WATER SUPPLY UPDATE

August 26, 2015

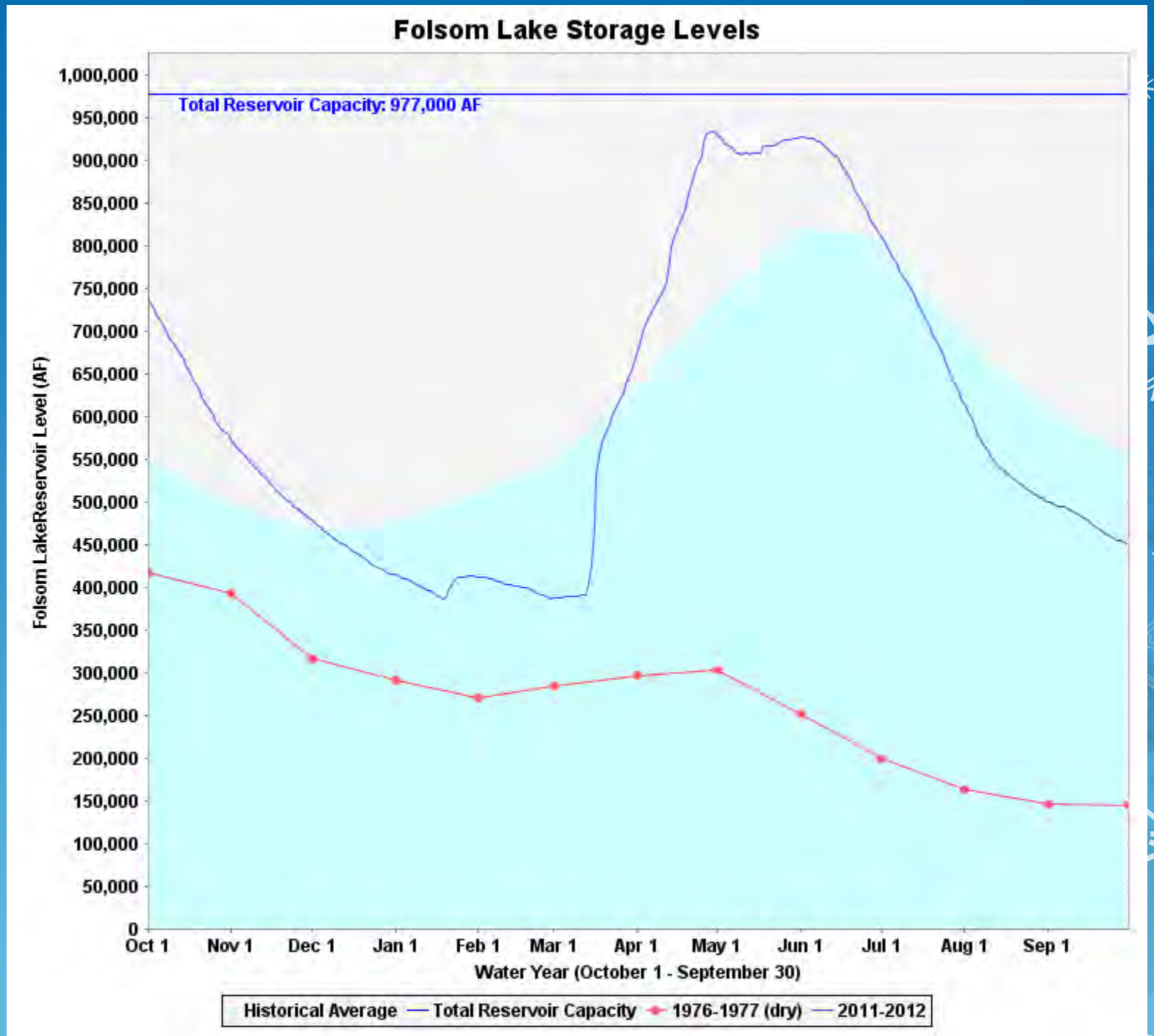
Shauna Lorance
General Manager
SJWD

Agenda

- Water Supply Conditions
- Operation of CVP as a System
- Folsom Lake Contingency Plans
- SJWD Emergency Operation Plans

