

An aerial photograph of a large, winding waterway, likely a canal or river, in a rural landscape. The water is a deep blue-grey color. The surrounding land is a mix of vibrant green agricultural fields and large areas of reddish-brown earth, possibly recently cleared or under construction. In the distance, there are some white buildings and more fields under a clear blue sky. The entire image is framed by a dark, irregular border.

Report on Delta Drought Operations and State Water Resources Control Board's Temporary Urgency Change Petition

Special Committee on Bay-Delta
Item 3a, April 28, 2015

Presentation

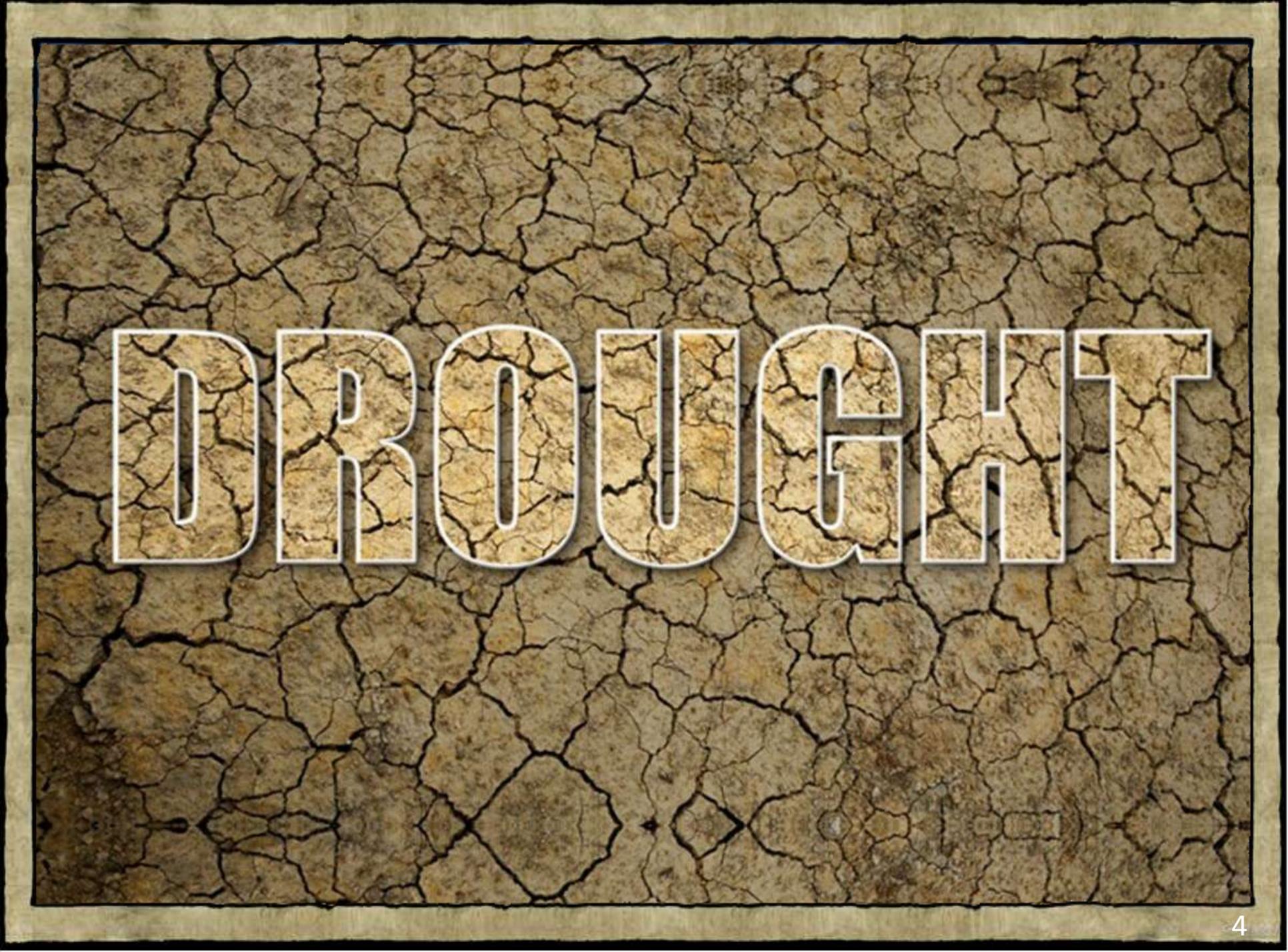
An aerial photograph of a coastal delta region, showing a complex network of water channels and land. The water is a light blue-grey color, and the land is a darker, brownish-green. The channels meander through the landscape, creating a series of islands and peninsulas. In the background, a city or town is visible on the right side, with buildings and infrastructure. The overall scene is a mix of natural and human-made elements.

