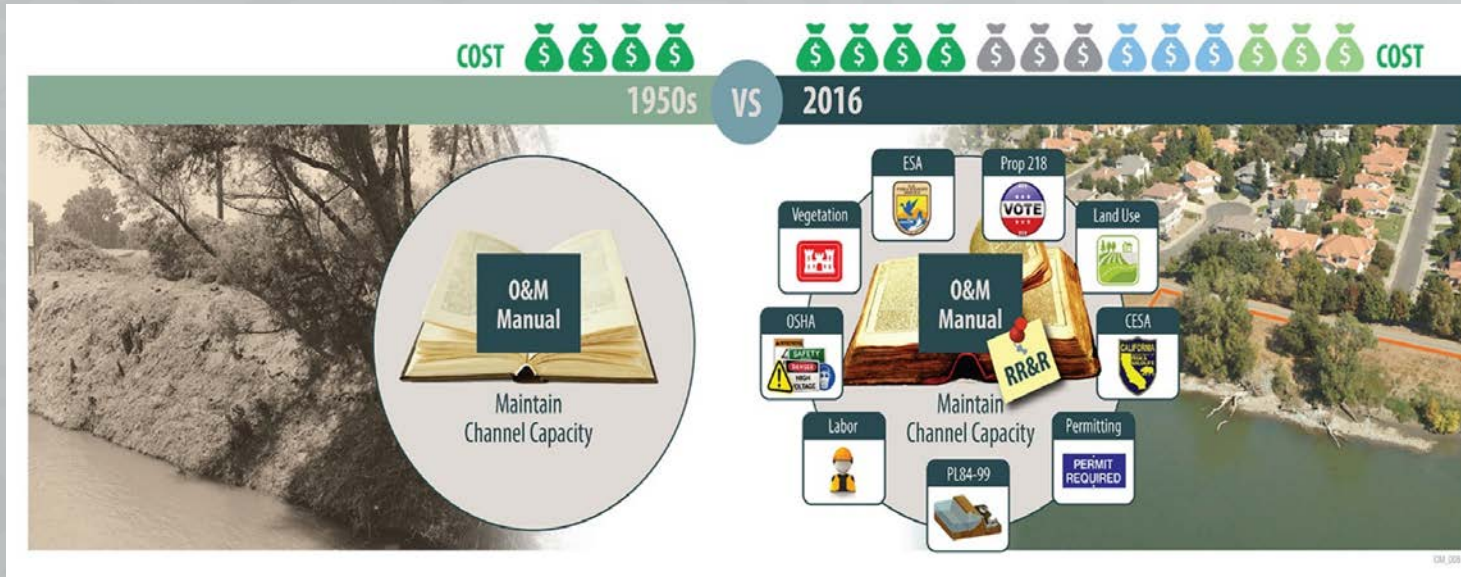


Photo: DWR Flood Maintenance Office Employee Opening One Bay of the 100-year old Sacramento Weir during the winter 2017 high water event. The weir protects the cities of Sacramento, West Sacramento and Elk Grove by removing flood flows from capacity limited Sacramento River.

Investment Strategy

C V F P P

\$17 to 21 billion

Investment over 30 years



**ONGOING
INVESTMENTS \$M/Y**

Annual funding
for routine activities:

\$250–310 M/year

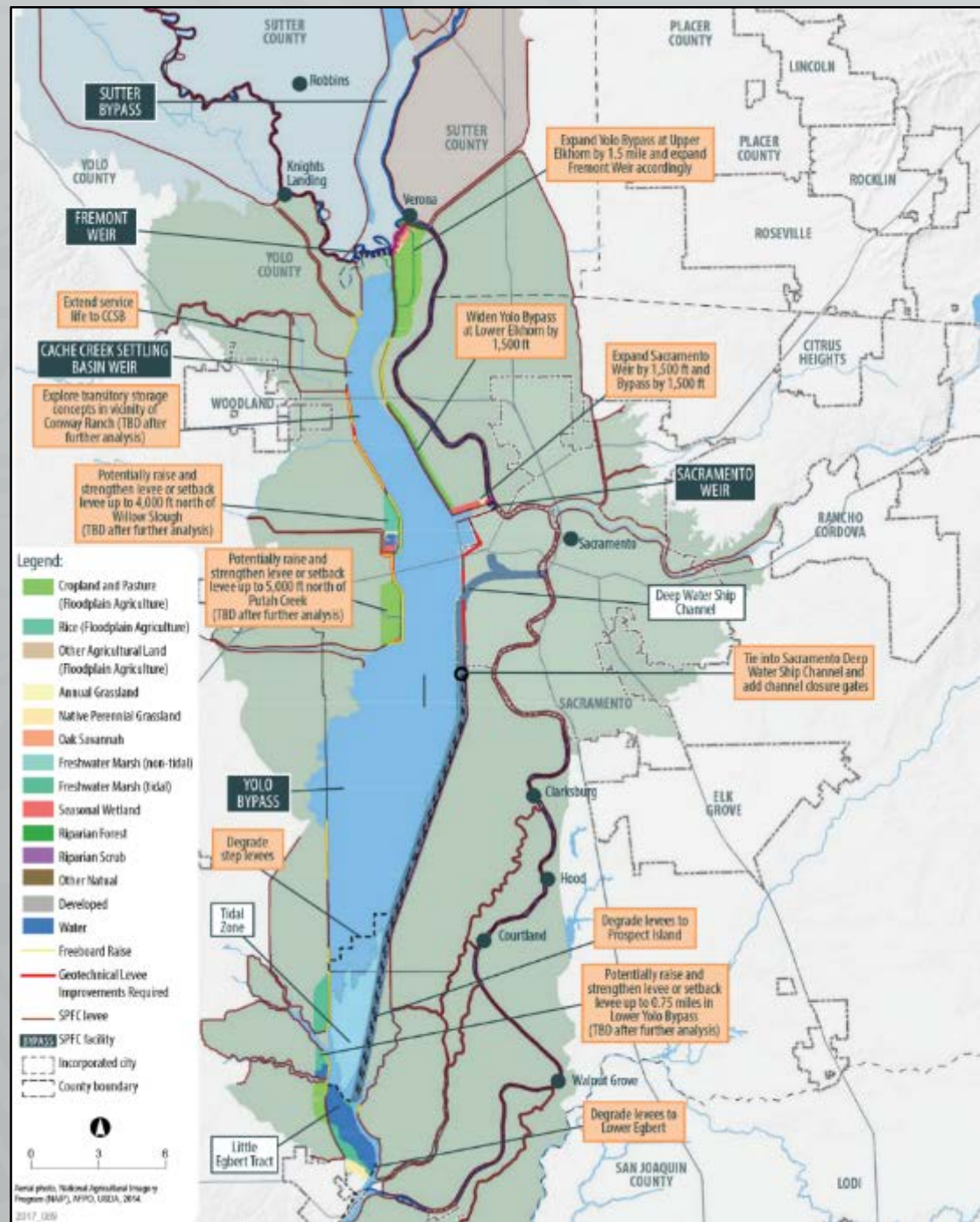


**CAPITAL
INVESTMENTS \$\$\$**

One-time funding for construction
or improvements:

\$12–16.2 B

Sacramento BWFS Recommended Plan

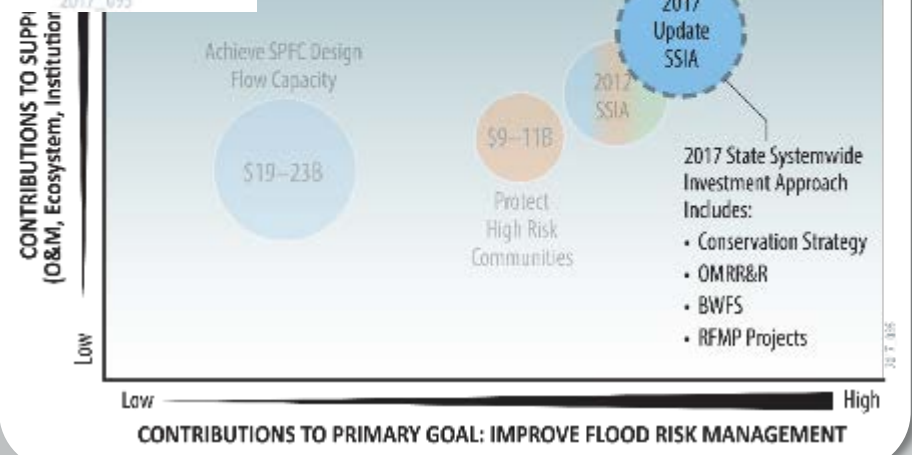


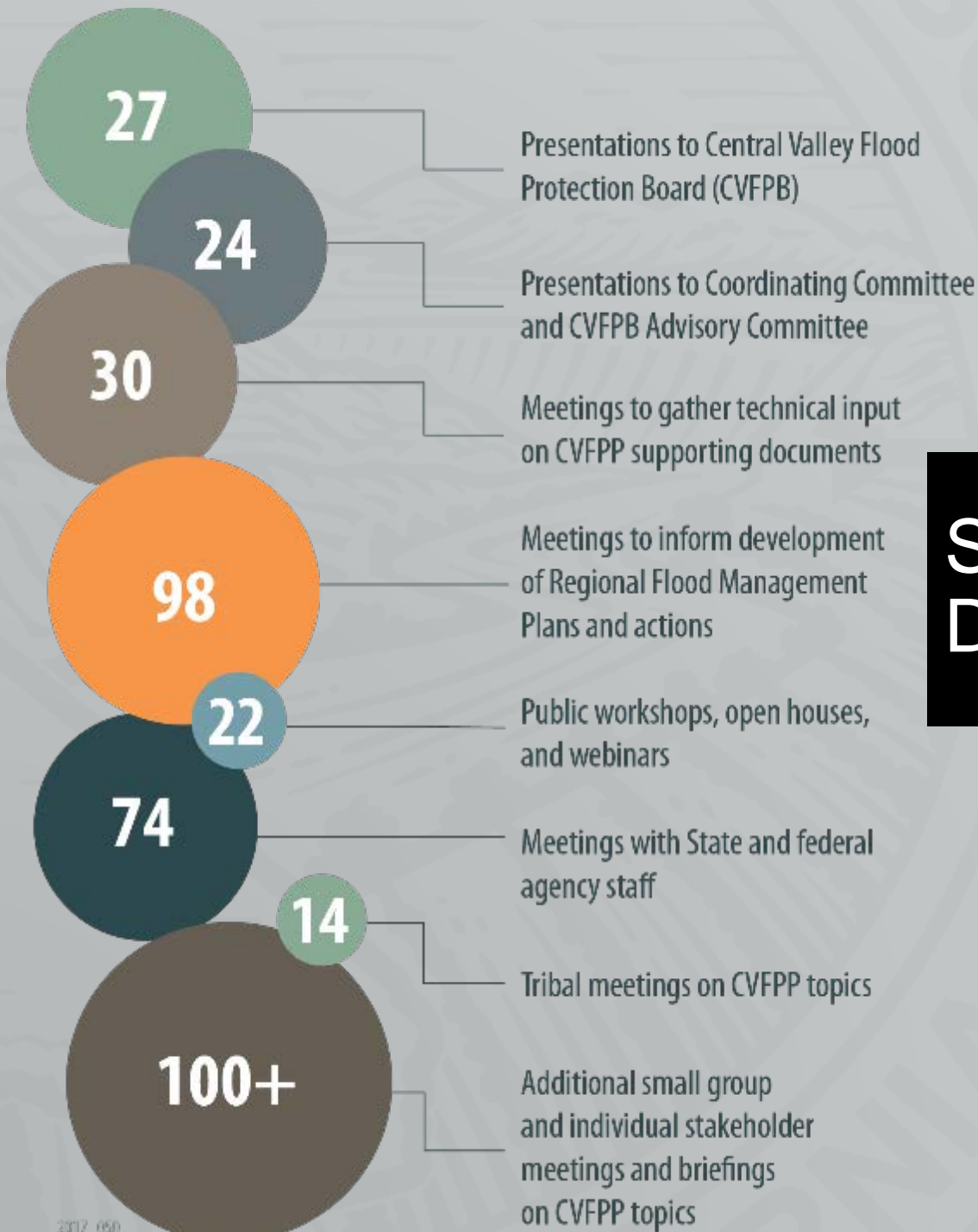
Assessing the Usability of the CVFPP



- ### Plan Recipe
- Provide Context & Set Objectives
 - Describe Performance of Several Ideas
 - Estimate Cost (Time & \$\$\$) of Recommendation
 - Show a Path to Implementation for Recommendation