Start of Drought

- Never know if dry year or start of drought….
- 2012-2013
  - rainy season had extremely wet start
  - additional storm in Dec would have triggered flooding in N. Calif
  - Jan – June 2013 driest start to the calendar year in at least 118 years


Folsom Lake Storage Levels
Total Reservoir Capacity: 977,000 AF
Folsom LakeReservoir Level (AF)
1,000,000
950,000
900,000
850,000
800,000
750,000
700,000
650,000
600,000
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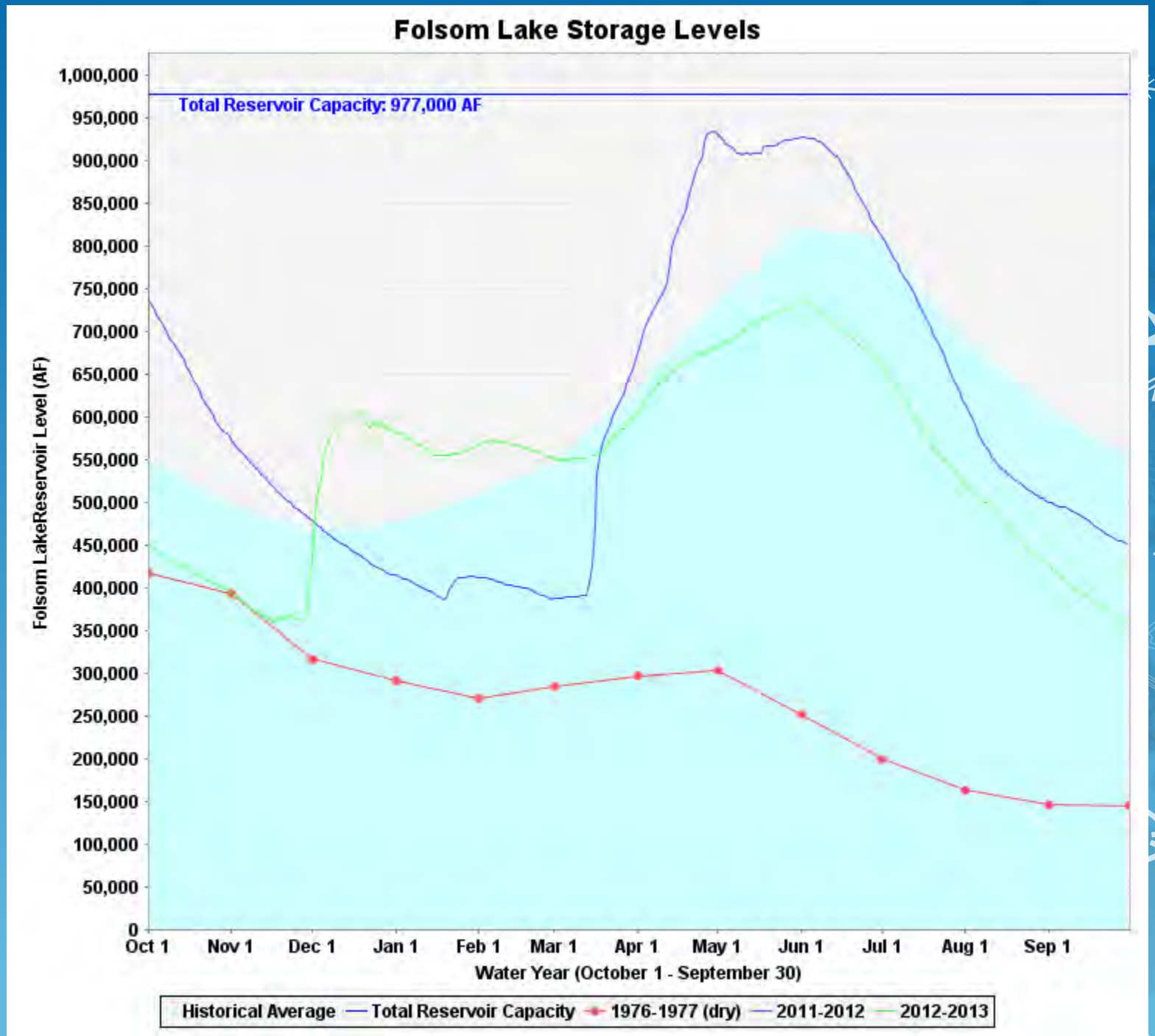
0
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Water Year (October 1 - September 30)
Historical Average
Total Reservoir Capacity
1976-1977 (dry)
2011-2012