- Current & Forecasted Conditions
- Delta Related State Water Board Measures
- Department of Water Resources Actions

Key Points



- Salinity and bromide water quality levels will be higher than average but within regulatory requirements
- State Water Board approved additional Delta related measures
- Department of Water Resources to install 1 of 3 proposed drought salinity barriers



DROUGHT

Last Year 2014

Salinity Intrusion

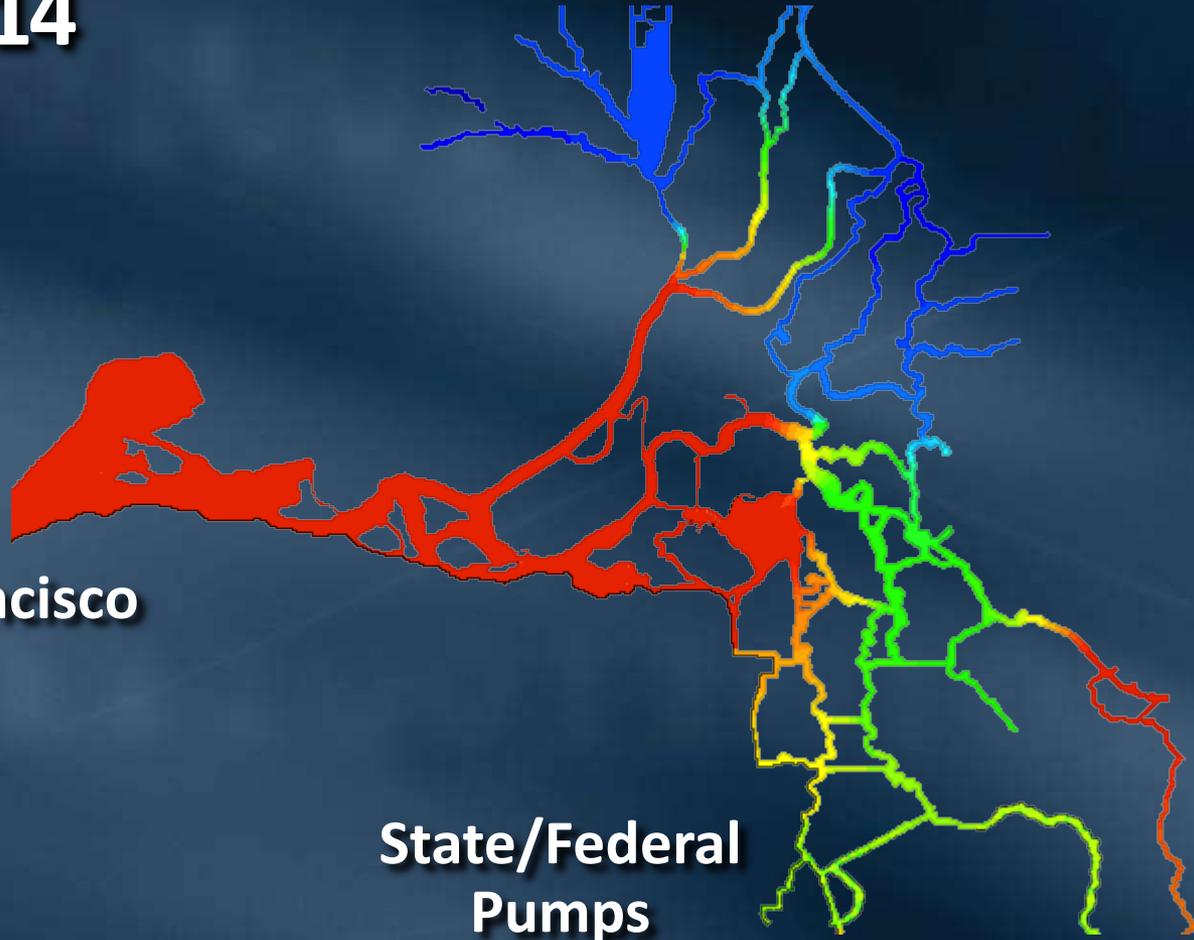
Feb 2014

Sacramento

San Francisco Bay

Stockton

State/Federal Pumps



Salinity (Total Dissolved Solids – mg/L)

