

LESJWA Water Summit

Drought Impacts on Local Lakes and Watershed

May 13, 2014

Overview

- Historical Perspective
- Current Conditions
- Impact on Local Lakes and Watershed
- Drought Response and Mitigation
- Outlook

Historical Perspective

Precipitation Rankings by Climate Region: **January – December 2013**



Historical Perspective

Statewide		North Coast		North Central		Northeast		Sacramento-Delta		Sierra	
Year	Rainfall	Year	Rainfall	Year	Rainfall	Year	Rainfall	Year	Rainfall	Year	Rainfall
2013	7.0	2013	22.7	2013	14.2	2013	7.9	2013	5.1	2013	10.4
1898	11.6	1976	32.3	1976	22.4	1924	10.6	1923	7.7	1976	17.0
1923	11.7	1923	36.5	1898	22.7	1923	11.5	1917	8.1	1898	21.6
1976	13.1	1985	37.6	1923	25.1	1976	12.0	1976	8.1	1947	21.8
1917	13.3	1929	38.9	1910	27.3	1908	12.5	1898	8.6	1908	22.1
San Joaquin Valley		Central Coast		South Coast		South Interior		Mojave		Sonoran	
Year	Rainfall	Year	Rainfall	Year	Rainfall	Year	Rainfall	Year	Rainfall	Year	Rainfall
2013	2.9	2013	4.9	2013	5.3	1947	7.2	2013	2.7	Various	0.09
1947	4.5	1923	10.9	1947	5.5	1953	7.2	1953	2.8	Various	4.3
1917	5.2	1917	11.0	1989	5.6	1989	7.3	1929	2.9	Various	4.3
1898	5.5	1929	11.3	1898	6.0	2007	7.3	1989	2.9	2003	4.4
1929	5.7	1898	11.3	1953	6.1	1999	8.1	1947	3.1	1958	4.4
						1961	8.1			2013	4.4
						2013	8.2				

Source:

1. Western Regional Climate Center
2. DWR (www.water.ca.gov)

Current Conditions

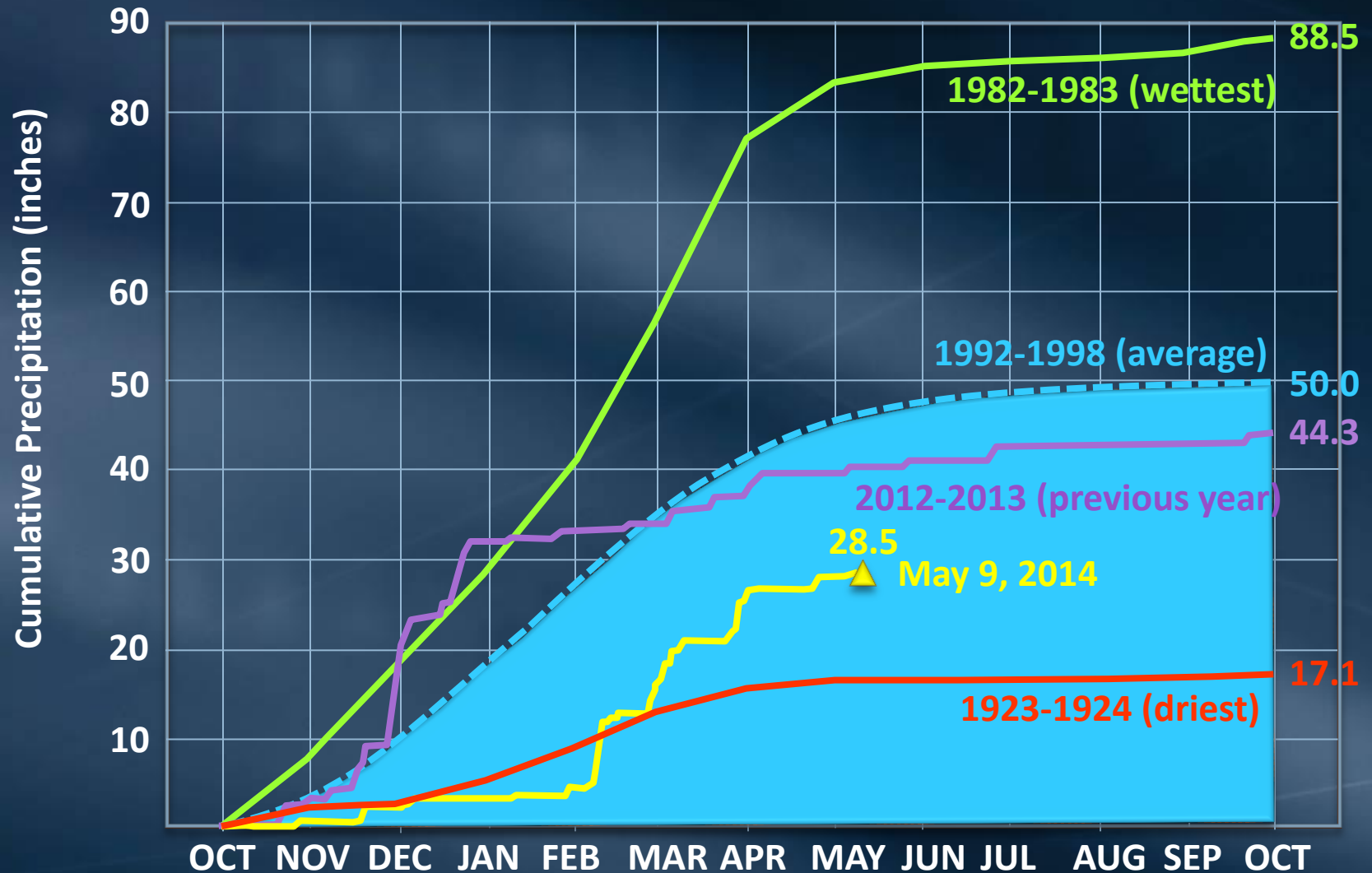


Current Conditions



Current Conditions

Northern Sierra Precipitation: 8-Station Index



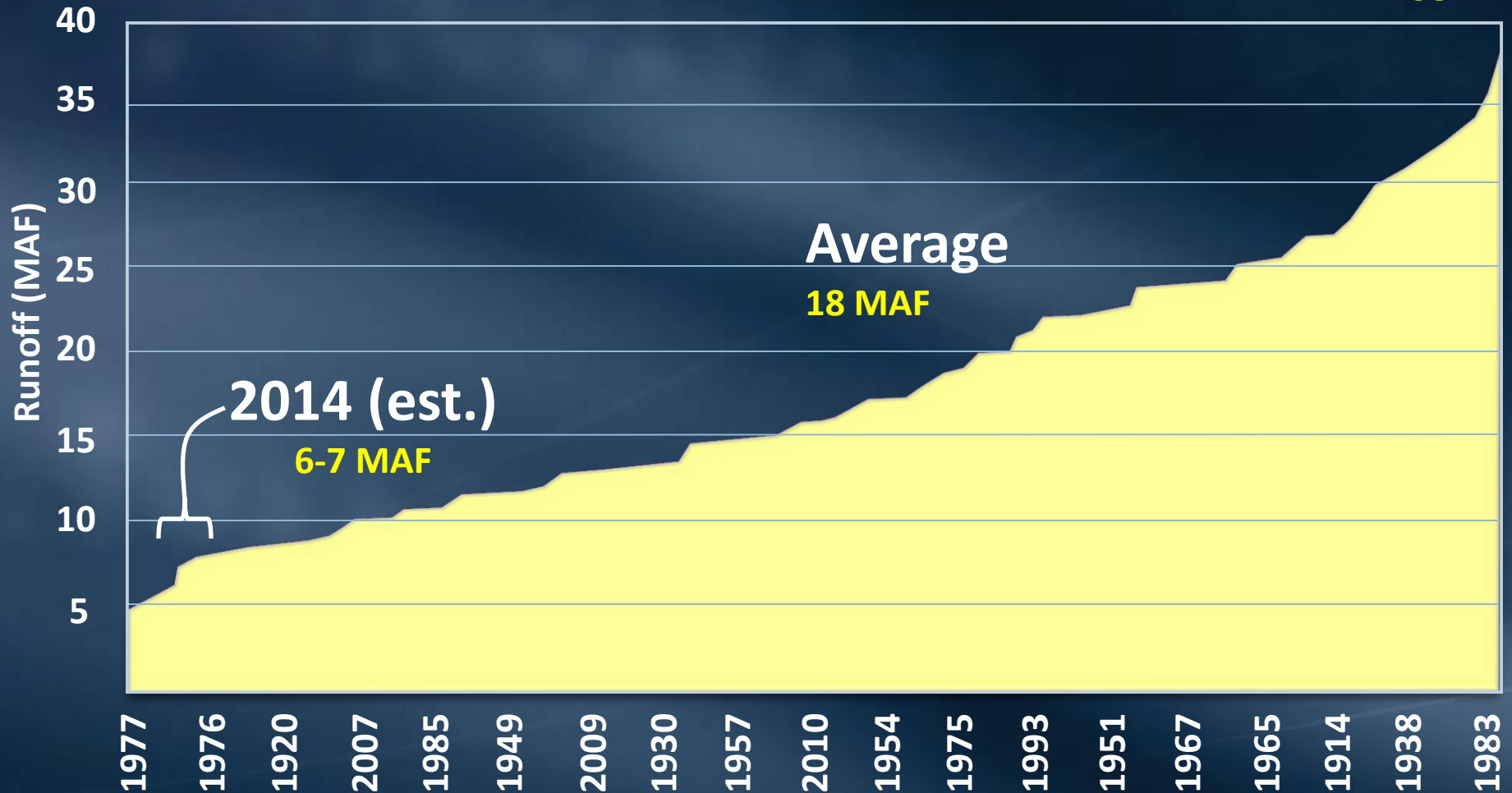