Ridiculously Resilient Ridge

- 2nd half of 2013
- Persistent high pressure over Pacific Ocean
- Forced storms to the north
- Lessened in Summer 2013
- Returned with greater force in November 2013
- Alaska experiences warmth and precipitation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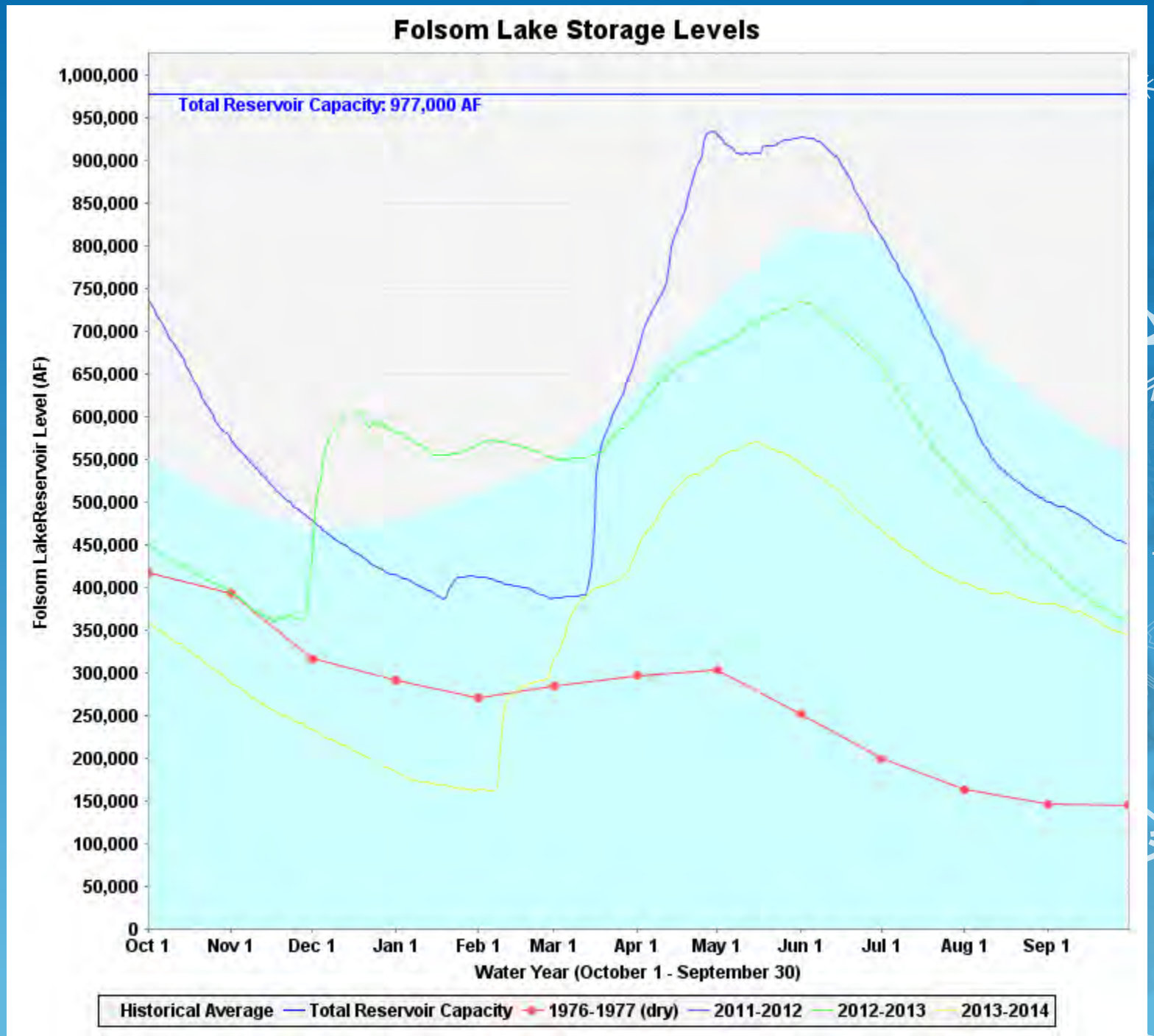
1976-1977 (dry)
2011-2012
2012-2013