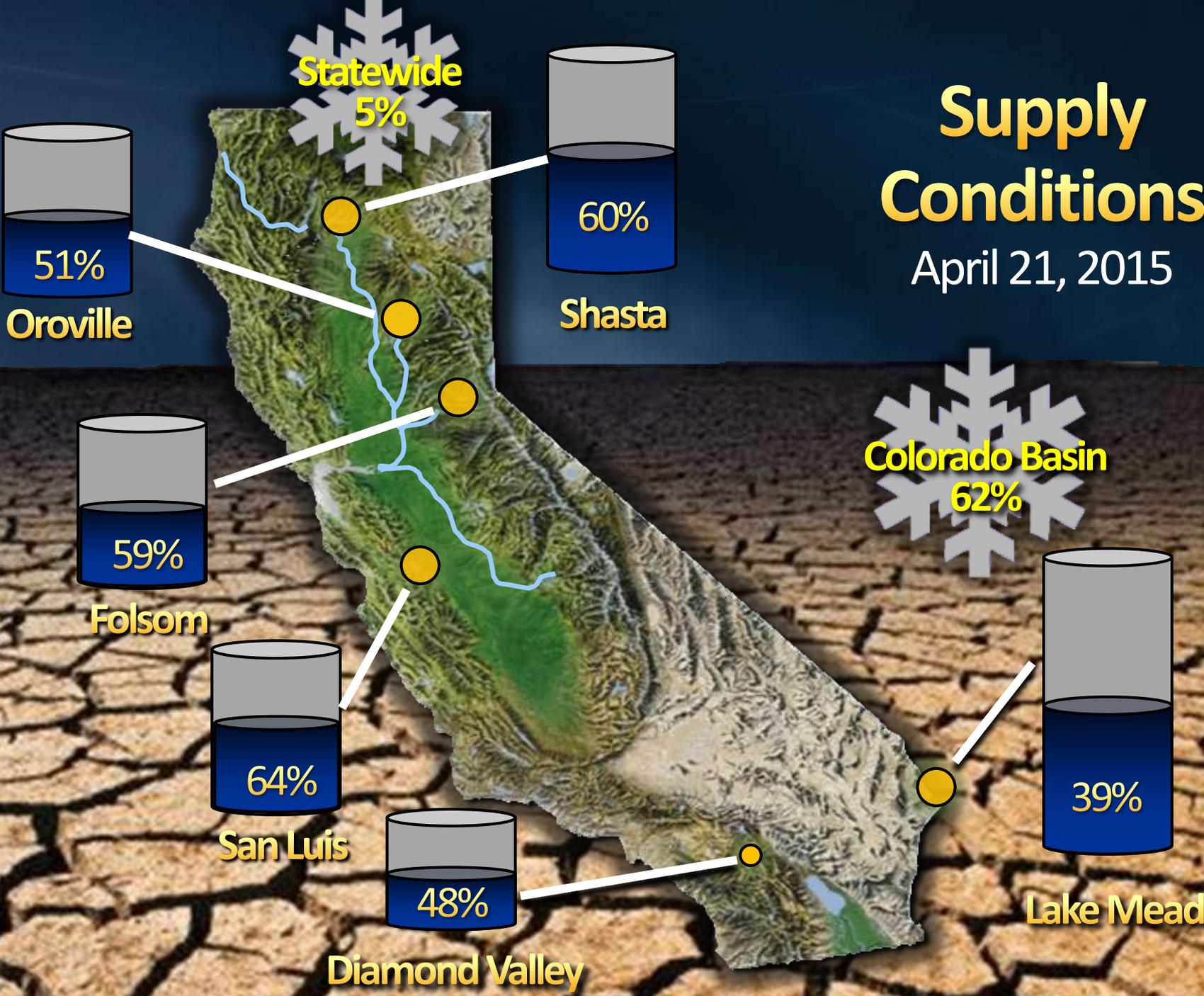
200

1,000

Current Hydrology 2015

Supply Conditions

April 21, 2015



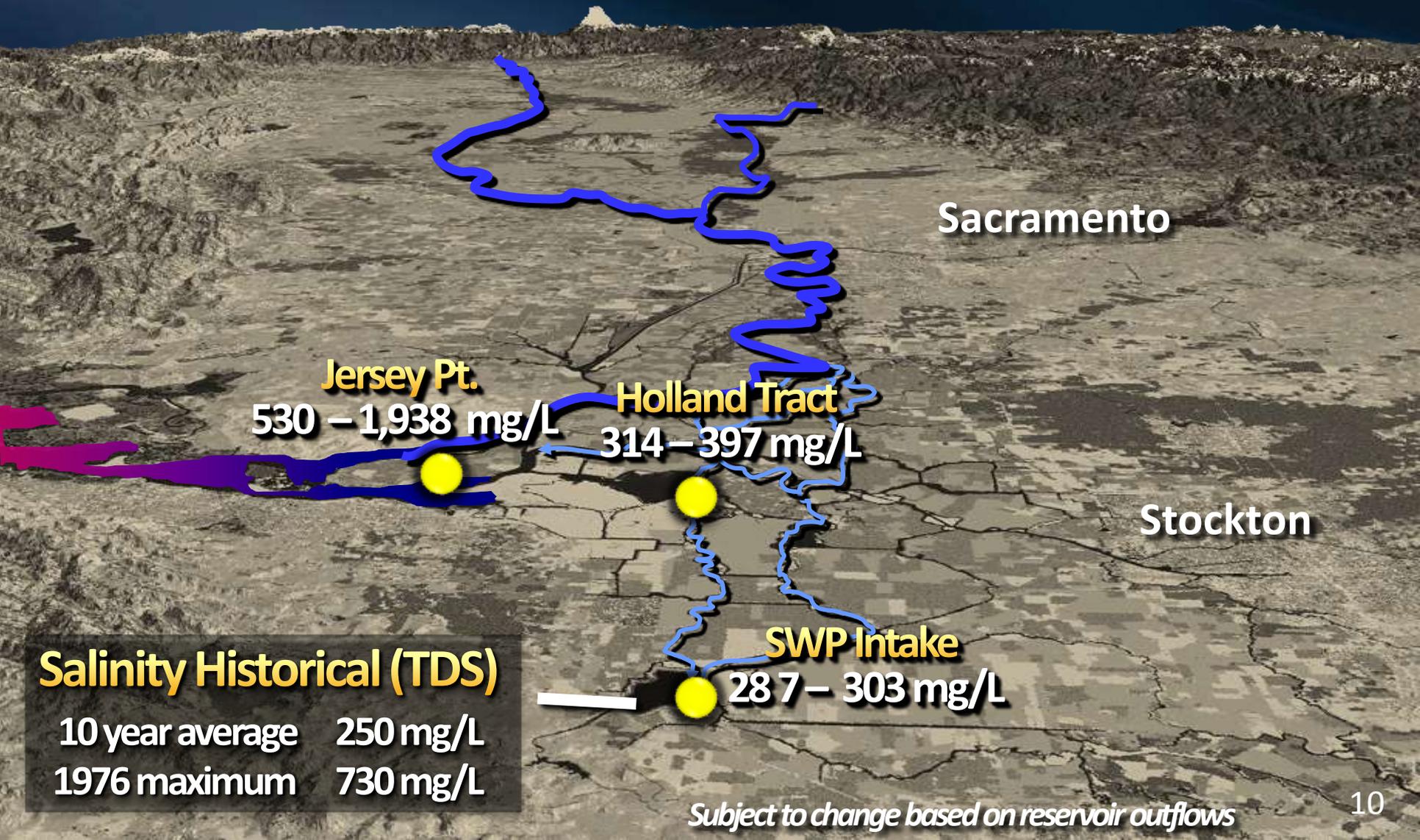
Water Allocations

State Water Project & Central Valley Project

- Central Valley Project
 - 0% allocation – Agriculture South of Delta & Friant
 - 0% allocation – Eastside Water Service Contractors
 - 25% allocation – Municipal & industrial users
 - 75% allocation – Senior water right holders
(Settlement and Exchange contractors, wildlife refuges)
- State Water Project
 - 20% allocation – State Water Contractors
 - 50% allocation – Feather River Settlement Contractors
- 620,000 to 1 million acres of land to be fallowed

