

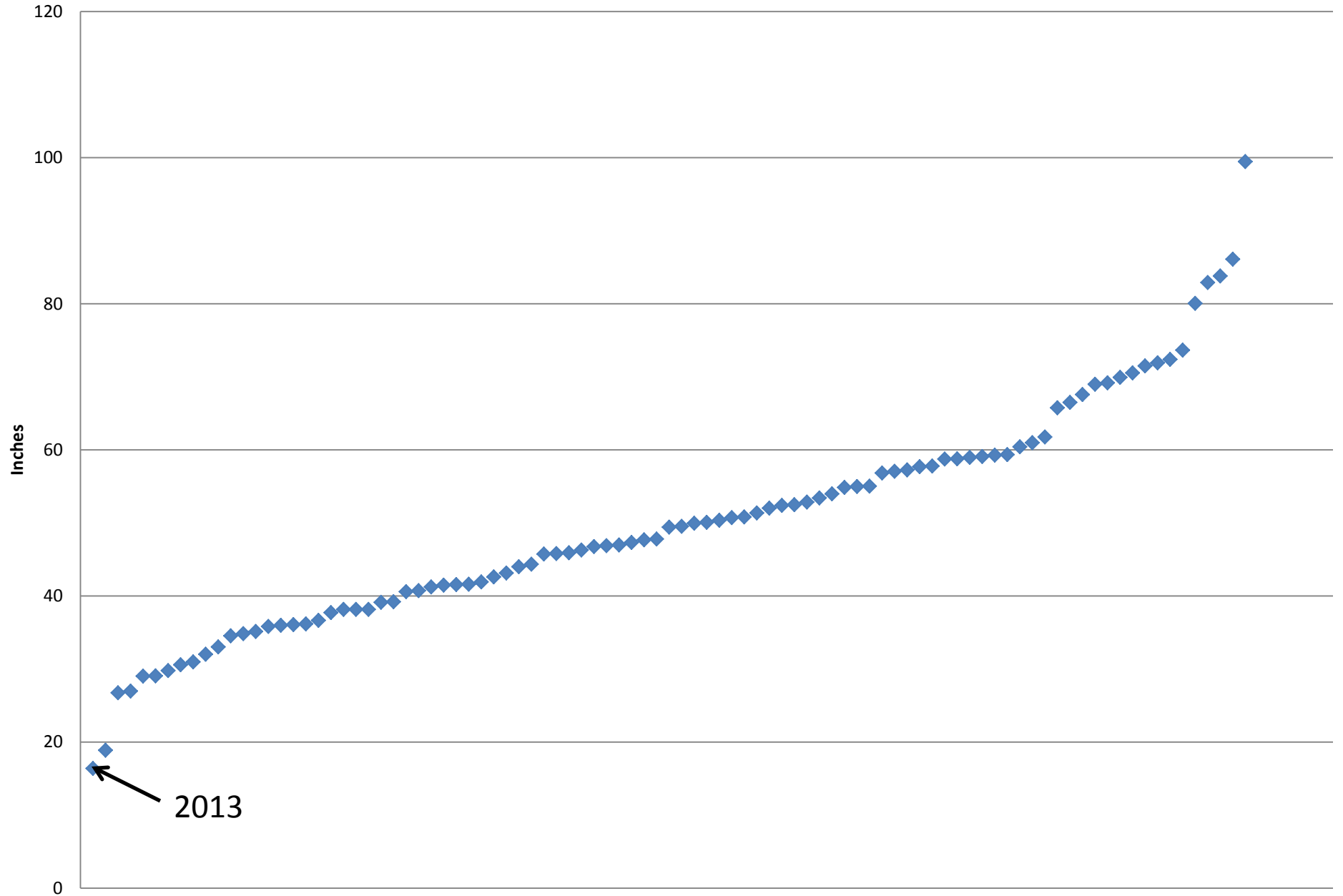
State Water Project
Central Valley Project
01/29/14 TUCP

Drought Workshop
02/18/14

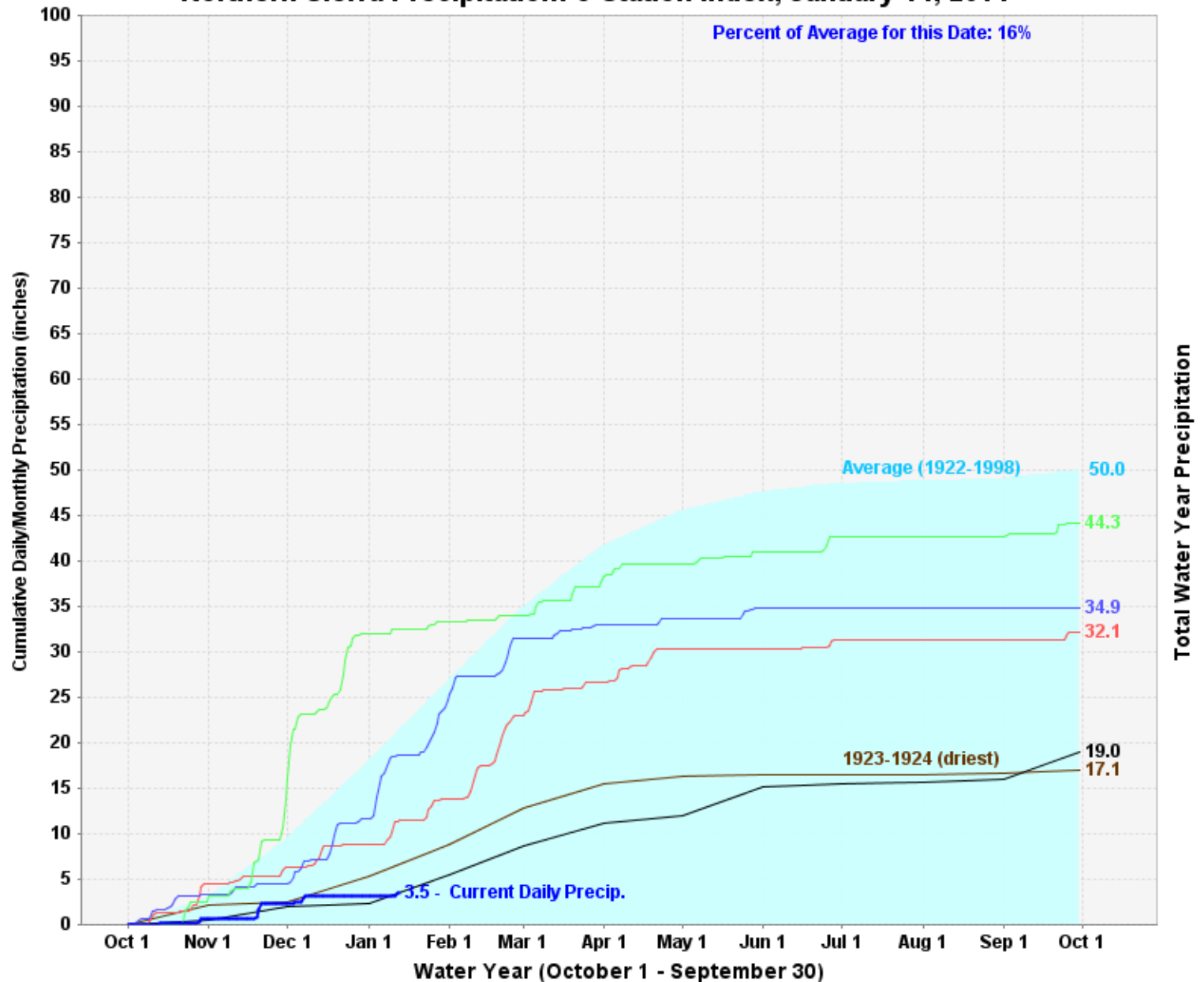
- TUCP Impetus – January Hydrologic Picture
- Proposed D-1641 Modification
- Order Implementation