2014 continued drought

- By Feb 2014, RRR began to lose some intensity
- Winter precipitation came in two systems
- 2014 3rd driest winter, following driest ever in 2013, and drier than average 2012
- warmest winter in 2013-14 on record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Aug 1
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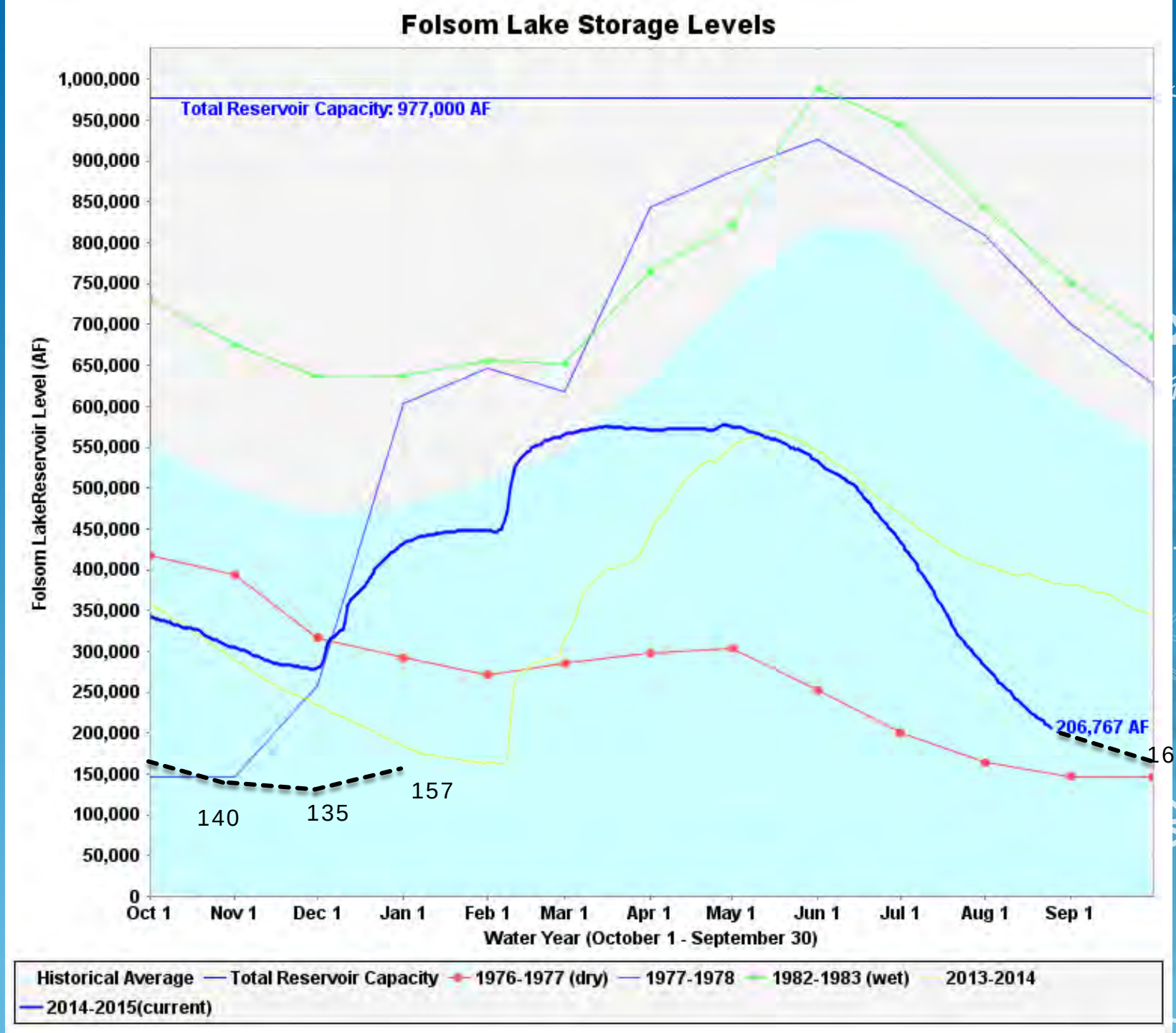
Water Year (October 1 - September 30)
Historical Average
Total Reservoir Capacity
1976-1977 (dry)
2011-2012
2012-2013
2013-2014

Where are we in 2015?