Bay-Delta Water Quality

Salinity Levels – April 21, 2015



Bay-Delta Water Quality & Supply

Affects of Storm Flows



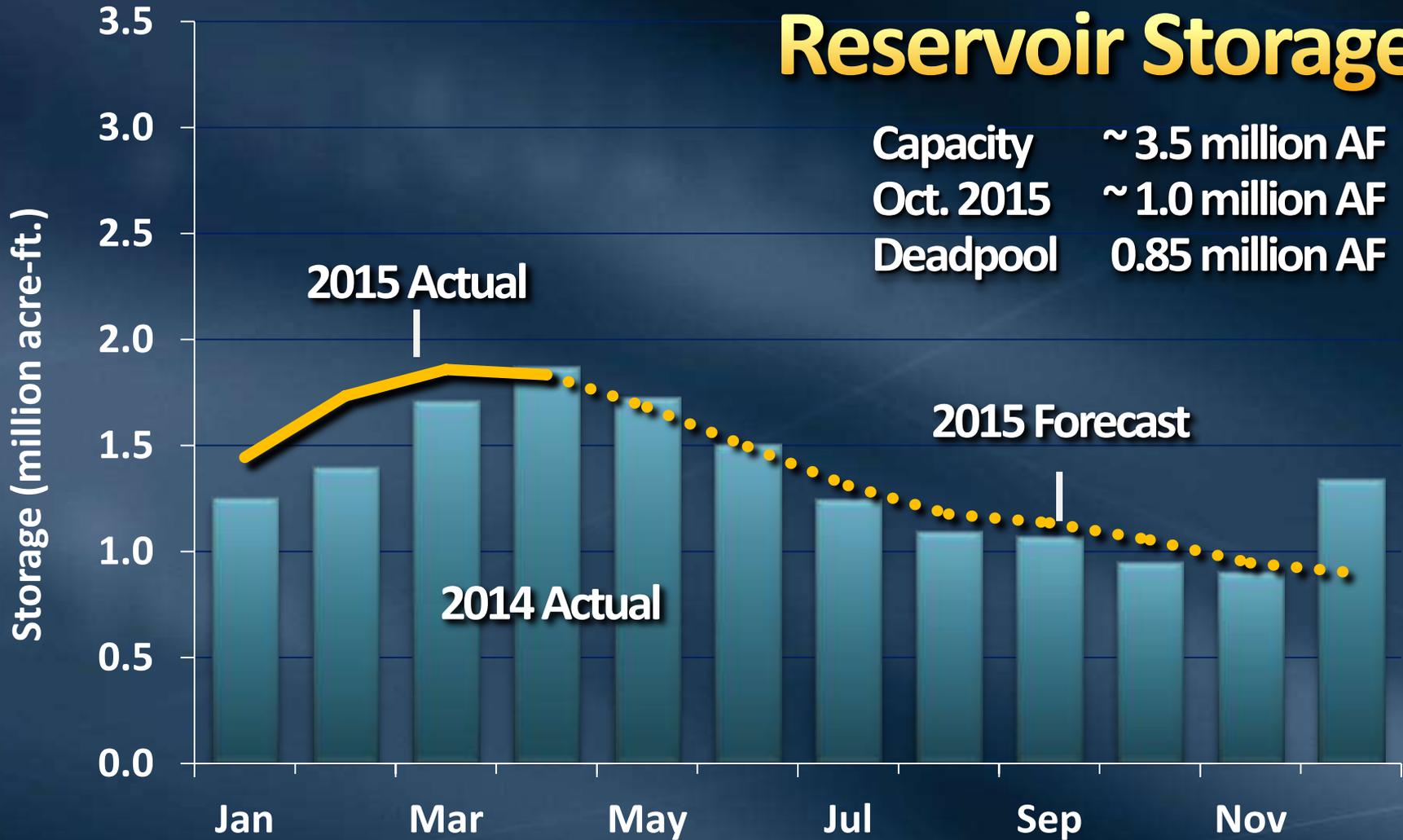
Dec 2014 Storm Flows

- Peak flow below reservoirs ~ 60,000 cfs
- Exports cutbacks from ~ 9,000 to 4,000 cfs
- w/ BDCP North Delta intake ~ 3,000 cfs
(~180,000 AF)

