



— BUREAU OF —  
RECLAMATION

# Multipurpose Water Project Management

## Hydrologic Extremes

October 2, 2023

2023 Annual Conference

# Bureau of Reclamation



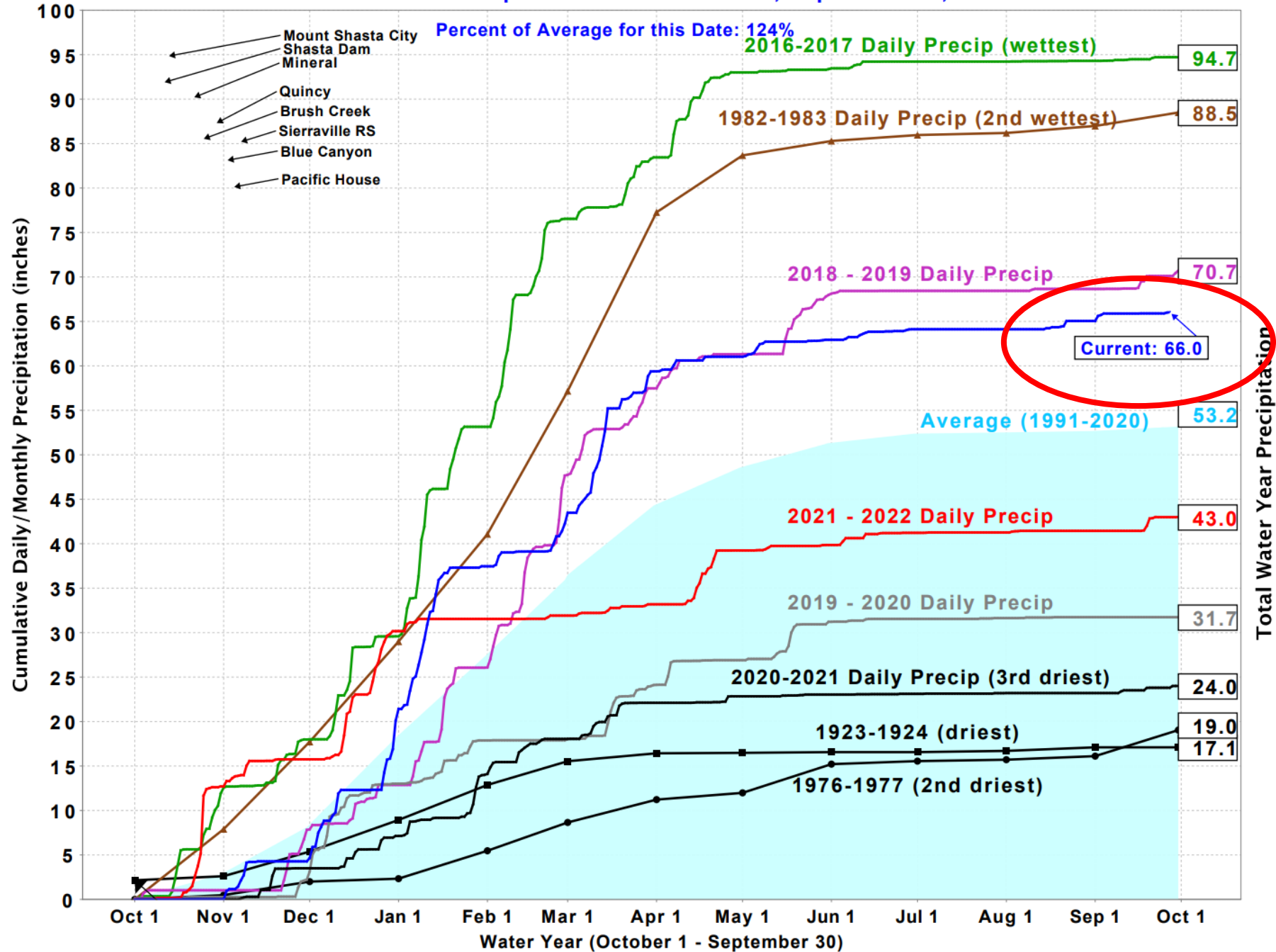
**Bureau of Reclamation Regions**



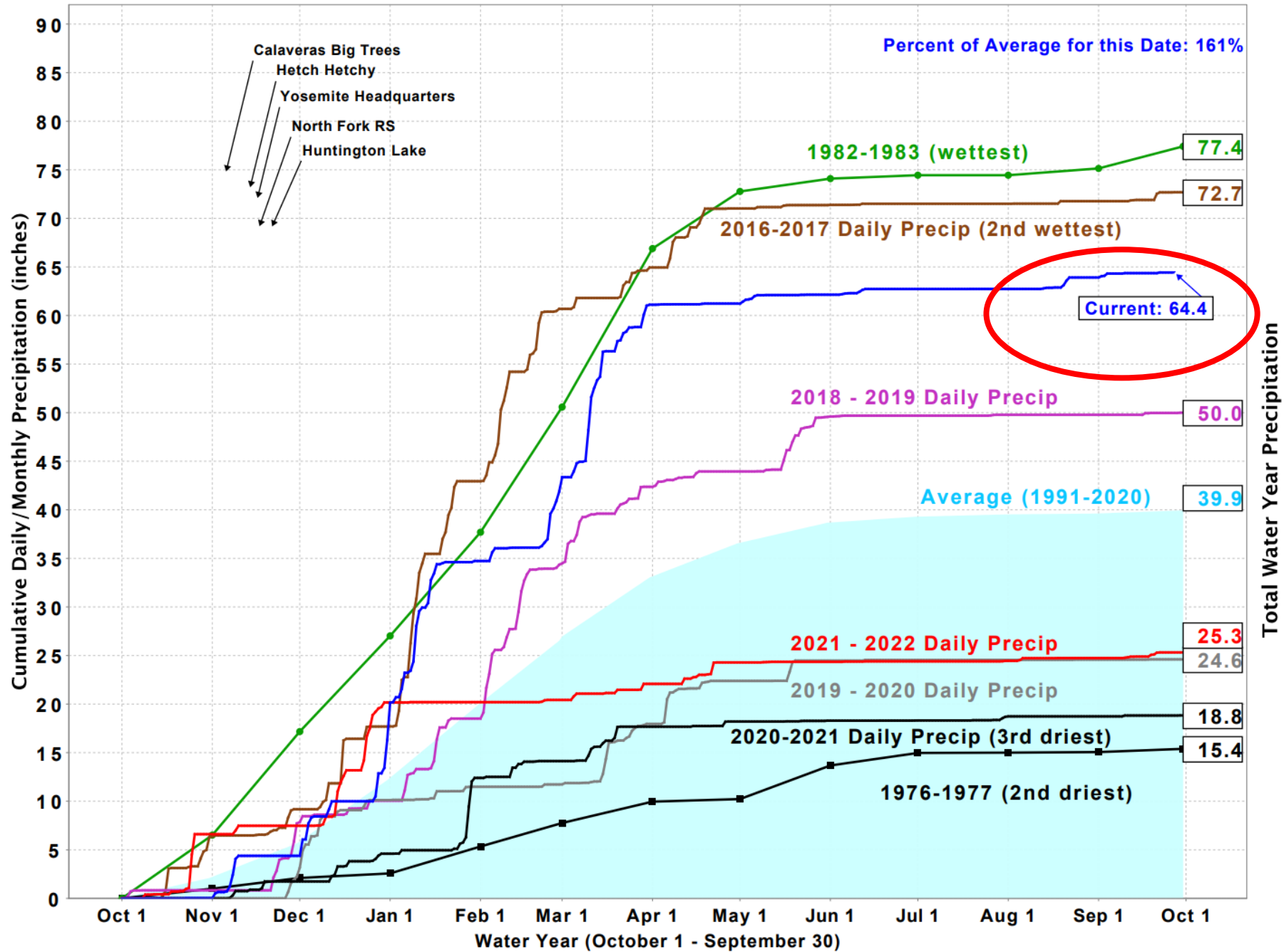