Early January Hydrologic Picture

Northern Sierra (8-Station) Calendar Year Precipitation

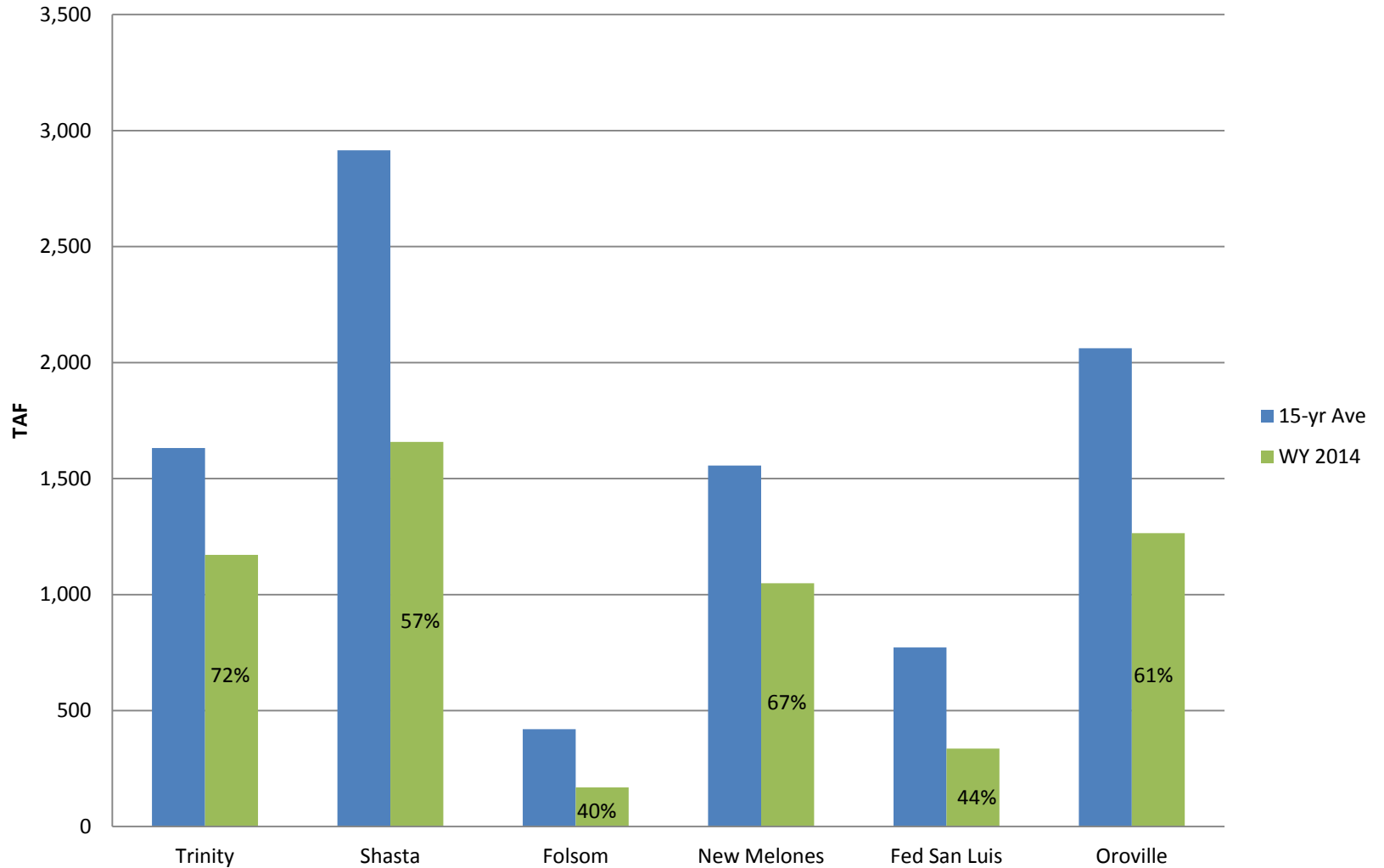


Northern Sierra Precipitation: 8-Station Index, January 14, 2014

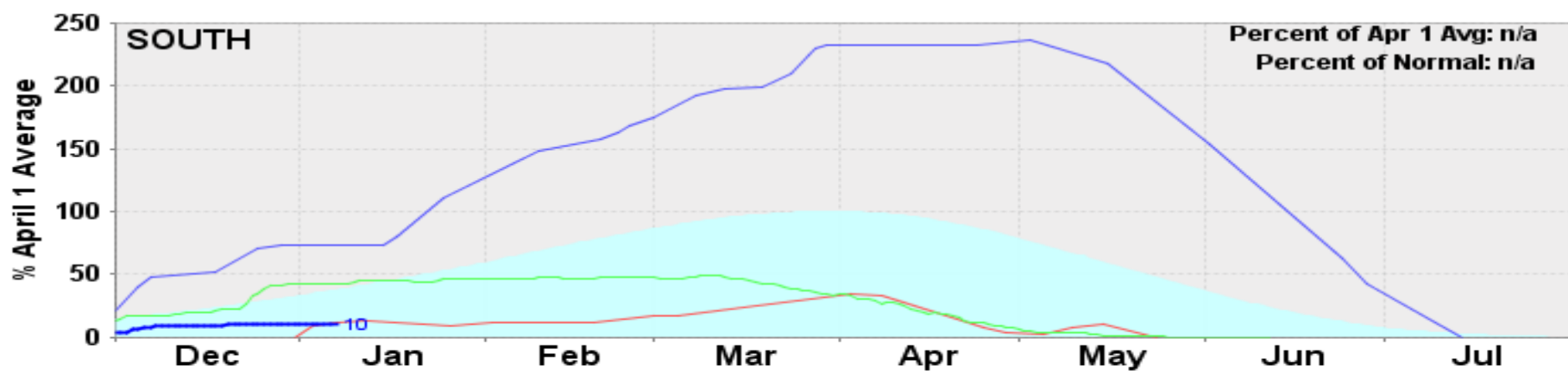
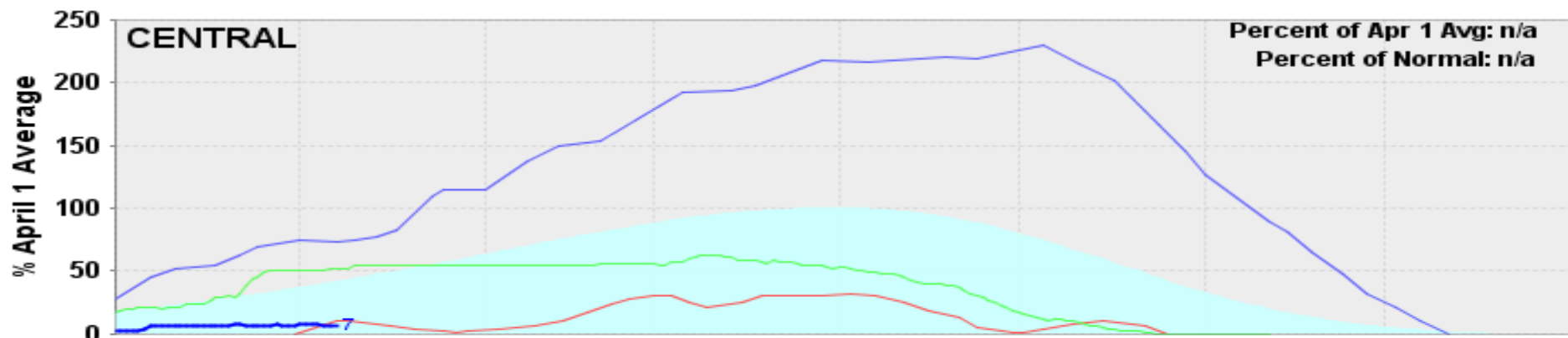
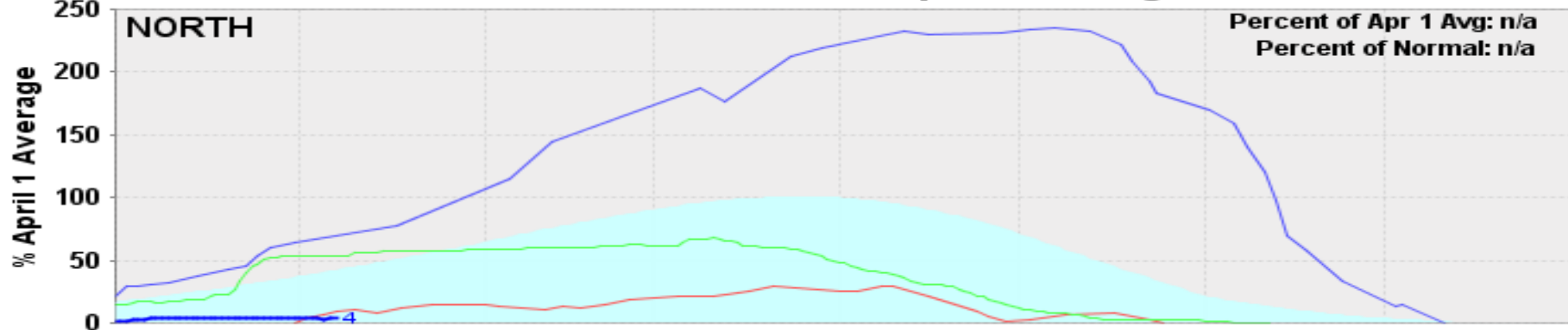