- El Nino – Not guaranteed to be a wet season
  - 50/50 chance wet or dry
  - Historical look at past El Ninos
    - 7 years with similar signals
    - Three wet
    - One average
    - Three dry
- Folsom forecast to hit lowest storage since being built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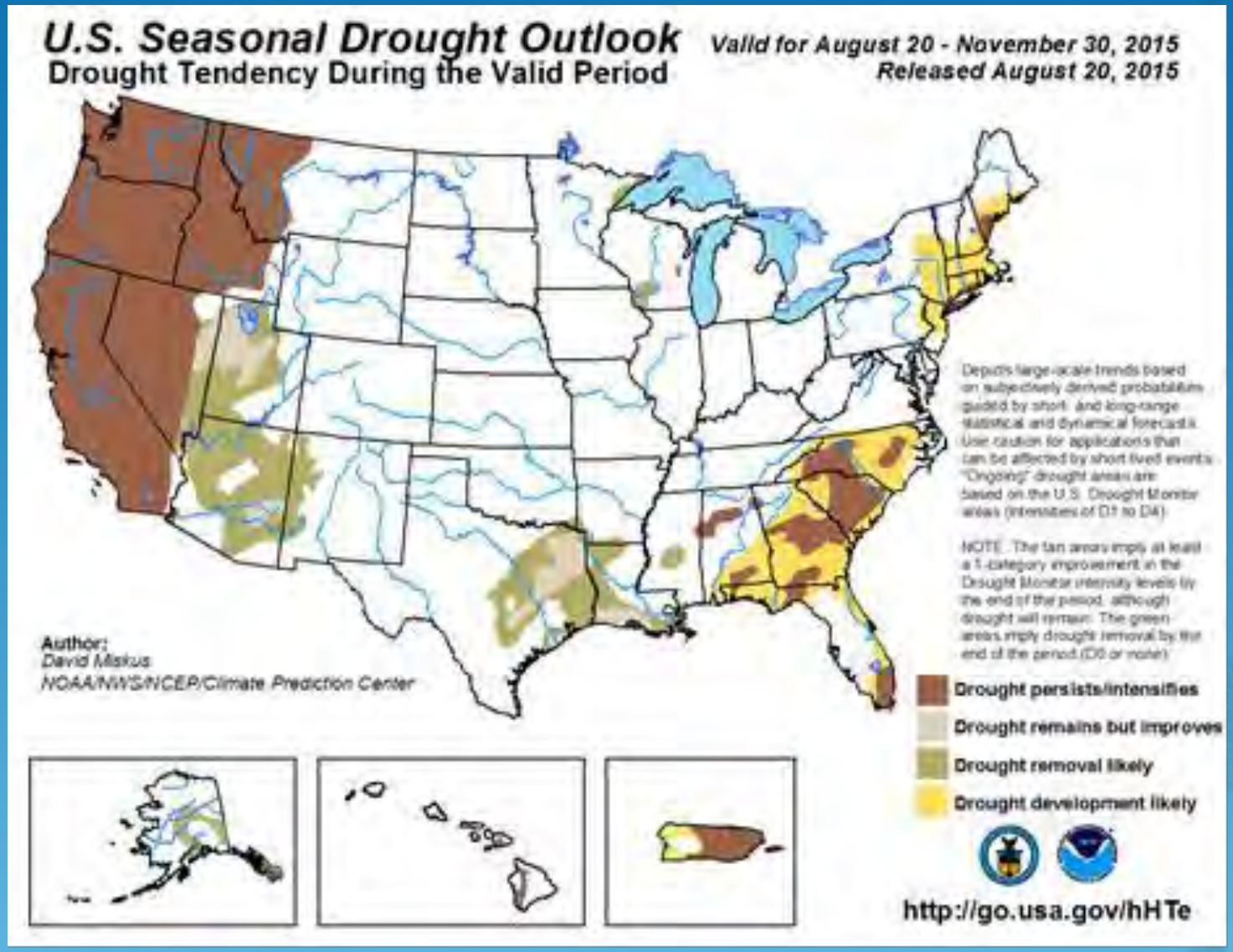
0
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Water Year (October 1 - September 30)
206,767 AF
165
157
140
135
Historical Average
Total Reservoir Capacity
1976-1977 (dry)
1977-1978
1982-1983 (wet)
2013-2014
2014-2015(current)