CVFPP Update





Stakeholder-Driven Process

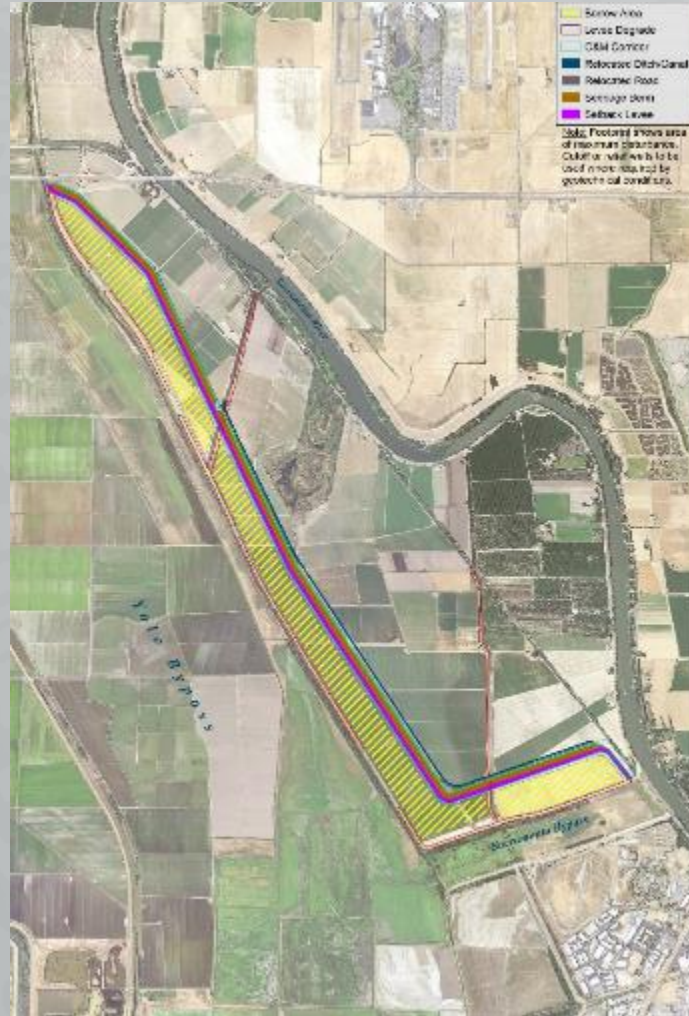
Recent Implementation Efforts



DWR Public Safety Initiative



Yolo Bypass Implementation

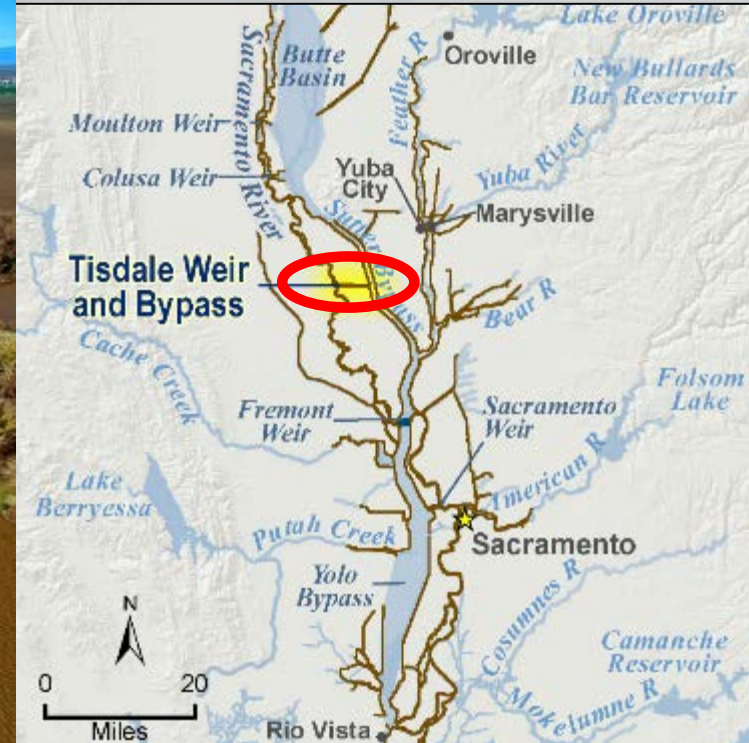


Lower Elkhorn Basin
Levee Setback



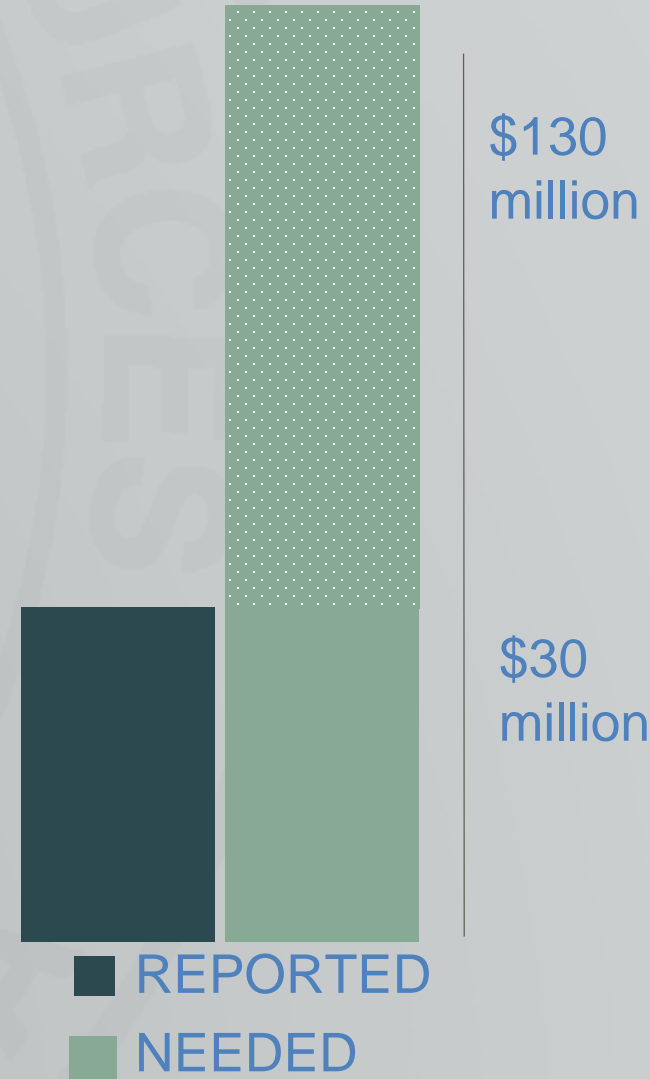
Little Egbert Tract