Reservoir Storage

January 20 Storage



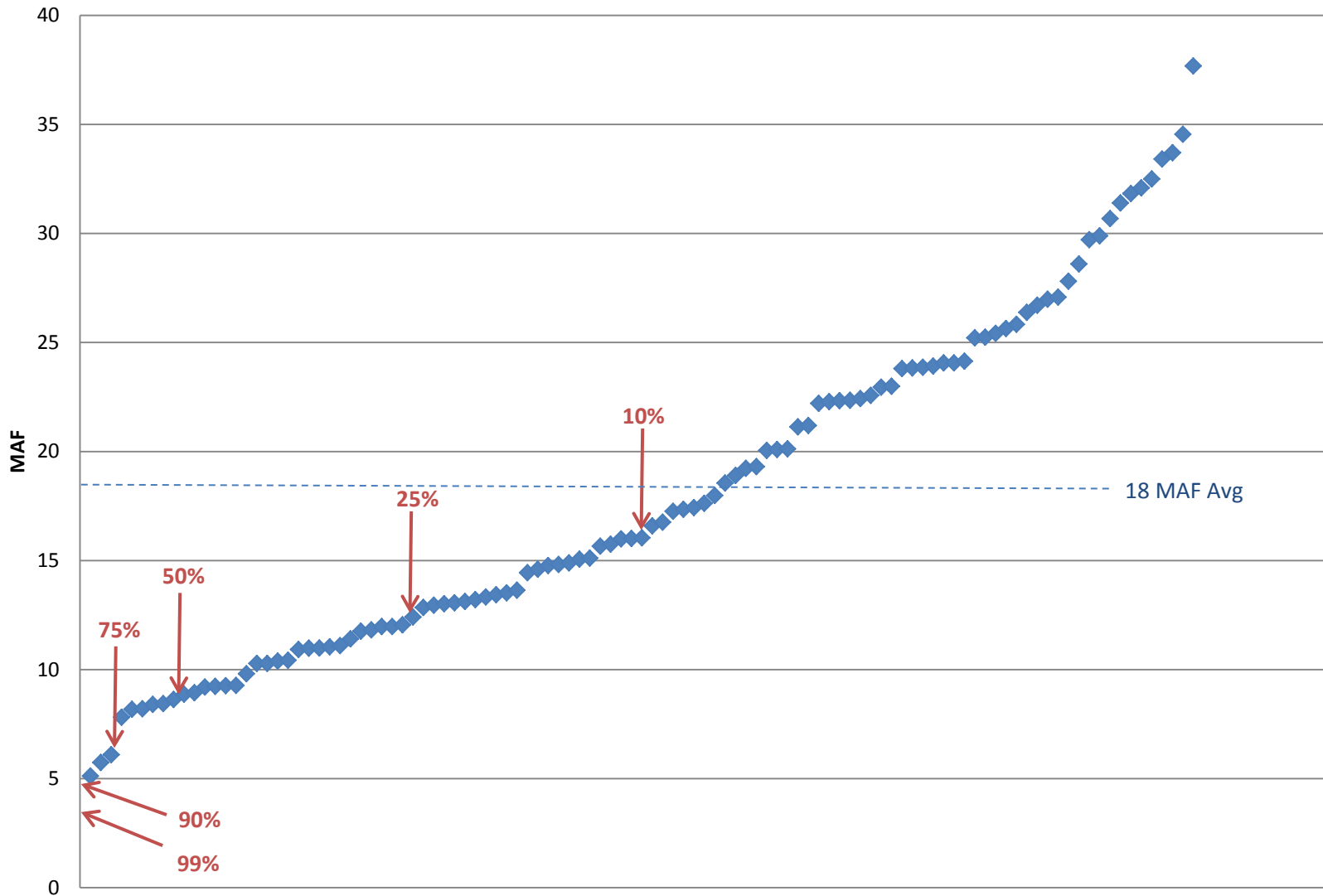
California Snow Water Content - Percent of April 1 Average For: 07-Jan-2014



Average — 1976-1977 (min) — 1982-1983 (max) — 2012-2013 — 2013-2014 (current)

Historical Sacramento Valley Runoff (1906-2012)

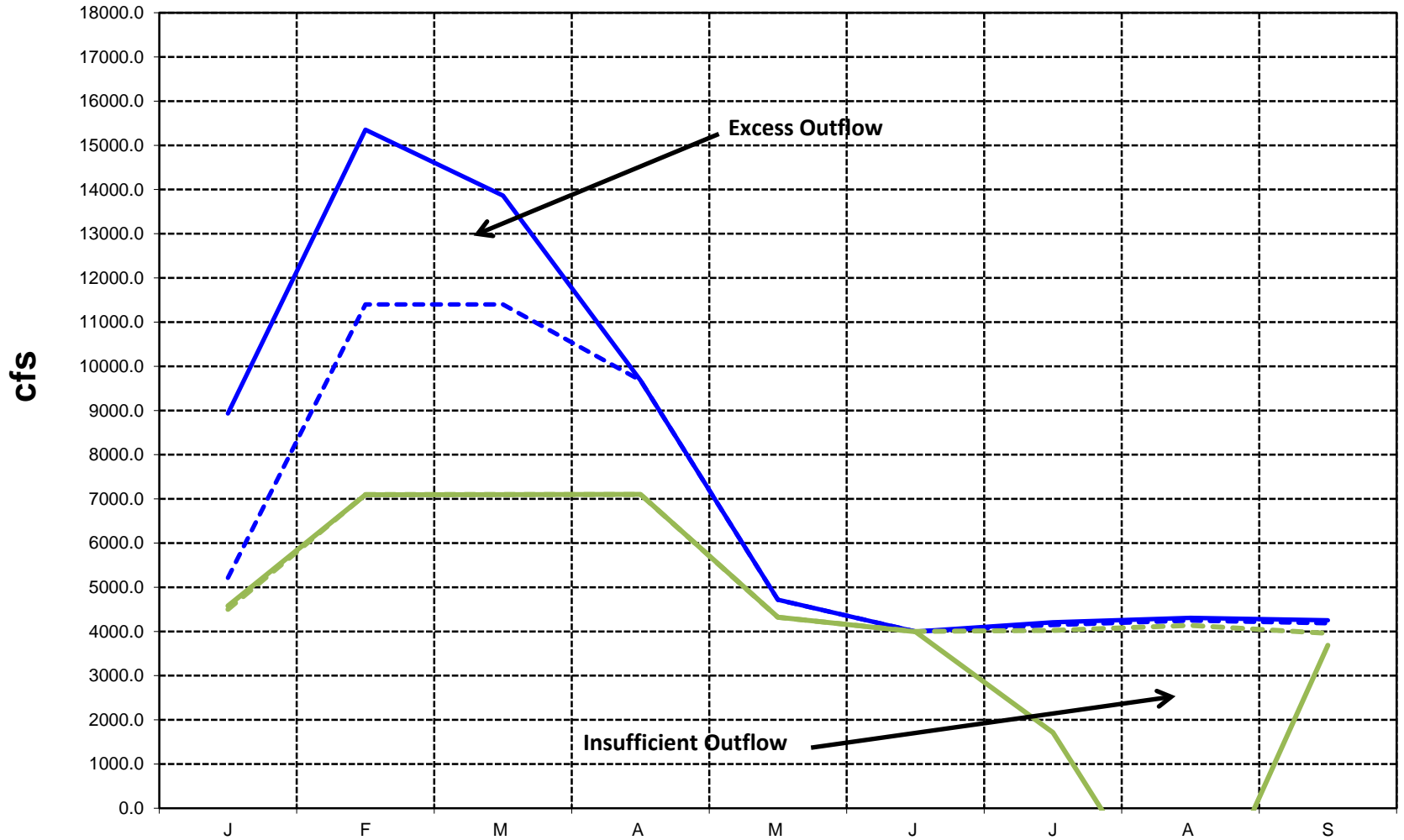
(Estimated WY 2014 Estimates based on January 1 WSI Forecast)



DWR Forecasted Delta Outflow

(Based on January 1 Runoff Forecast)

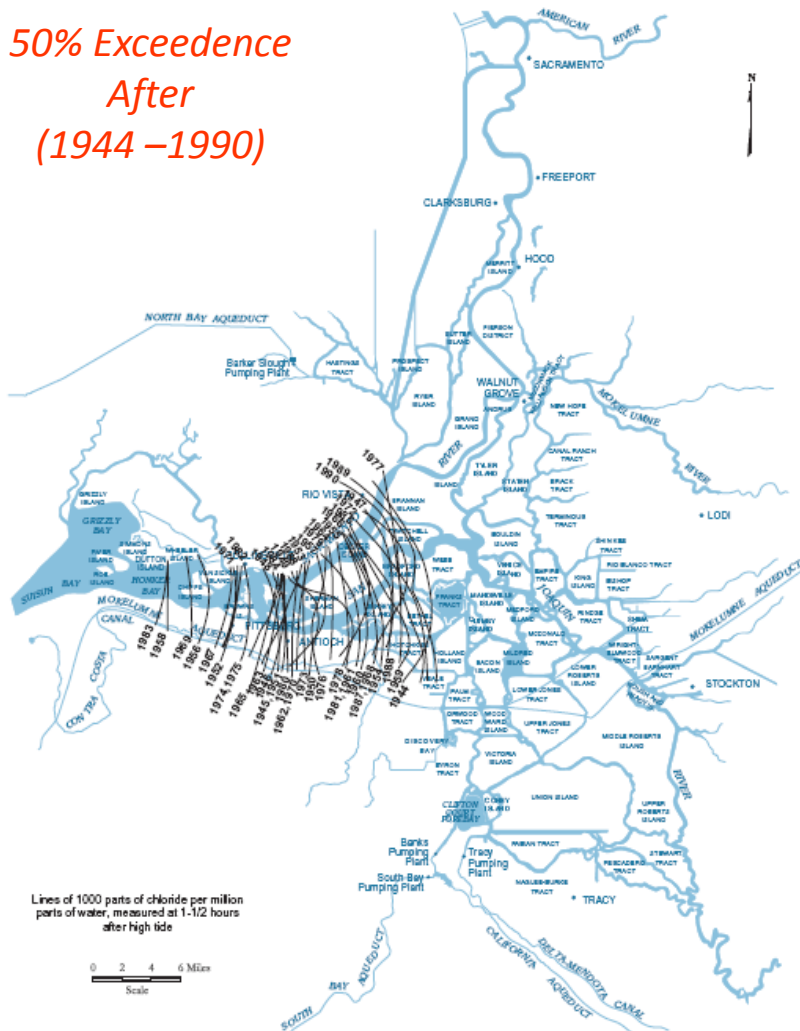
- Required Outflow 50% Exceedence
- Forecasted Outflow 50% Exceedence
- Required Outflow 90% Exceedence
- Forecasted Outflow 90% Exceedence