# CVP/SWP Overview



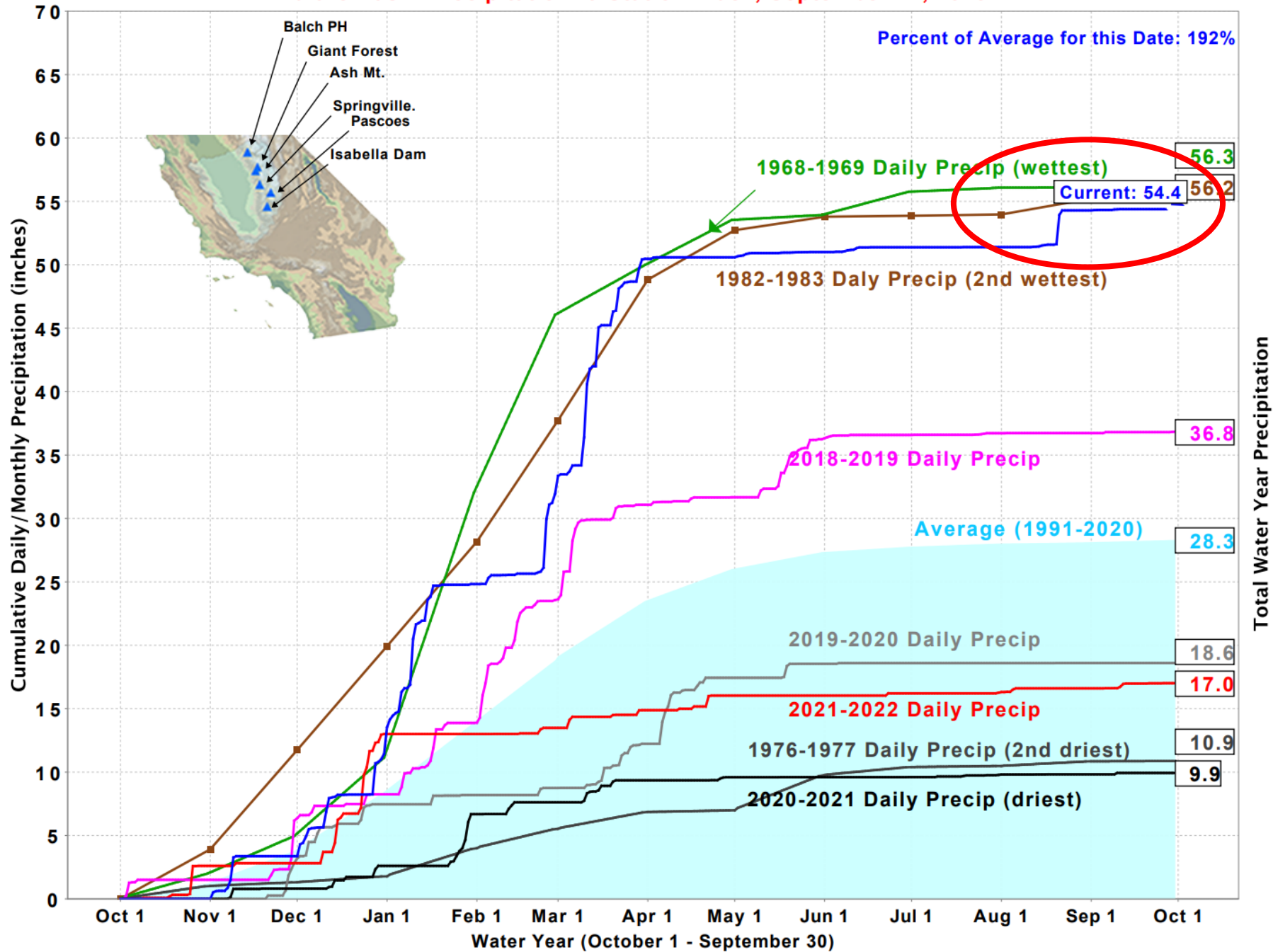
# Northern Sierra Precipitation: 8-Station Index, September 27, 2023