Forecasted Hydrology 2015

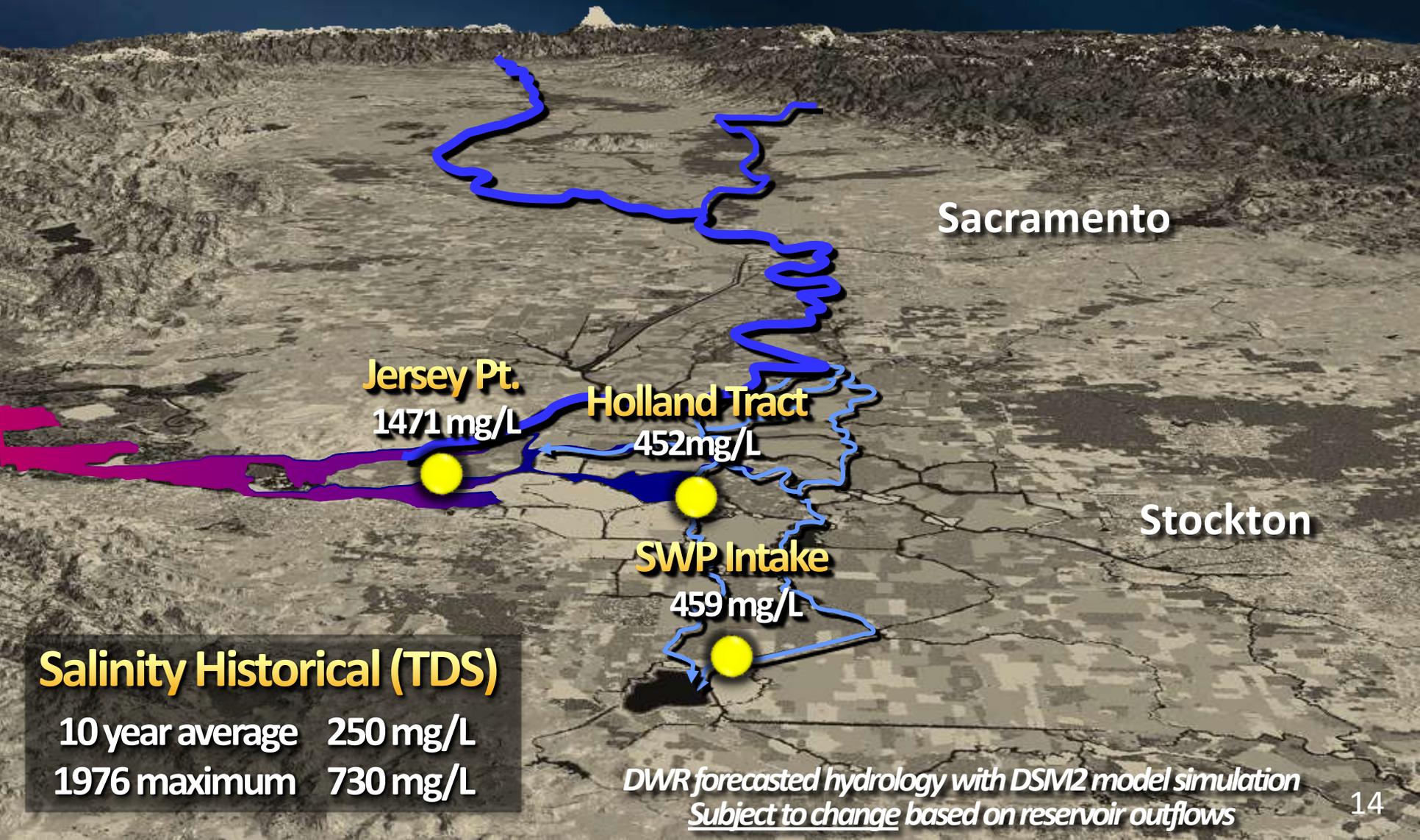
Oroville Reservoir Storage

Capacity ~ 3.5 million AF
 Oct. 2015 ~ 1.0 million AF
 Deadpool 0.85 million AF



Bay-Delta Salinity Forecast

Summer/Fall – Tidally Averaged Daily Maximum



Salinity Historical (TDS)

10 year average	250 mg/L
1976 maximum	730 mg/L

*DWR forecasted hydrology with DSM2 model simulation
Subject to change based on reservoir outflows*

Drought Year Water Supply Rebalancing

Drought Year Water Supply Rebalancing

SWRCB Temporary Urgency Change Petition

- Not enough water to meet requirements
- DWR & USBR petitioned State Board to rebalance Delta water supply
- Reasons
 - Higher outflows for smelt will harm cold-water needed for salmon survival
 - Ability to repel ocean salinity intrusion
 - Preserving water for health and safety



Drought Year Water Supply Rebalancing

SWRCB Temporary Urgency Change Petition

- State Board Temporary Changes

- Reduced Delta outflows
- Reduced State & Federal exports
- Reduced San Joaquin River flows
- Changed salinity compliance location near Sherman Island
- Allowed more flexible Delta Cross Channel Gate operations



Salinity/Bromide Intrusion Reduction Efforts

Salinity Intrusion Reduction Efforts

1977 – Temporary Salinity Barriers



Salinity Intrusion Reduction Efforts

2015 – Temporary Salinity Barriers



Bay-Delta Water Quality

Salinity Forecast – State Water Project Intake



Based on DWR forecast (April 2015); Subject to change based on reservoir outflow and hydrologic conditions
Historical annual average salinity (2005-2015) = 250 mg/L TDS



Next Steps

- May – DWR installation of False River salinity barrier
- June – SWRCB Temporary Urgency Change Petition updated
- Monthly updates – storage, water supply, and quality

The Delta

Sacramento

Suisun Bay

Stockton

**State & Federal
Pumping Plants**

California's Bay-Delta