Salinity Intrusion Before and After Managed Upstream Reservoirs

Figure 4-27 Maximum Salinity Intrusion, 1944-1990

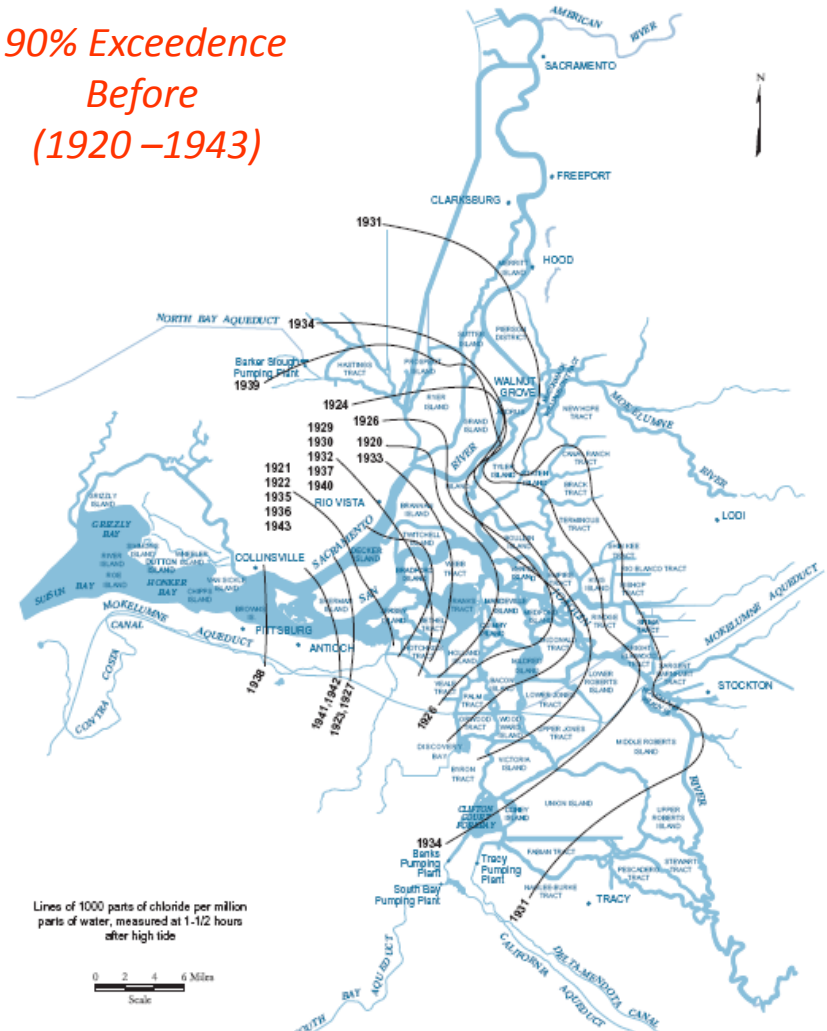
50% Exceedence
After
(1944-1990)



Source: Department of Water Resources, Sacramento - San Joaquin Delta Atlas, 1993

Figure 4-26 Maximum Salinity Intrusion, 1921-1943

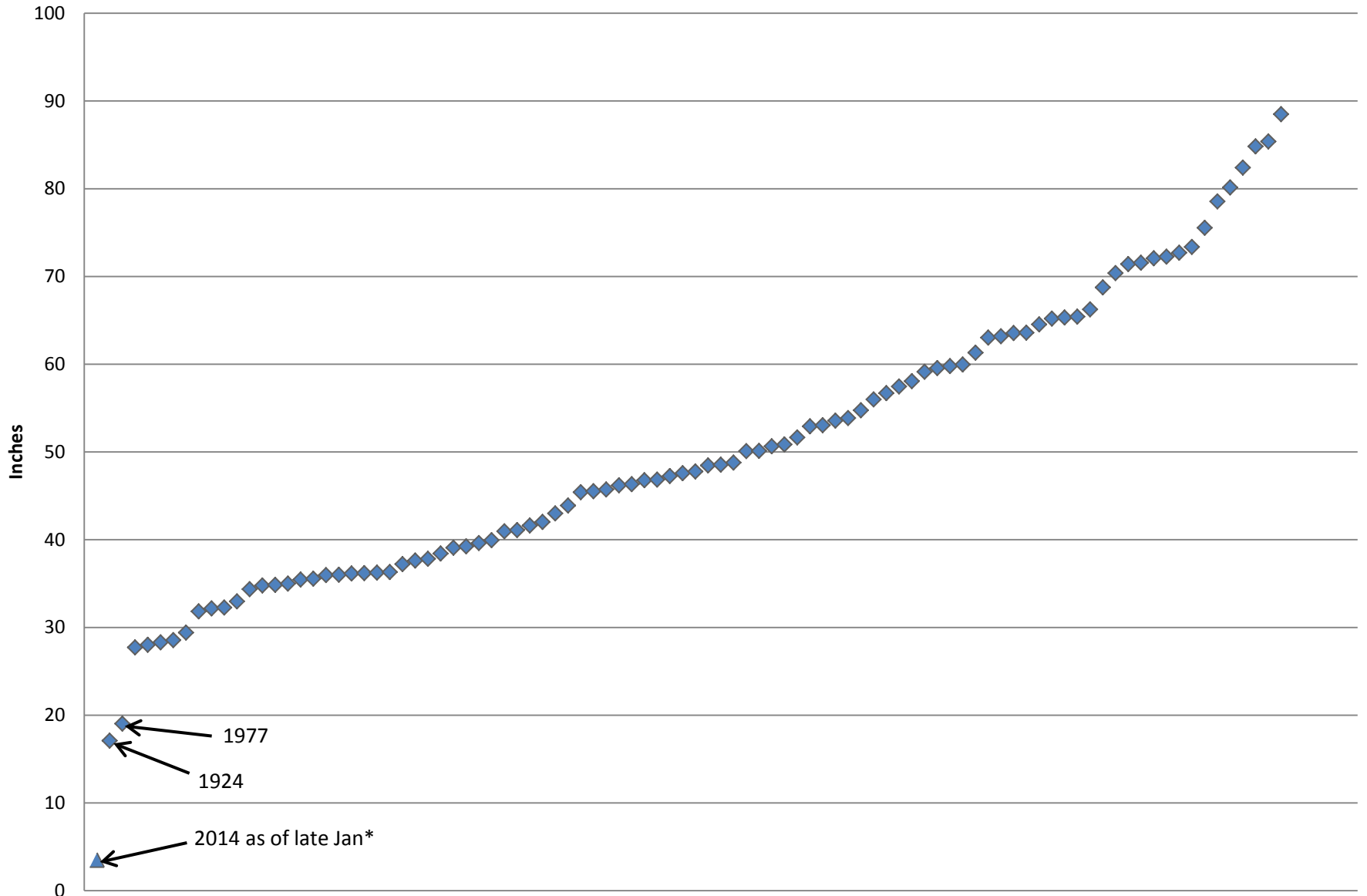
90% Exceedence
Before
(1920-1943)