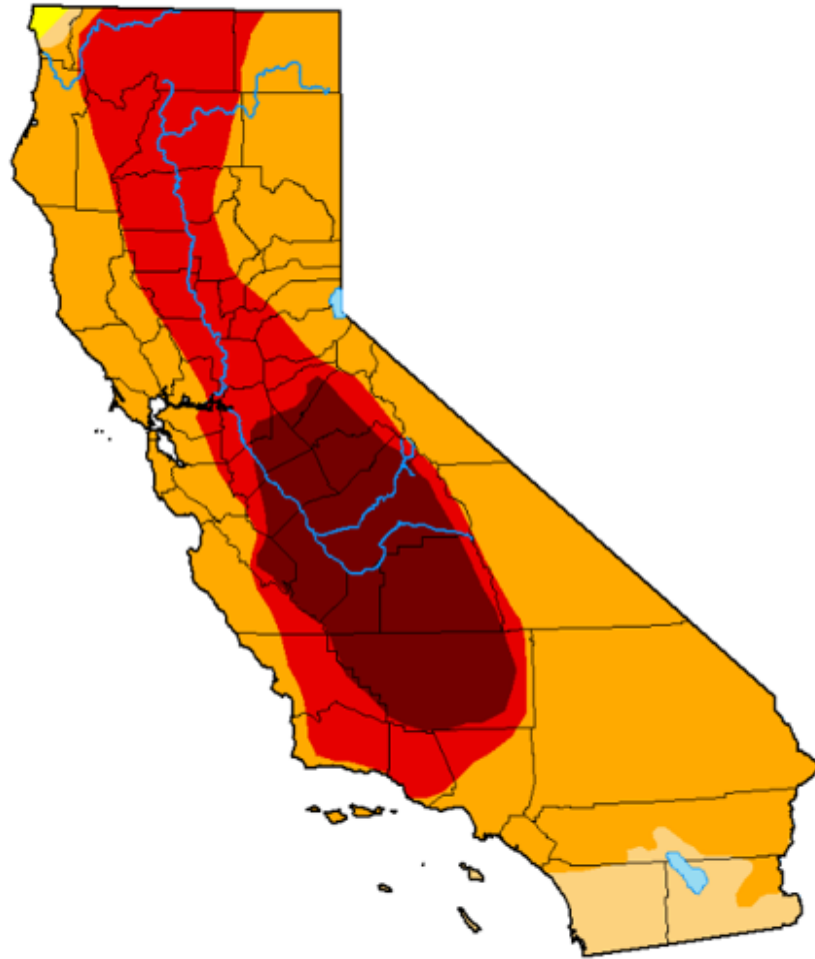
## San Joaquin Precipitation: 5-Station Index, September 27, 2023



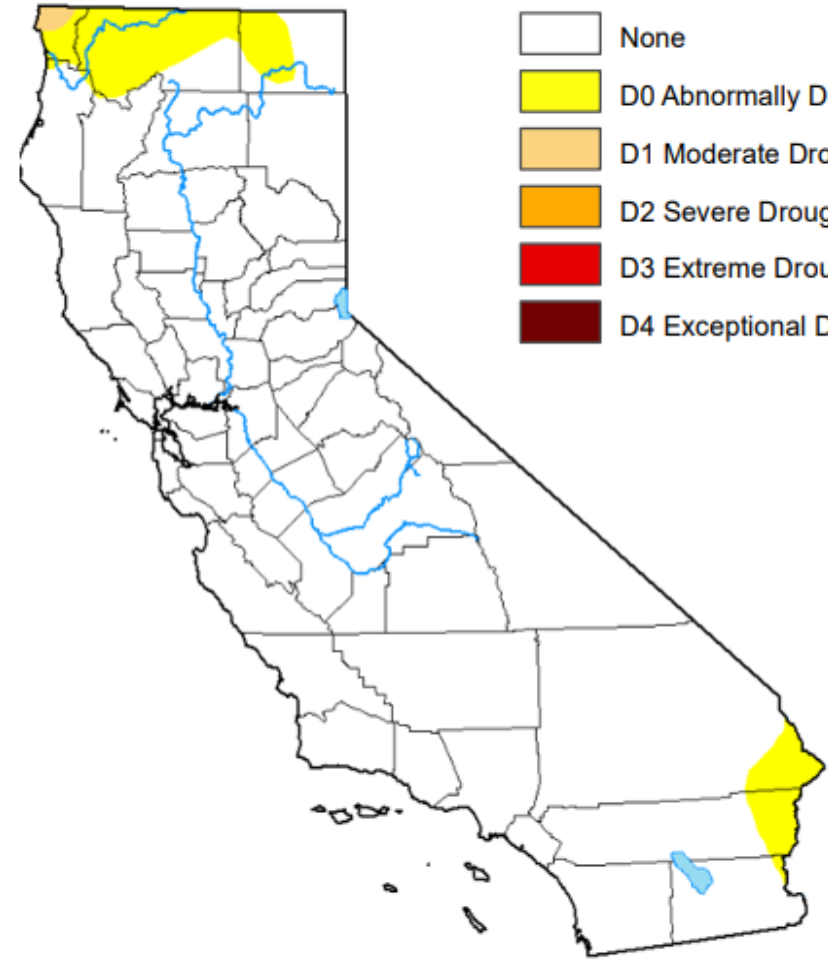
## Tulare Basin Precipitation: 6-Station Index, September 27, 2023