Tisdale Weir Rehabilitation



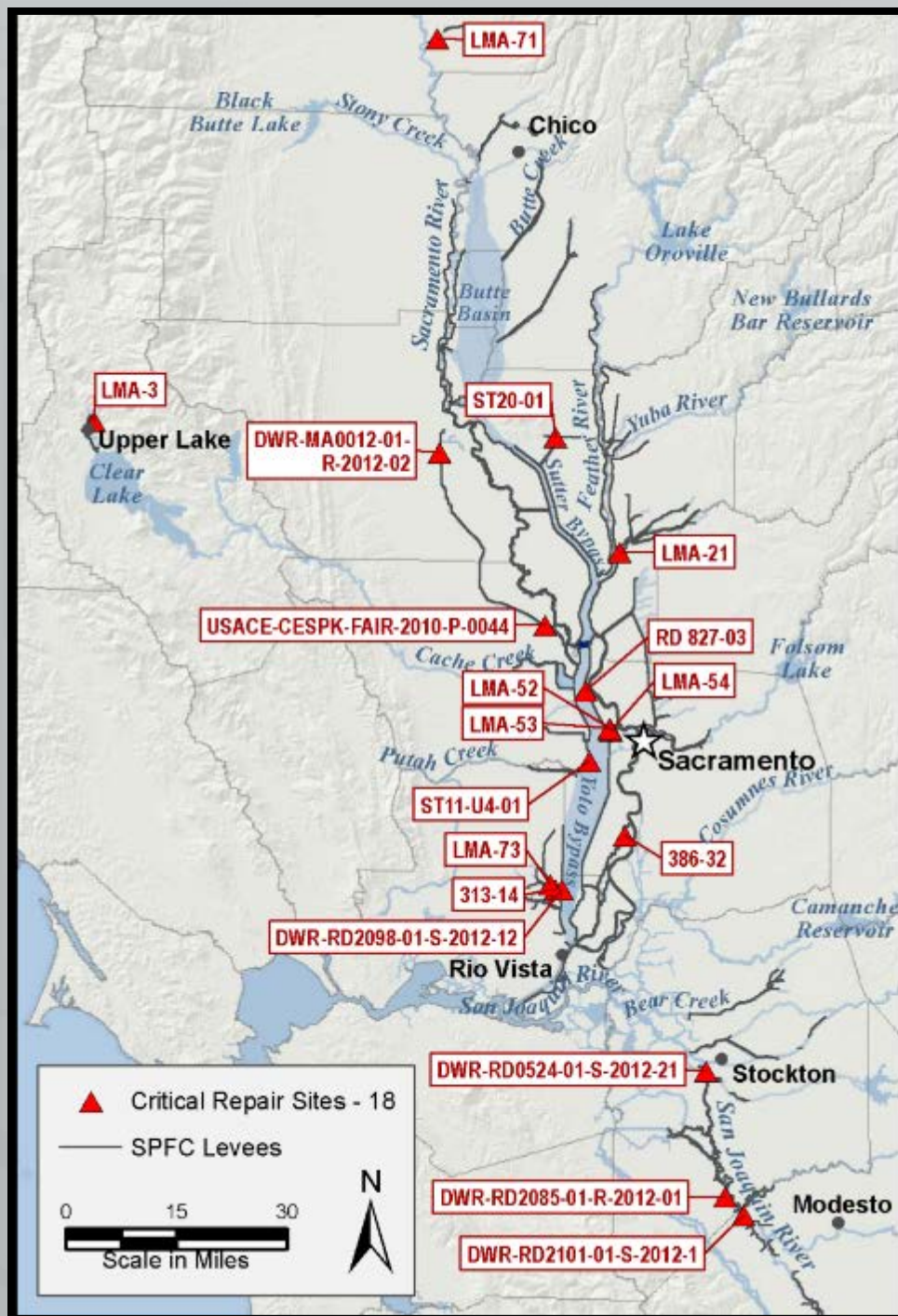
Enhanced O&M

- Increasing State and Local contributions to OMRR&R
 - Flood System Maintenance Assistance Program (FMAP)
 - CVFPB study of new local funding
 - CVFPB encroachment enforcement program
- O&M Goals and Performance Tracking