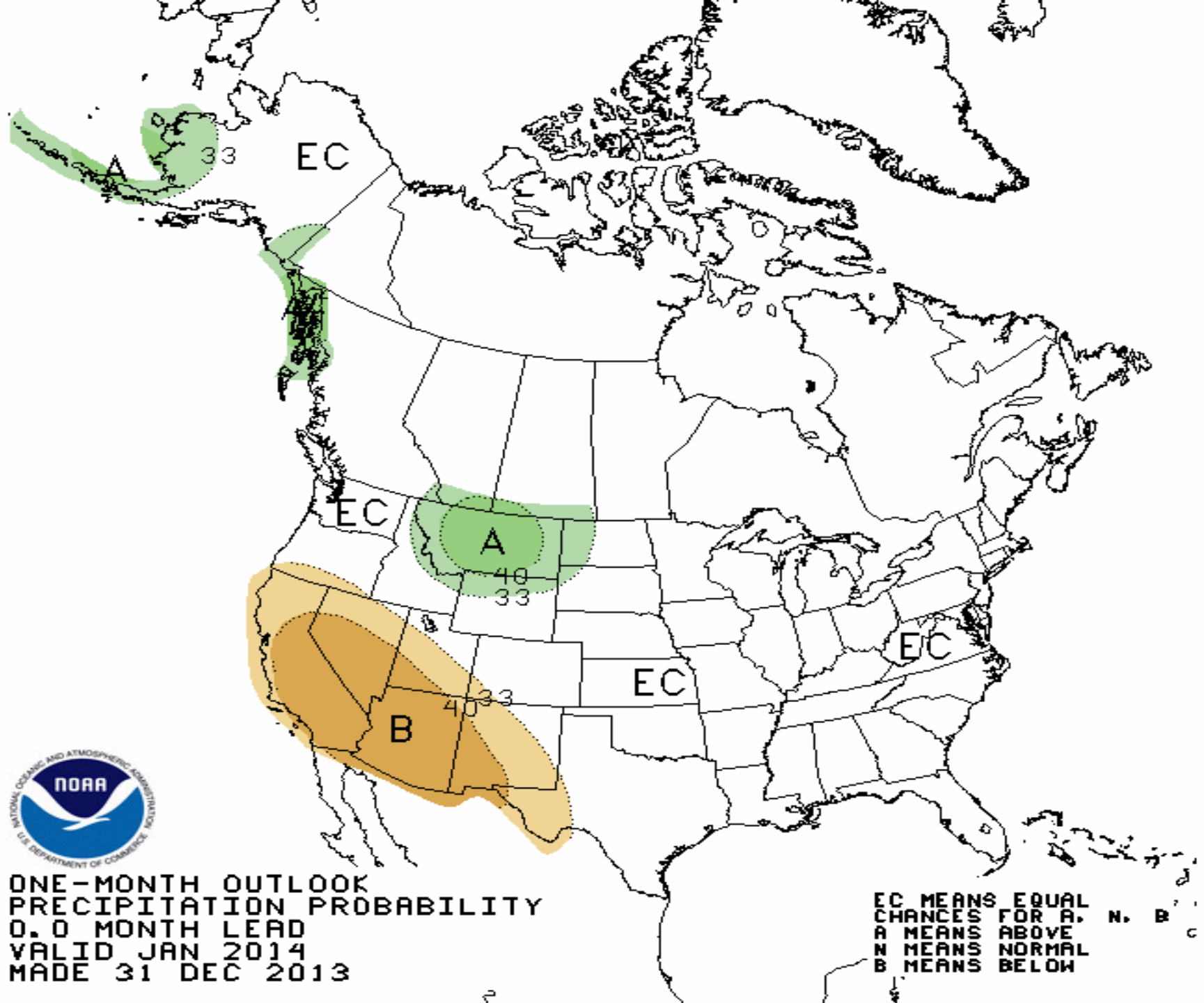
Source: Department of Water Resources, Sacramento - San Joaquin Delta Atlas, 1993

Late January Hydrologic Picture

Northern Sierra 8-Station WY Precipitation Totals

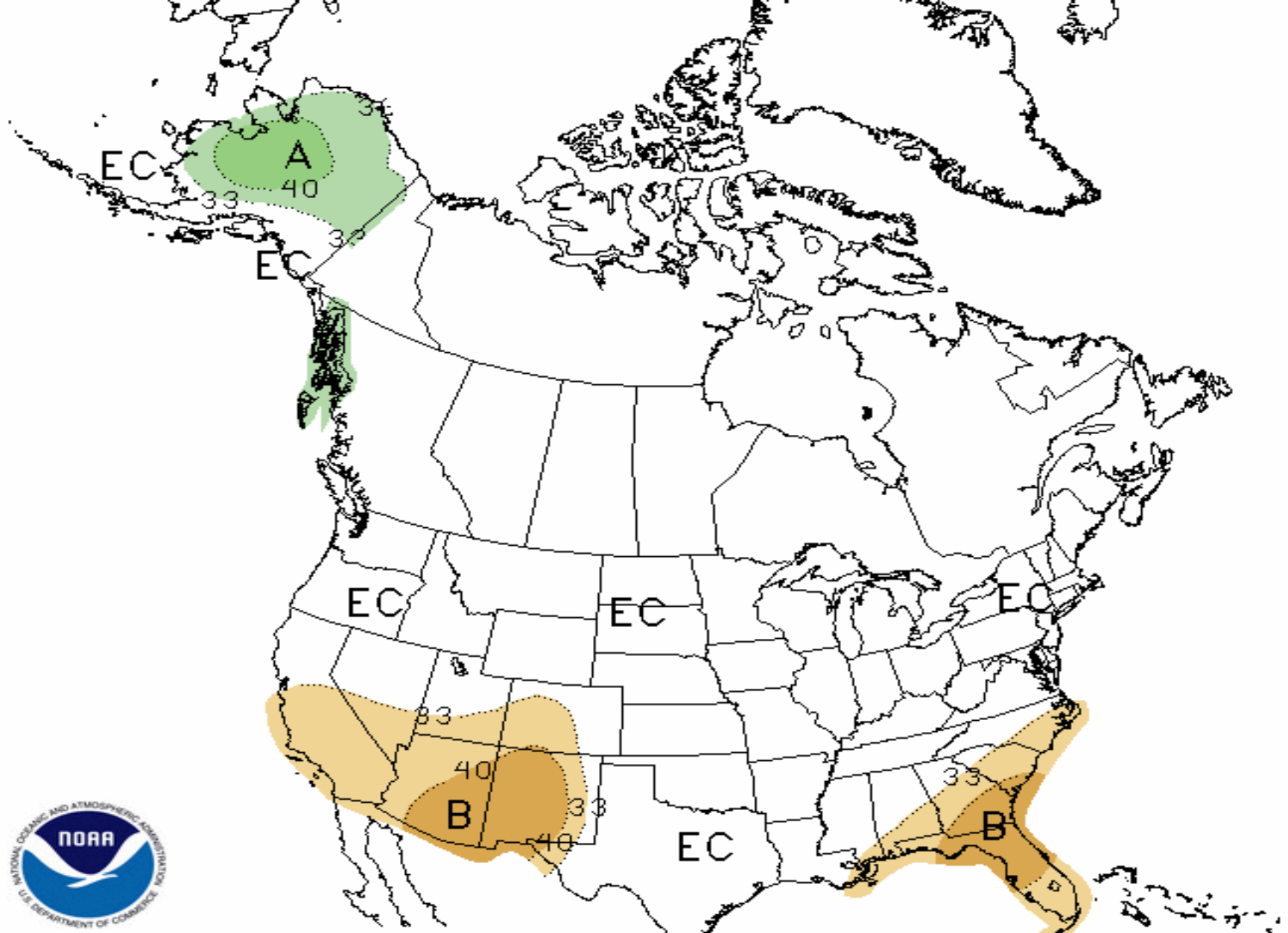


*WY 2014 Precipitation through 1/29/14 = 3.5" - half of WY total typically occurs by late January