## October 2022



## October 2023



### Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought



[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)



# End of September Storage

Reservoir	September					
	2022			2023*		
	Storage (TAF)	% Capacity	% of 15-yr Average	Storage (TAF)	% Capacity	% of 15-yr Average
Trinity	553	23%	44%	1,285	52%	107%
Shasta	1,515	33%	67%	3,353	74%	153%
Folsom	345	35%	79%	678	69%	160%
New Melones	619	26%	51%	1,898	78%	166%
Millerton	343	66%	122%	227	44%	81%
San Luis	585	25%	85%	1,656	81%	193%
Oroville	1,230	35%	70%	2,638	75%	158%

\*As of September 27, 2023





# Recent CVP Allocations

WY	Ag NOD	Ag SOD	M&I NOD	M&I SOD	Sacramento Settlement Contractors	Exchange Contractors
2019	100%	75%	100%	100%	100%	100%
2020	50%	20%	75%	70%	100%	100%
2021	0%	0%	25%	25%	75%	75%
2022	0%	0%	PHS <sup>1</sup>	PHS <sup>1</sup>	18%	Shasta Critical <sup>2</sup>
2023	100%	100%	100%	100%	100%	100%
1) Public Health & Safety needs						
2) Per individual contract, as defined under Shasta Critical						



# CVP/SWP Operations

## 2022

- **Upstream Reservoirs**
  - Conserve storage
  - Maintain minimum releases to meet Delta needs
- **Delta**
  - Modify exports to meet Delta requirements and fisheries protections
  - Export available to build storage in San Luis Reservoir
- **Goals**
  - Public Health and Safety
  - Storage Conservation

