

# RECLAMATION

*Managing Water in the West*

## **The Influence of Resource Competition During Drought and Related Delta Challenges**

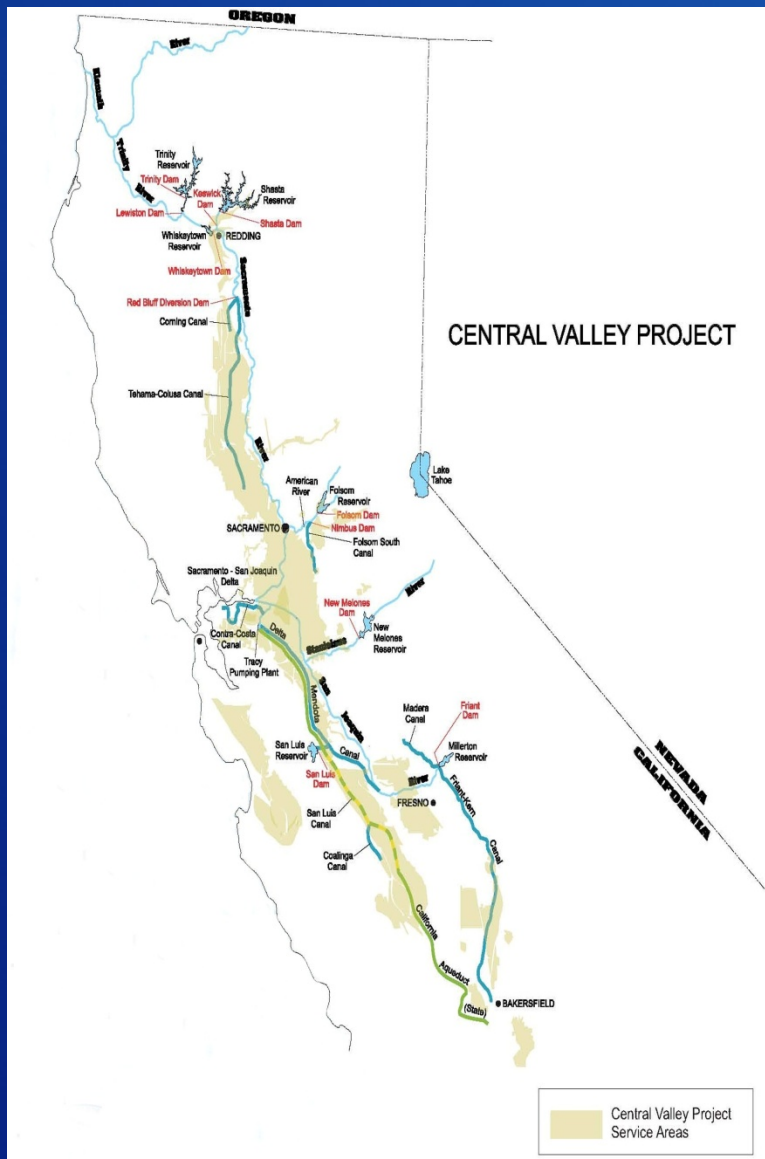
**October 25, 2016**

***Michelle Banonis***  
***Area Manager, Bay-Delta Office***  
***Mid-Pacific Region***



U.S. Department of the Interior  
Bureau of Reclamation

# Central Valley Project (CVP) Overview



- 20 dams and reservoirs, 11 powerplants, 500 miles of canals
- 7 MAF of water for agricultural, urban, and wildlife
- Operates in coordination with the State Water Project via the Coordinated Operations Agreement

RECLAMATION

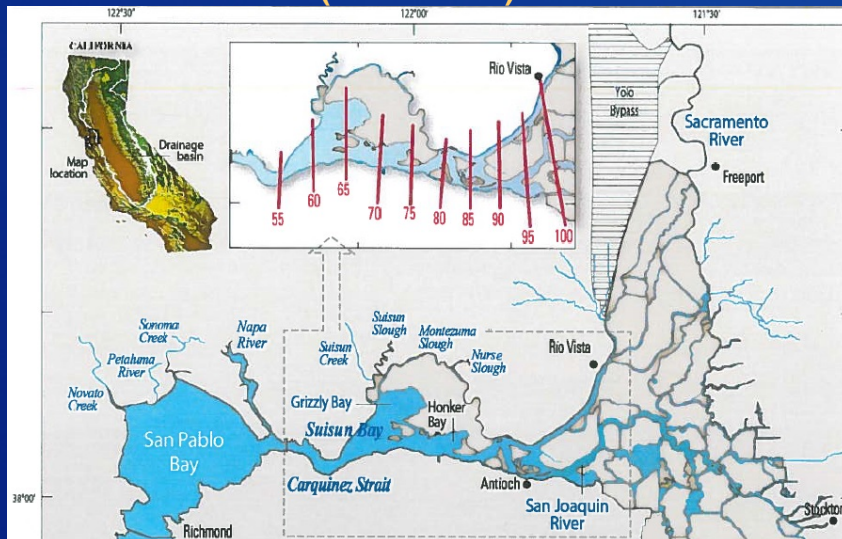
# CVP Contractual Requirements

- **Sacramento River Settlement Contractors and San Joaquin River Exchange Contractors**
- **State and Federal Wildlife Refuges**
- **Municipal and industrial (M&I) and agricultural**