ONE-MONTH OUTLOOK
 PRECIPITATION PROBABILITY
 0.0 MONTH LEAD
 VALID JAN 2014
 MADE 31 DEC 2013

EC MEANS EQUAL CHANCES FOR A, N, B
 A MEANS ABOVE
 N MEANS NORMAL
 B MEANS BELOW

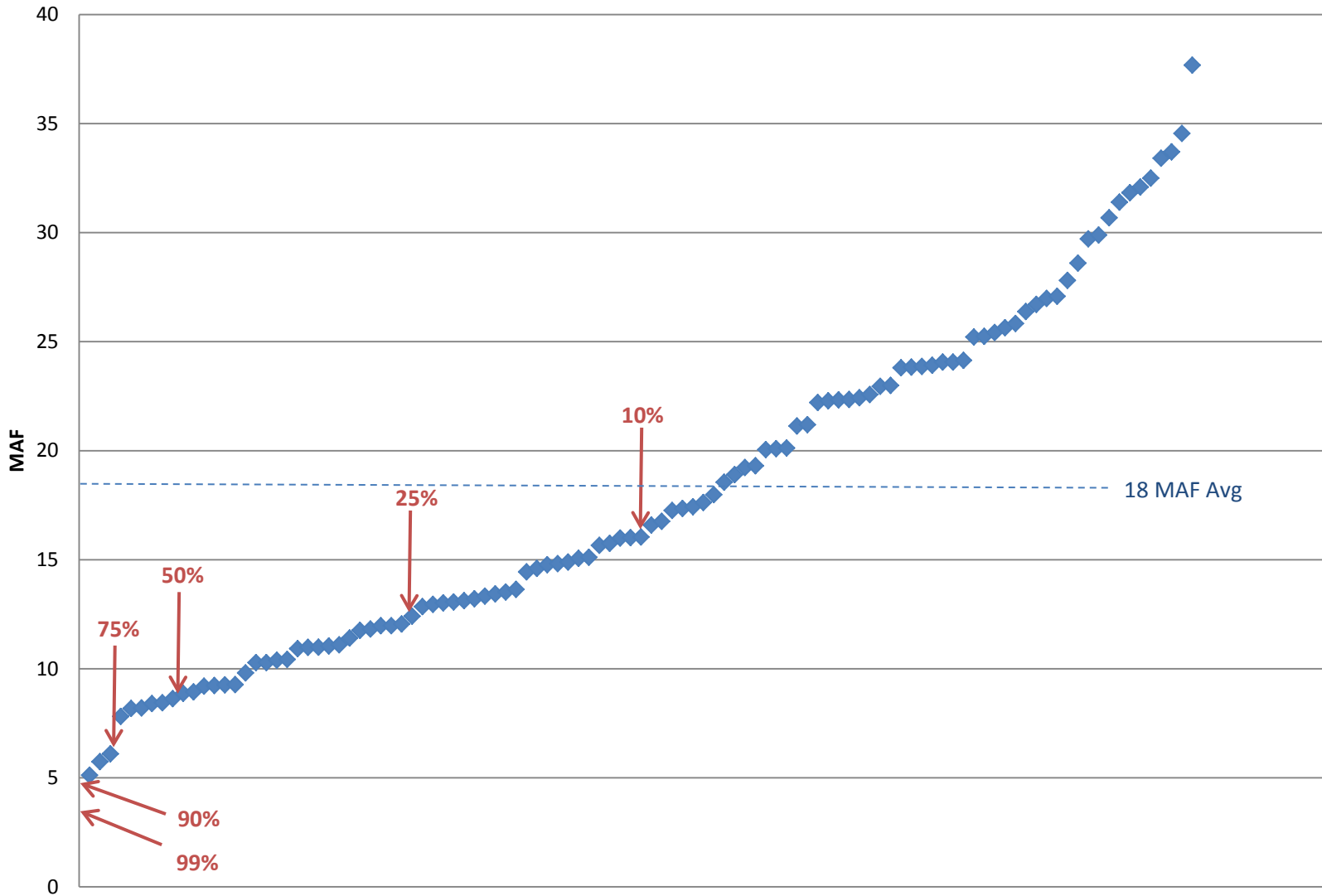


THREE-MONTH OUTLOOK
 PRECIPITATION PROBABILITY
 0.5 MONTH LEAD
 VALID JFM 2014
 MADE 19 DEC 2013

EC MEANS EQUAL CHANCES FOR A, N, B
 A MEANS ABOVE
 N MEANS NORMAL
 B MEANS BELOW

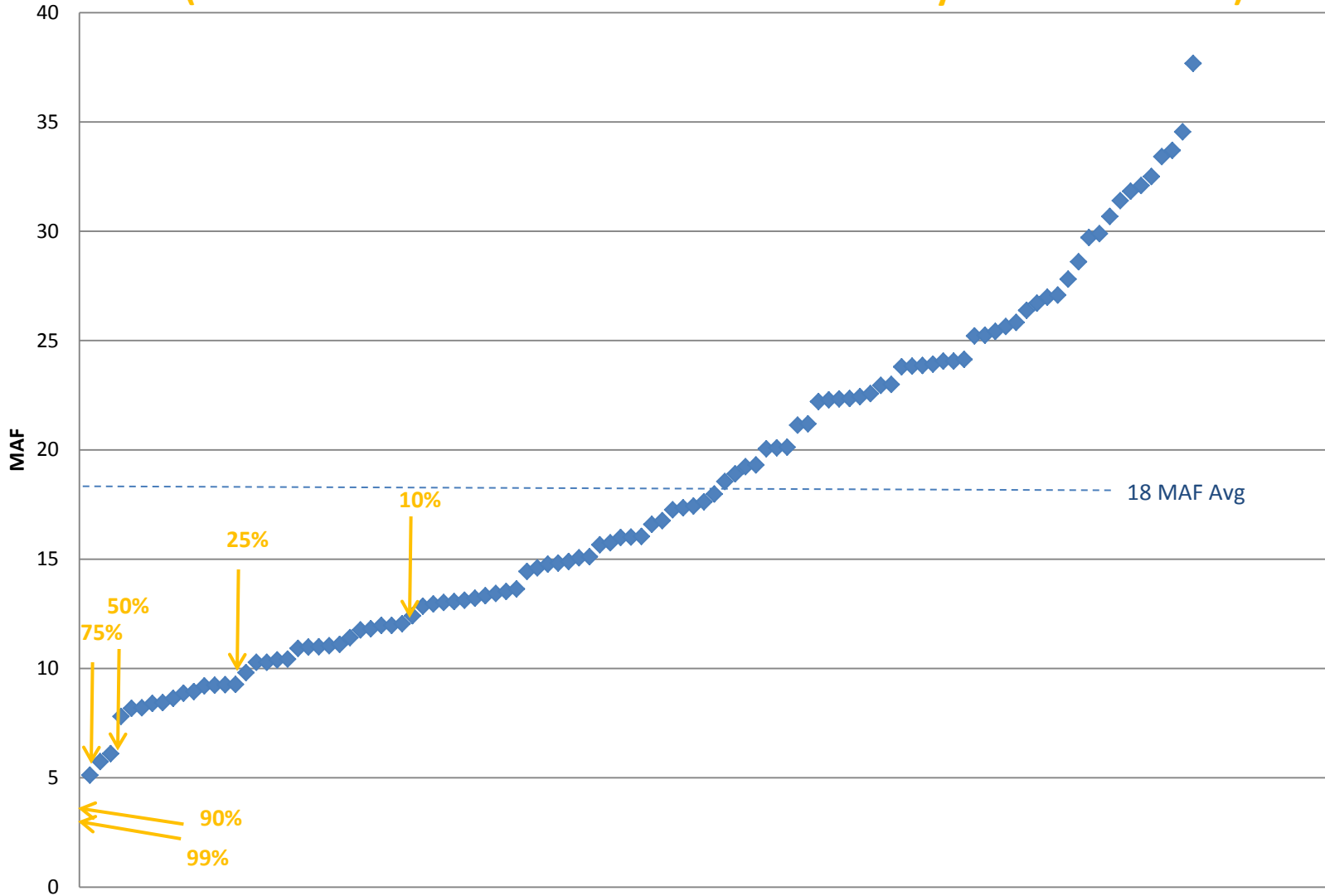
Historical Sacramento Valley Runoff (1906-2012)

(Estimated WY 2014 Estimates based on January 1 WSI Forecast)



Historical Sacramento Valley Runoff (1906-2013)

(Estimated WY 2014 Runoff based on February 1 B-120 Forecast)



TUCP Proposed Operations

Proposed D-1641 Standard Modifications

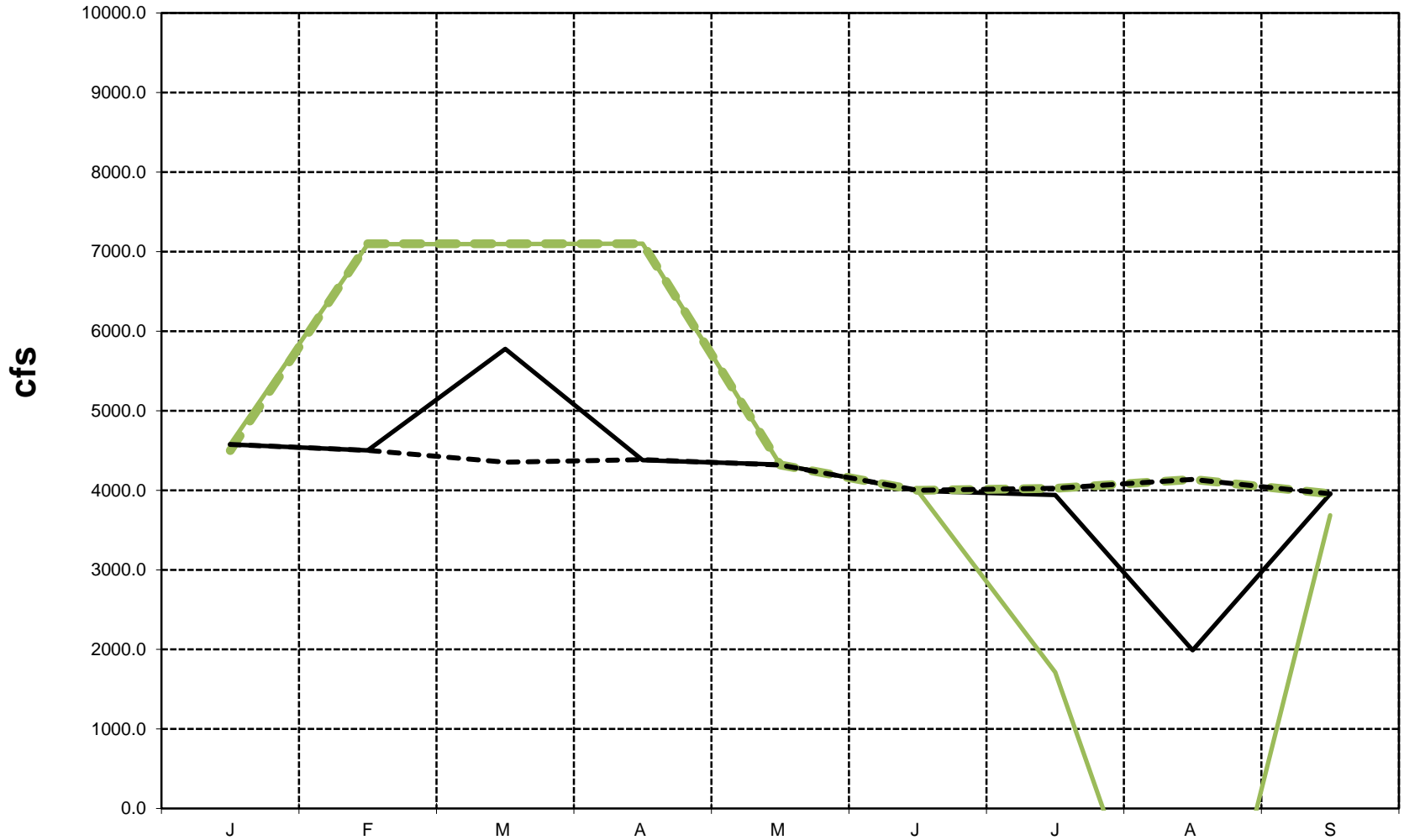
- Reduce February Outflow Requirement
 - Minimize Additional Upstream Releases
 - Minimize Exports to Health and Safety Needs
- Open DCC Gates
 - Improve Delta Salinity Conditions
 - Minimize Additional Upstream Releases