Current Conditions

Sacramento Four Rivers Runoff

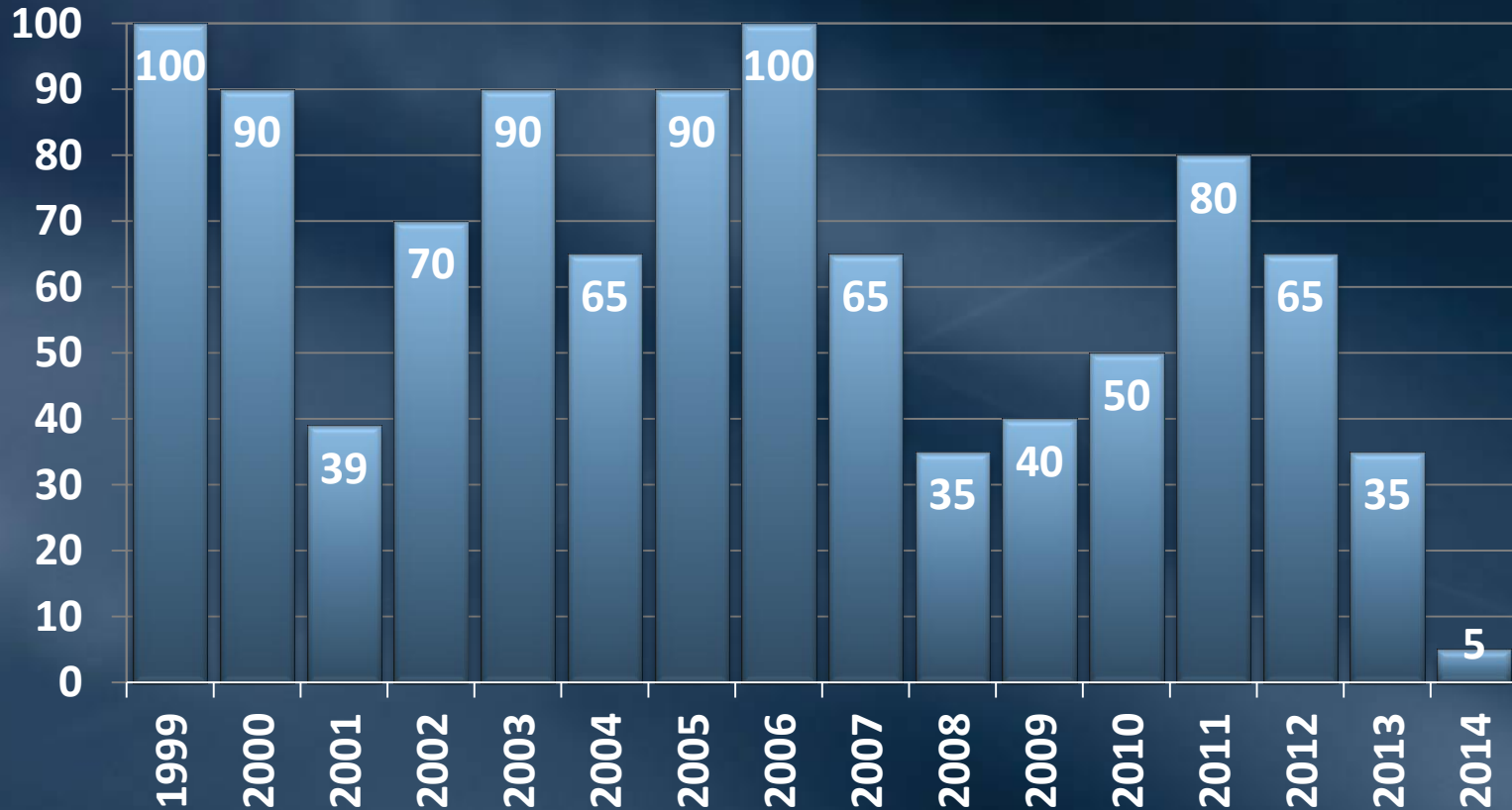
1906-2014 – Sacramento, Feather, Yuba, American

1983
38 MAF



Current Conditions

State Water Project Allocation (%)



Current Conditions

Imported Water Supply and Demand Projection

Water Balance	Acre-Feet
SWP Supply	103,000
CRA Supply	935,000
Total Supply	1,038,000
Total Demand	2,102,000
Net Water Balance	-1,064,000

- Net Water Balance will be met by Dry-Year Storage Programs
 - Local Conjunctive Use Programs