# CVP Regulatory Requirements

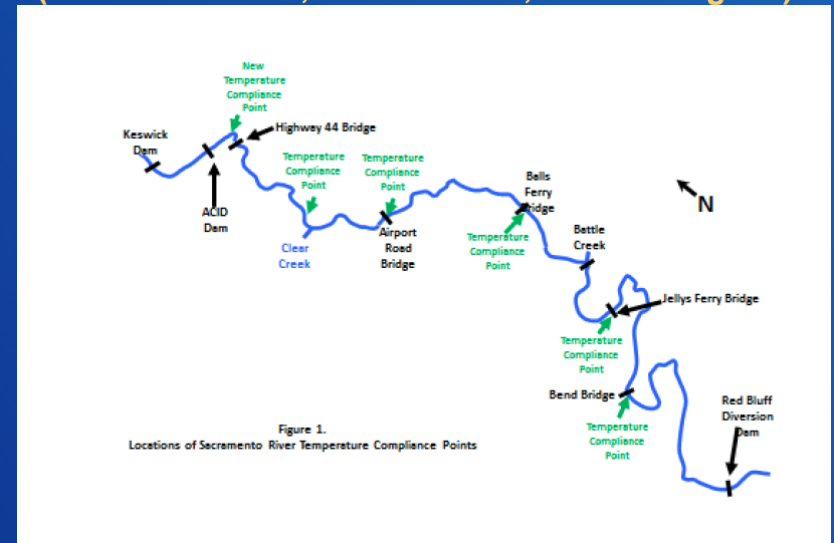
- **Endangered Species Act**
  - 2008 U.S. Fish and Wildlife Service (USFWS)
    - Includes a Reasonable and Prudent Alternative (RPA) for X2
  - 2009 National Marine Fisheries Service (NMFS)
    - Includes an RPA for in-stream temperature criteria in the Sacramento River
- **State Water Resources Control Board (SWRCB) Decision 1641 (D-1641)**
  - Salinity objective at Vernalis

## X2 Locations (Delta Smelt)



From: Interagency Ecological Program MAST Report, 2014

## Temperature Compliance Points (Chinook Salmon, CV Steelhead, Green Sturgeon)



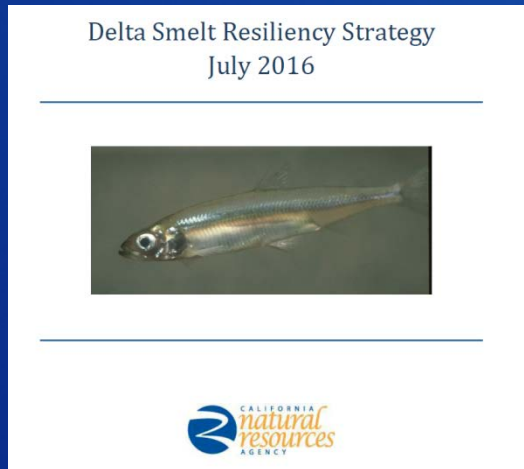
From: Sacramento River Temperature Task Group Annual Report of Activities, 2015

# RECLAMATION

# 2016 CVP Allocations

- 2016 storage gains not uniform over CVP
- Priorities of settlement, exchange, and refuge supplies – 100%
- 55% of historical use for South-of-Delta (SOD) M&I water service contracts
- 5% to SOD agricultural water service contractors
- Friant Division – started at 30% of Class I, updated to 65%, finally at 75% as of July 18, 2016

# 2016 Needs and Requests



- **Delta Smelt Resilience Strategy**
  - 13 proposed actions, including outflow for spring and summer
  - Up to 250 TAF of outflow augmentation above D-1641 requirements
- **Sacramento River Water Temperature Management Plan**
  - Plan submitted March 31, revised June/July
  - Coordinated with NMFS, concurrence from SWRCB
  - Called for reduced releases out of Shasta to maintain cold water through summer



# San Luis Reservoir: August 1, 2016



RECLAMATION

# One System, Many Needs, Ripple Effect

- **Sacramento River Temperature Management**
  - Reduced releases out of Shasta
  - Reduction or inability to divert in Sacramento River
  - Less capture in Delta for storage/deliveries
- **Delta Smelt Outflow Augmentation**
  - Reclamation efforts to acquire water for summer 2016
  - High Delta salinity = higher outflows to meet D-1641
  - X2 locations with or without outflow augmentation not ideal
  - If it happened, how would it have meshed with temperature management?
- **San Luis Reservoir Storage**
  - Low CVP storage in San Luis
  - Agreement with Friant Division



# Lessons Learned

- **Greater quantity of water than in prior years does not mean fewer resource conflicts**
- **Requests for additional resources/needs should come well before the water year commences**
- **Need to tie water management actions to specific and measurable biological objectives**

# Steps for WY 2017 and Beyond

- **Development of specific and measurable biological objectives, monitoring protocols, operational criteria**
- **Early coordination with regulatory agencies**
- **Continued coordination among State and Federal water and regulatory agencies to minimize or eliminate resource overlaps**