## 2023

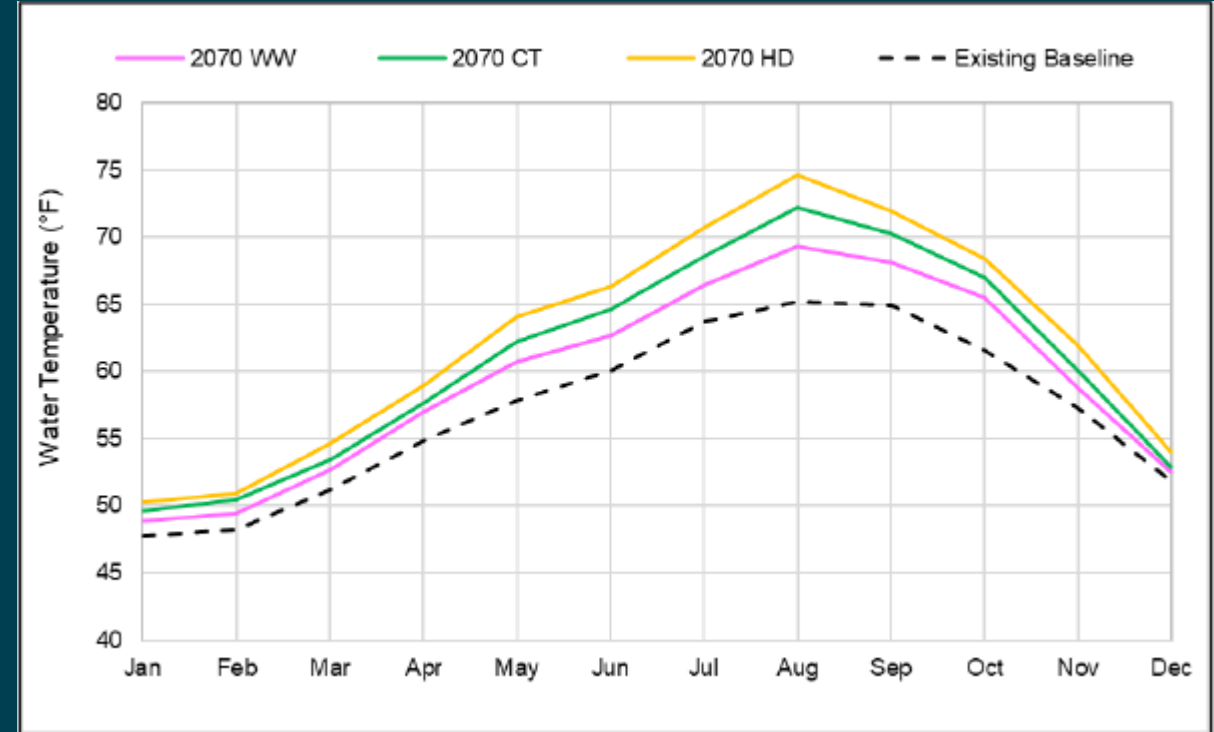
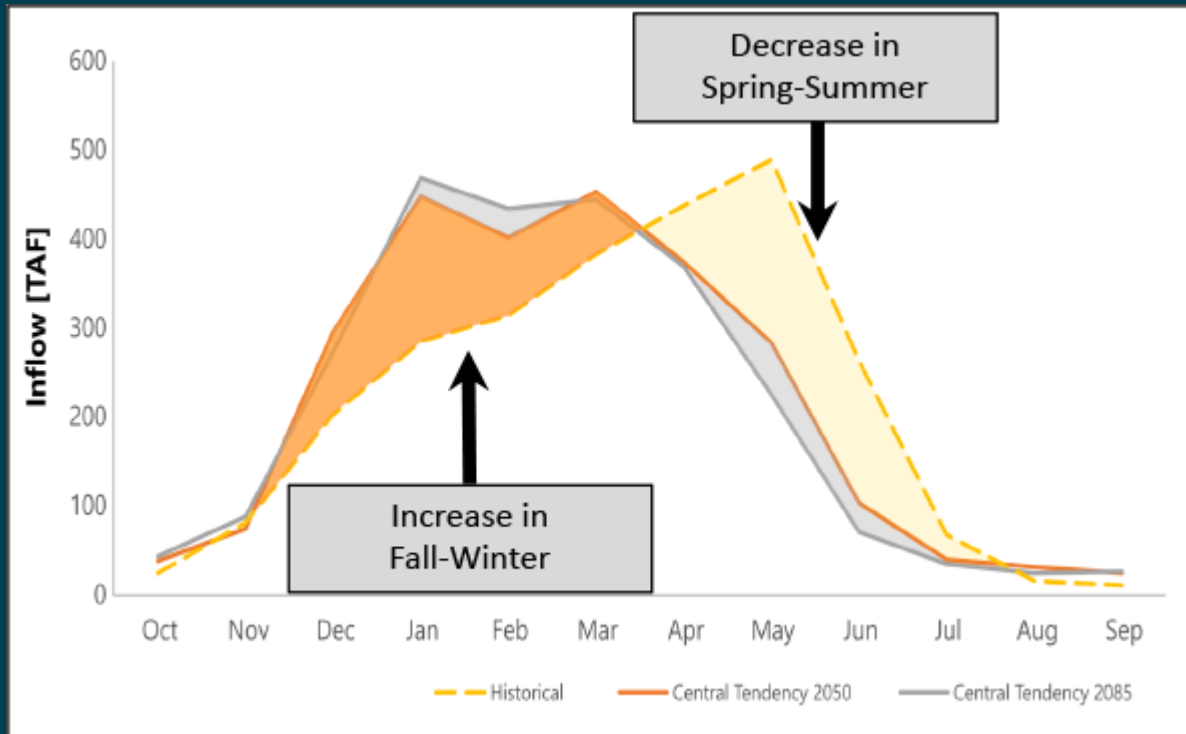
- **Upstream Reservoirs**
  - Build storage
  - Manage inflow to maintain flood control space
- **Delta**
  - Maximize pumping to take advantage of available water
- **Goals**
  - Optimize beneficial uses of abundant water supply
  - Fill San Luis Reservoir