Delta Outflow Modification

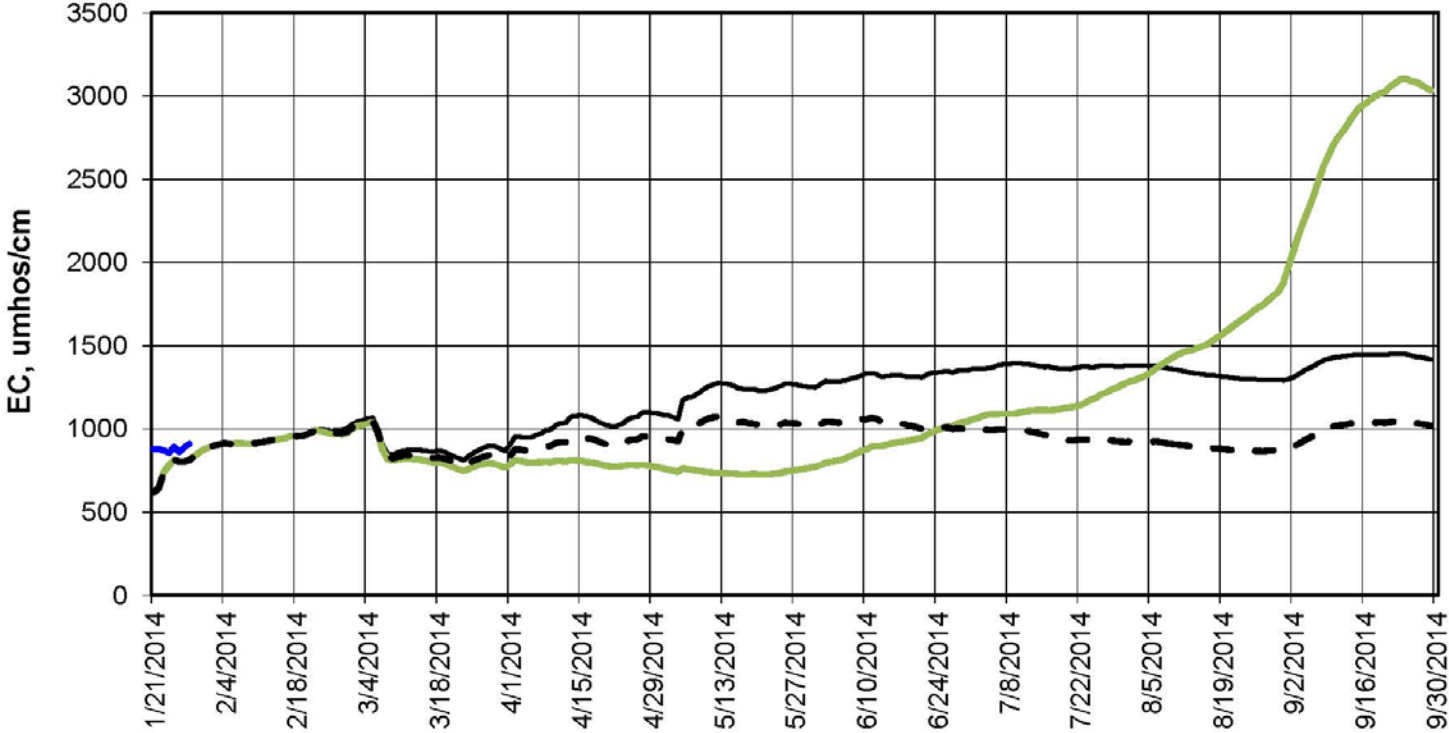
Forecasted Delta Outflow (Based on January 90% Hydrologic Forecast)

— Case 1 - Attempting to Meeting All Standards
- - - Required Outflow to Meet All D-1641 Standards

— Case 2 - Attempting to Meet Salinity Standards Only
- - - Assumed Ourflow Required to meet "Salinity Standards"



Forecasted Daily EC @ Clifton Court



Forecast Period 1/28/2014 thru 9/30/2014

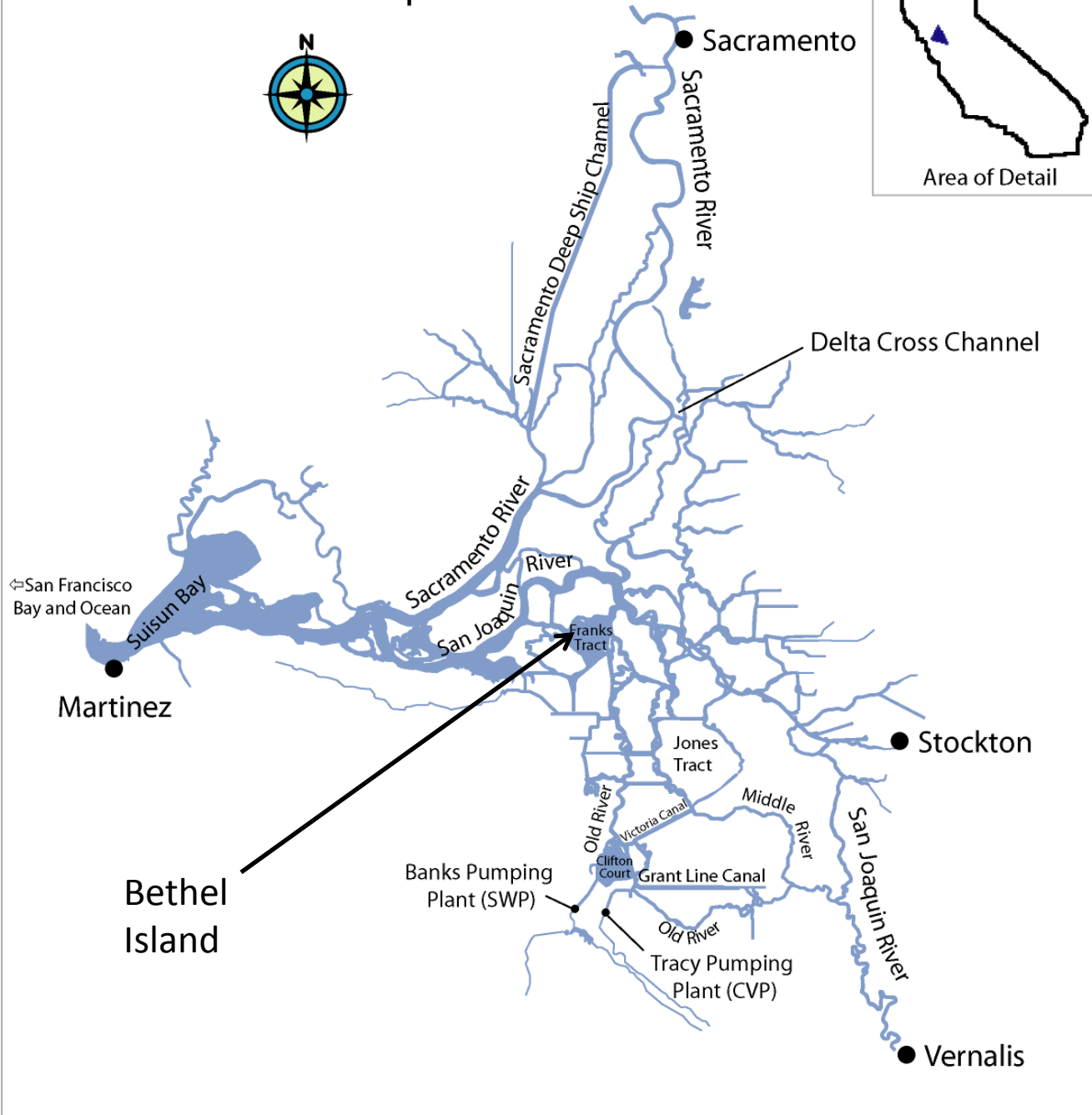
- Hist EC
- Meets all D-1641 until storage depleted
- Meets modified D-1641 while conserving storage
- - Modified D-1641 with DCC gates open after February 1st