Impact on Local Lakes and Watershed

- Water Quality
 - Increase in Salinity
 - Increase in Nutrients
- Lake Levels

Impact on Local Lakes and Watershed

Feb 2014

Sacramento

San Francisco
Bay

Stockton

State/Federal
Pumps



Impact on Local Lakes and Watershed

Apr 2014

Sacramento

San Francisco
Bay

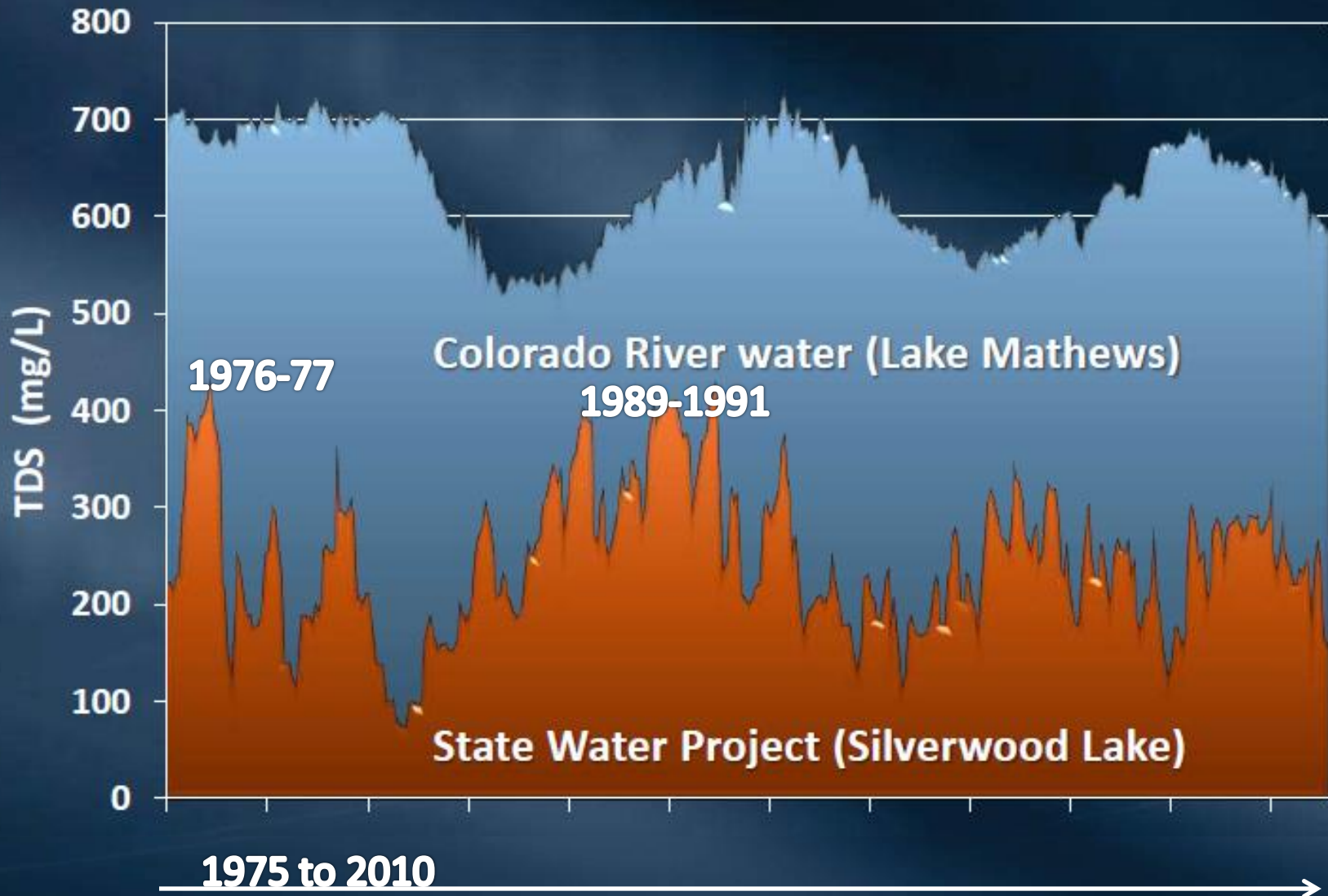
Stockton

State/Federal
Pumps



Impact on Local Lakes and Watershed

Historical Salinity of Imported Water