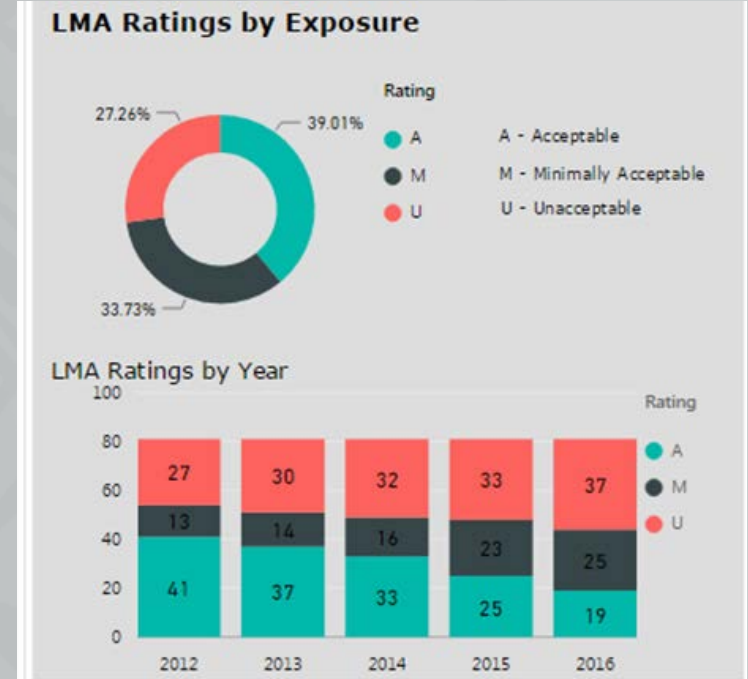
2017 Storm Damage DWR Emergency Rehabilitation Program

- Critical sites repaired before the start of the 2018 flood system



Performance Tracking

- Justifies Priorities and Investment
- Demonstrates Value
- Informs Adaptive Management



Questions

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