# Example Long Term Changes

## Lower American River Basin

Projected impacts to runoff.



Projected impacts to water temperatures.

WW = Warm-Wet, CT = Central Tendency, HD = Hot-Dry



# Looking Ahead

## Adapt to Climate Change and Work to Achieve More Reliable Water Supplies

- Fix Existing Infrastructure
- Pursue New Storage
- Improve Water Use Efficiency
- Provide Regulatory Certainty



# Looking Ahead: Fix What We Have

- B.F. Sisk Safety of Dams Project
- Conveyance Fixes
  - Friant-Kern Canal Middle Reach (first phase of construction underway)
  - Delta Mendota Canal (study underway)
  - Joint Reach/San Luis Canal (study underway)



# B.F. Sisk Safety of Dams Project



# Friant-Kern Canal Middle Reach Capacity Correction



# Delta-Mendota Canal Subsidence Correction Project





# Looking Ahead: New Storage

- Sites Reservoir
- Los Vaqueros Reservoir Expansion
- Del Puerto Canyon Reservoir
- B.F. Sisk Dam Raise and Reservoir Expansion Project
  
- Bipartisan Infrastructure Law Provides Opportunity to Advance Projects



# Sites Reservoir



## New Reservoir

### Would create:

- ✓ Additional 1.5 million acre-feet of off-stream storage
- ✓ Operational flexibility

### Benefits to:

- ✓ Agriculture/municipal users
- ✓ Anadromous fish/ wildlife refuges
- ✓ Groundwater recharge
- ✓ Delta ecosystems
- ✓ Flood damage reduction
- ✓ Recreation opportunities



# Los Vaqueros Reservoir Expansion



## Expansion of Existing Reservoir

### Would create:

- ✓ Additional 115,000 acre-feet of off-stream storage

### Benefits to:

- ✓ Contra Costa Water District's Service Area
- ✓ The Bay Area
- ✓ The Delta
- ✓ South-of-Delta wildlife refuges



# Del Puerto Canyon Reservoir Project



## New Reservoir

### Would create:

- ✓ Additional 82,000 acre-feet of off-stream storage
- ✓ Operational flexibility

### Benefits to:

- ✓ Agriculture/municipalities
- ✓ Fish and wildlife refuges
- ✓ Delta ecosystem enhancement
- ✓ Flood damage reduction
- ✓ Recreation opportunities



# San Luis Raise and Reservoir Expansion



## Raise/Expansion of Existing Reservoir

(in conjunction w/ SOD project)