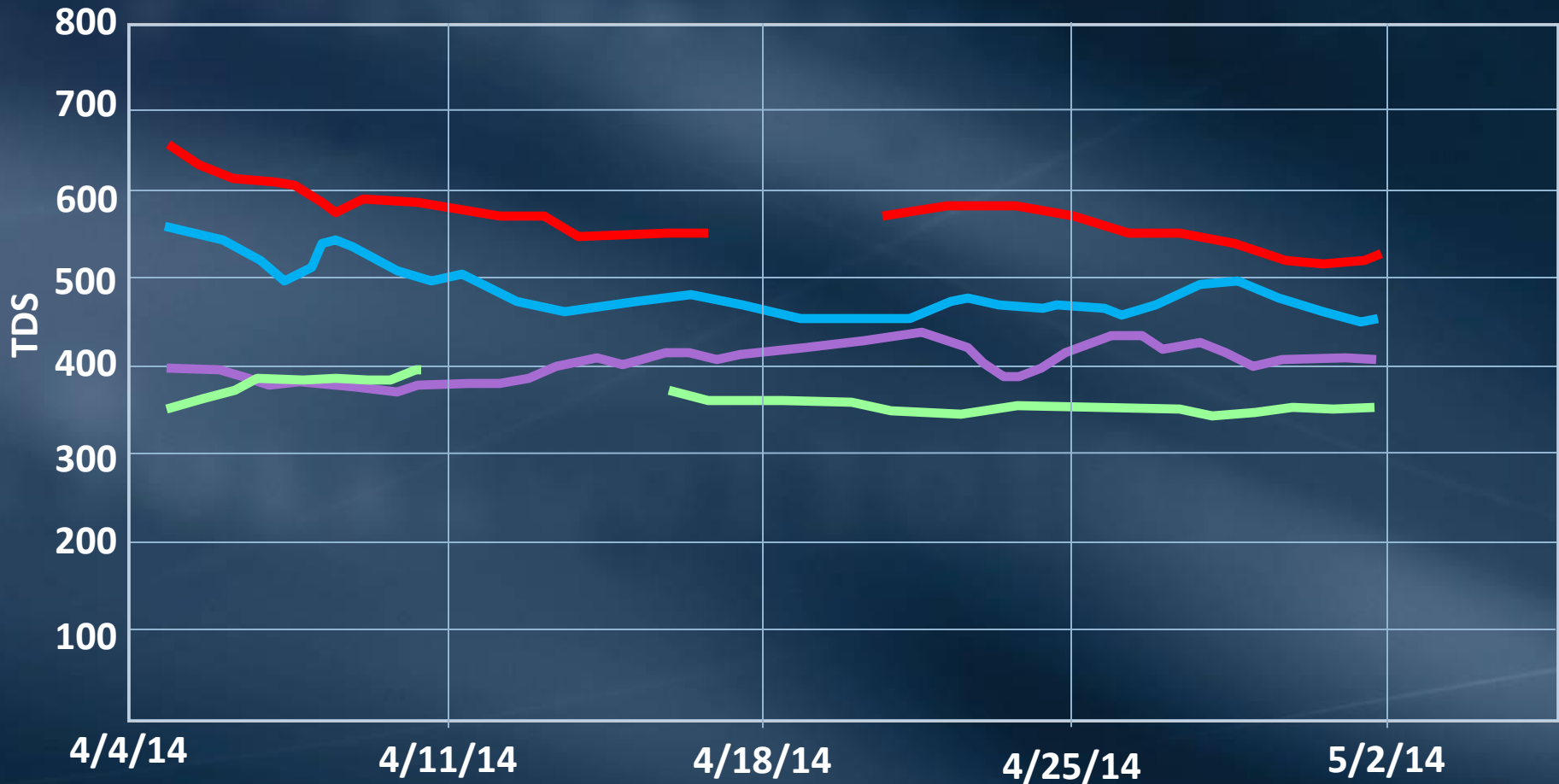


Impact on Local Lakes and Watershed

California Aqueduct Salinity



Check 13 Banks Check 41 Check 29



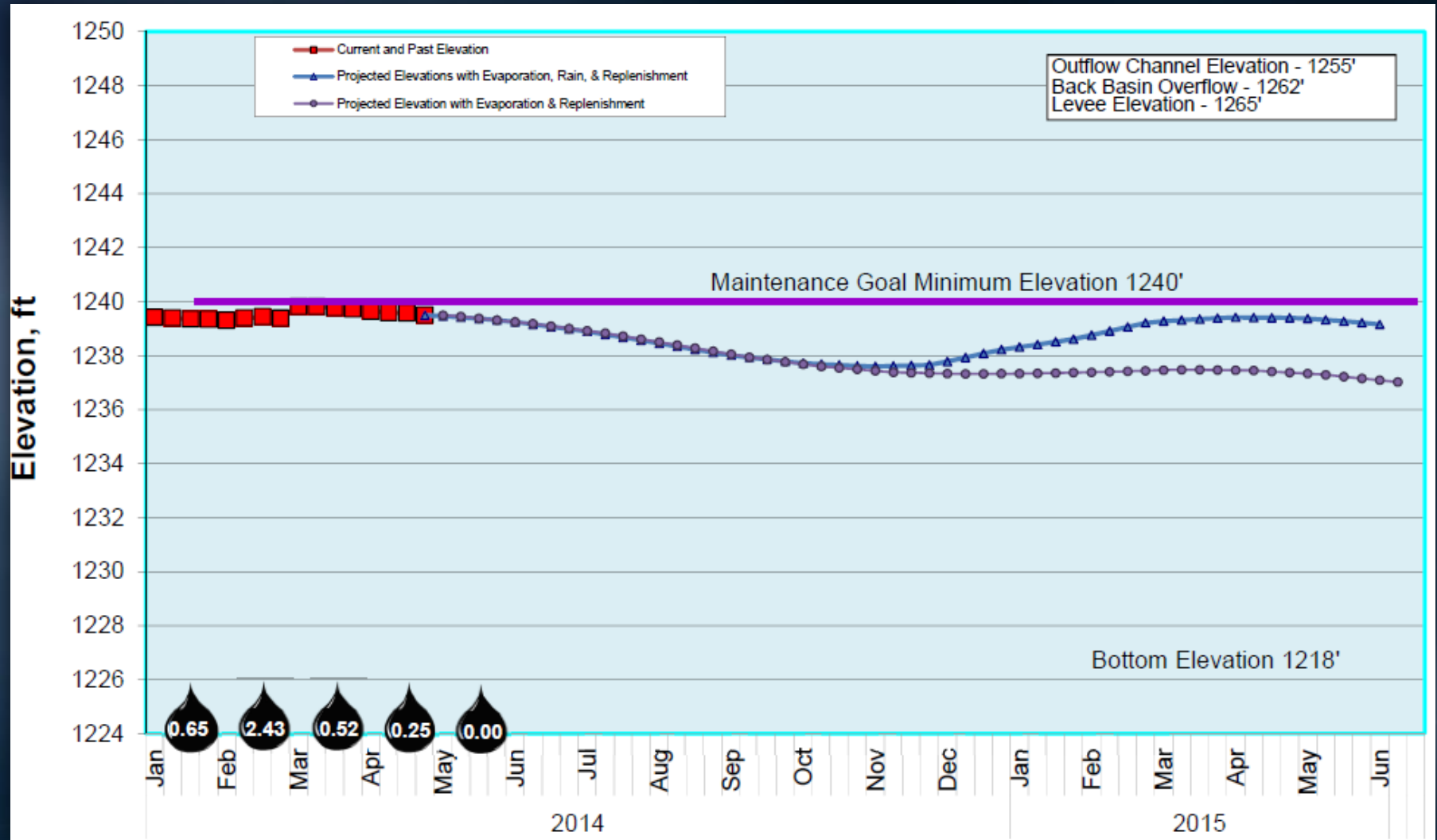
— Check 13 — Banks — Check 41 — Check 29