DCC Gate Opening

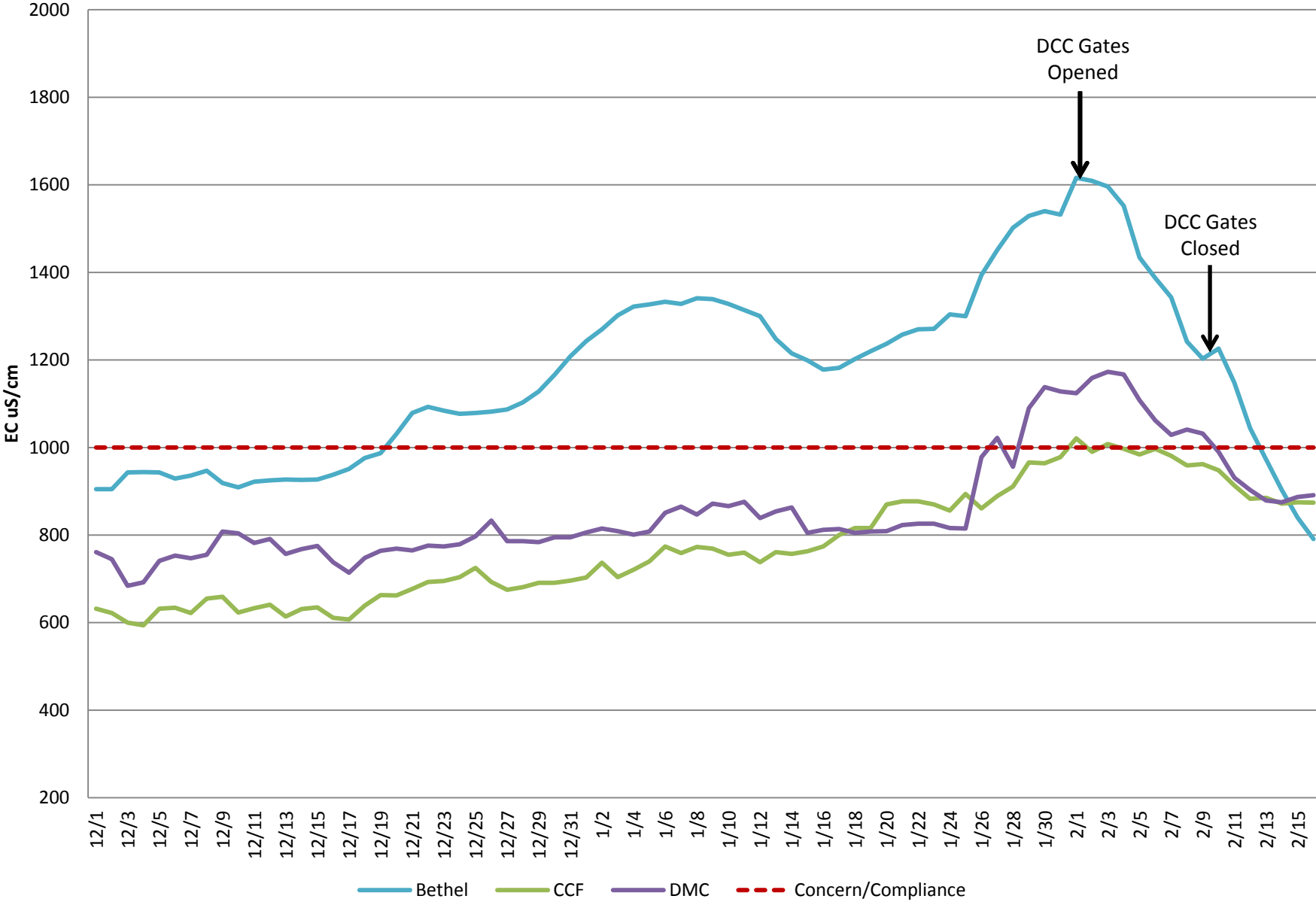
Sacramento San Joaquin Delta



Area of Detail



Delta Salinity Conditions

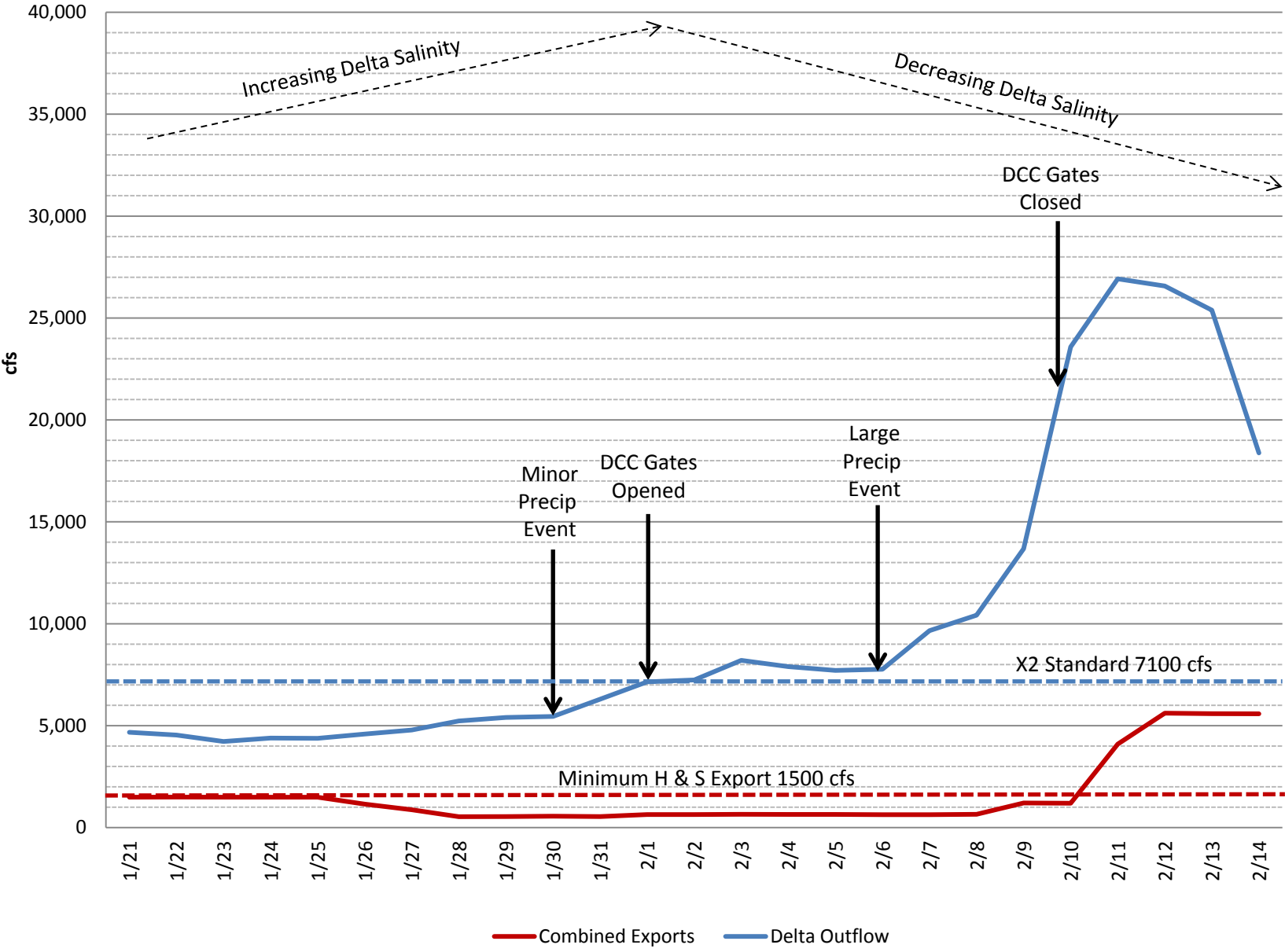


Order Implementation

February D-1641 Modifications

- Delta Outflow no less than 3000 cfs
- Maximum Exports for minimum health and safety not to exceed 1500 cfs
- DCC Gate Open as of February 1
- If D-1641 Requirements are met exports may be greater than 1500 cfs but limited to unstored flow

Historical Timeline



Other Order Terms

- Establishment of Real-Time Drought Operations Management Team (RTDOMT)
- Conserved Water Calculation
- Monthly Water Balance Estimates
- Increased Modeling and Monitoring to inform the RTDOMT