### Would create:

- ✓ Additional 130,000 acre-feet of off-stream storage

### Benefits to:

- ✓ South-of-Delta water users
- ✓ South-of-Delta wildlife refuges

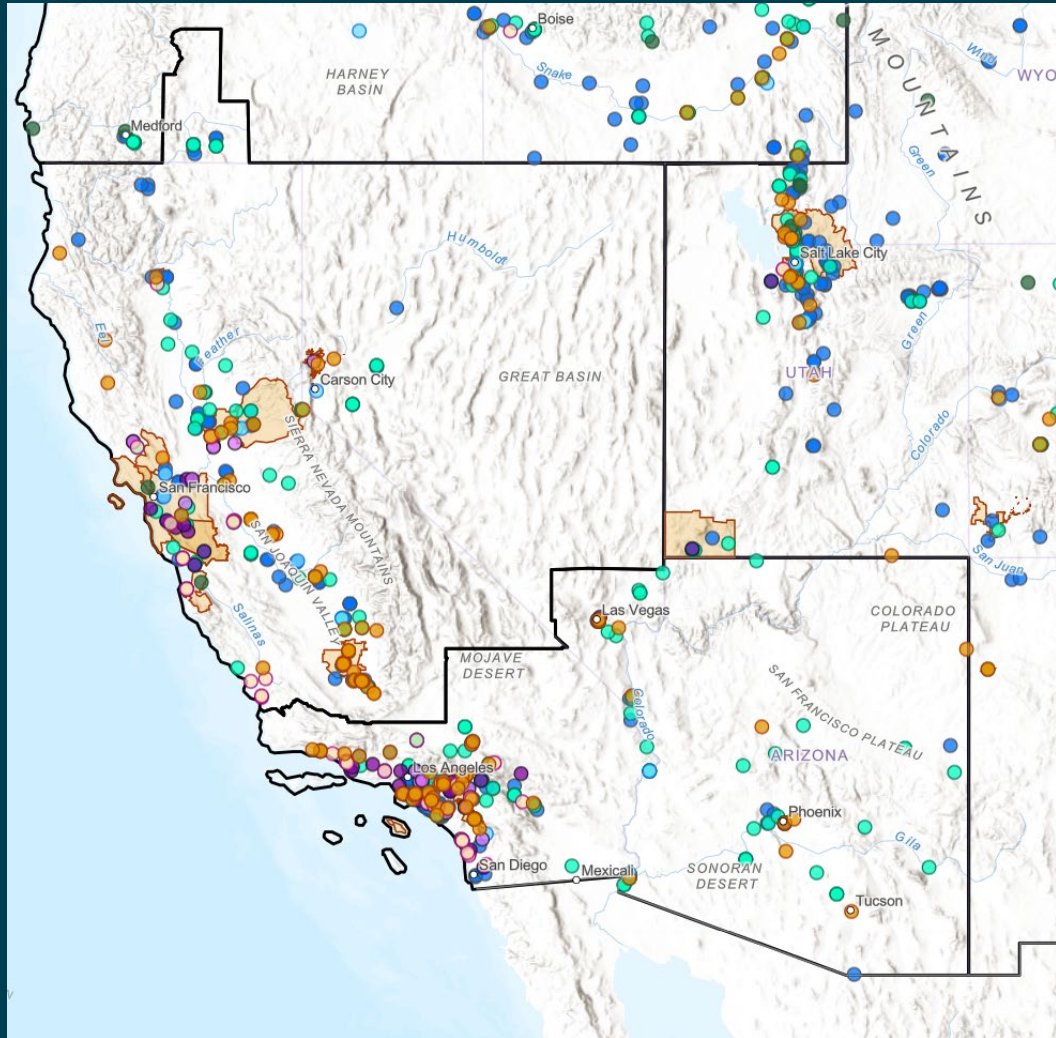


# Looking Ahead: Water Use Efficiency

- Bipartisan Infrastructure Law Provides Opportunities for Local Agencies to Invest in Water Use Efficiency Project
- Inflation Reduction Act provides Reclamation funding for Drought Mitigation activities
- Additional funding for WaterSMART and Recycled Water Grants



# Investing In WaterSMART



- Drought Resiliency
- Environmental Water Resources
- Small-Scale Water Efficiency
- Water Marketing Strategy Grants
- Title XVI - Water and Energy Efficiency
  - Investing over \$98 million – 28% of total funding \$310 million in CGB;
  - \$110 million in Lower Colorado Basin
  - CA total \$210 million



# Looking Ahead: Regulatory Certainty

- Need Regulatory Certainty to Improve Water Supply Reliability for Farms, Cities, and Refuges
- Reinitiation of Consultation for the Long-Term Operation of the CVP and SWP
- Voluntary Agreements





# Reinitiation of Consultation for Long-Term Operation of the CVP & SWP



# Voluntary Agreements



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