5/2/14

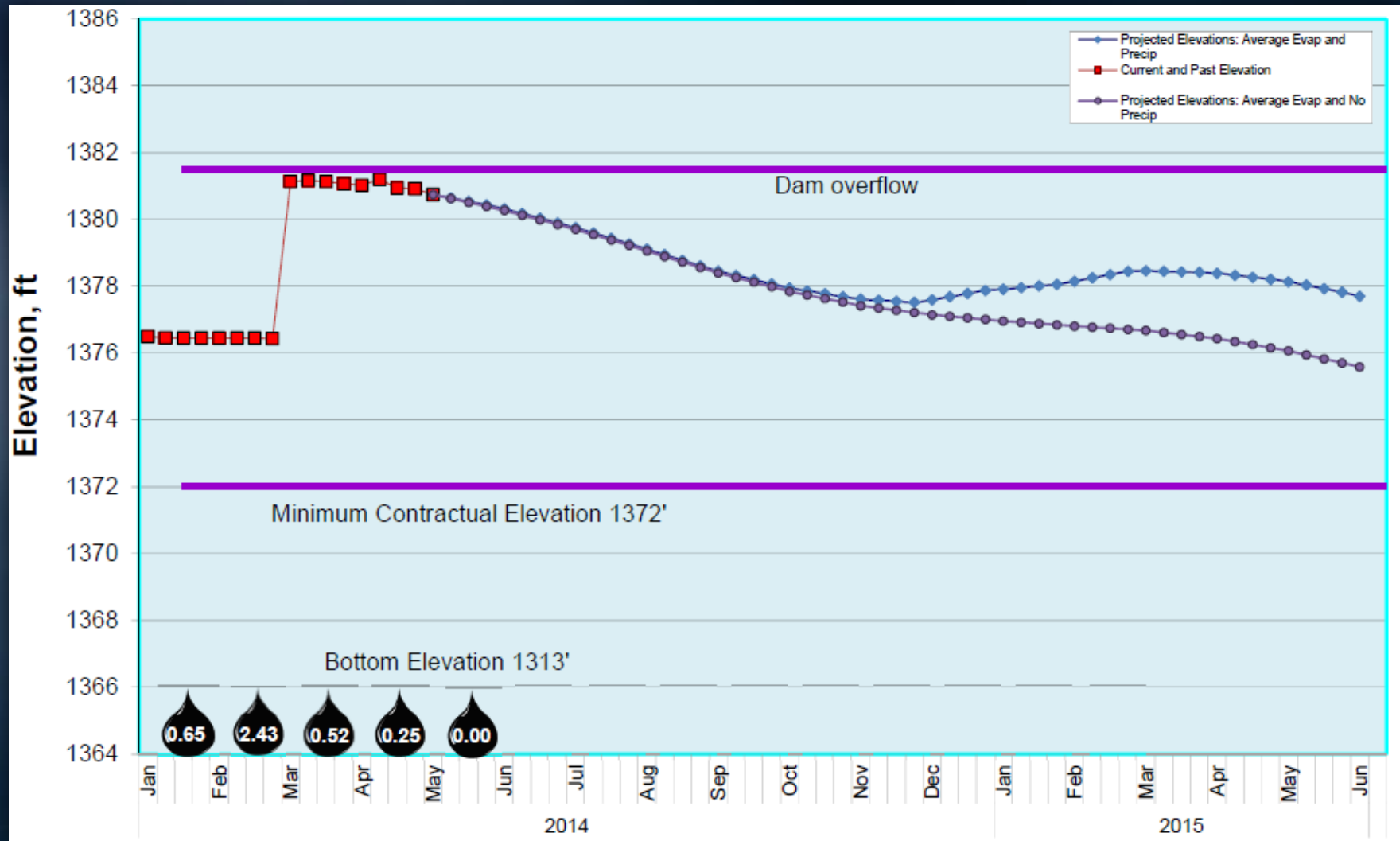
Impact on Local Lakes and Watershed

Lake Elsinore



Impact on Local Lakes and Watershed

Canyon Lake Reservoir



Drought Response

● Regional

- Voluntary conservation by 20%
- Doubled conservation funding from \$20 M to \$40 M
- Diamond Valley Lake to Mills WTP conveyance
- Emergency drought barriers on Delta (DWR)
- Dry-year storage programs

● Local

- Voluntary conservation
- Foundational planning actions
- Utilize conjunctive use storage

Outlook

- Probable El Nino Season
- Increases in Salinity
- Water supply allocation if drought persists

Questions