U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for August 20 - November 30, 2015
Released August 20, 2015
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. User caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).
Author:
David Miskus
NOAA/NWS/NCEP/Climate Prediction Center
Drought persists/intensifies
Drought remains but improves
Drought removal likely
Drought development likely
http://go.usa.gov/hHTe

Water supply reliability

- Wet years use surface water
- Dry years rely more on groundwater
- Requires regional approach to water management
- Would allow water transfers to offset revenue reductions and costs

OPERATION OF CVP AS A SYSTEM

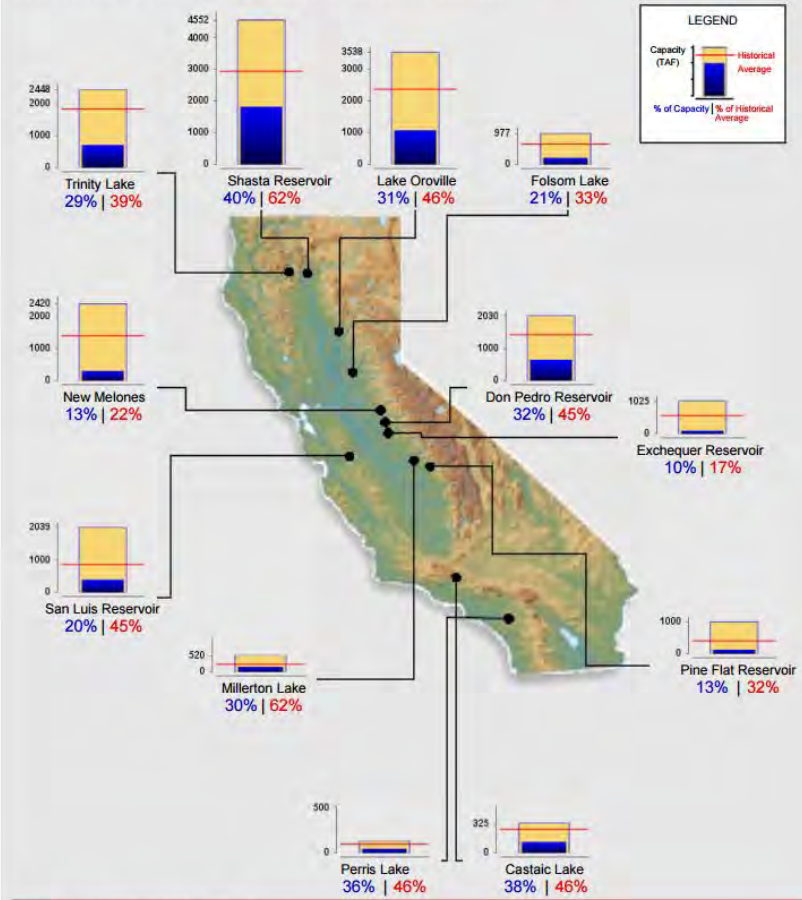
cdec.water.ca.gov/cgi-progs/products/rescond.pdf - Google Chrome

cdec.water.ca.gov/cgi-progs/products/rescond.pdf

Apps | CHP Traffic | Dell | tahoe lakefronts | folsom lake graph | CDEC - Data Applica... | usbr forecast | Beach House Rental... | Del Oro High School

Ending At Midnight - August 25, 2015

CURRENT RESERVOIR CONDITIONS



Graph Updated 08/26/2015 02:45 PM

FOLSOM LAKE WATER SUPPLY CONTINGENCY PLANS

Drew Lessard
Area Manager
USBR

Folsom Dam and Reservoir

Folsom Lake February 2014 (Elevation approx. 357)

RECLAMATION

Folsom Dam Overhead

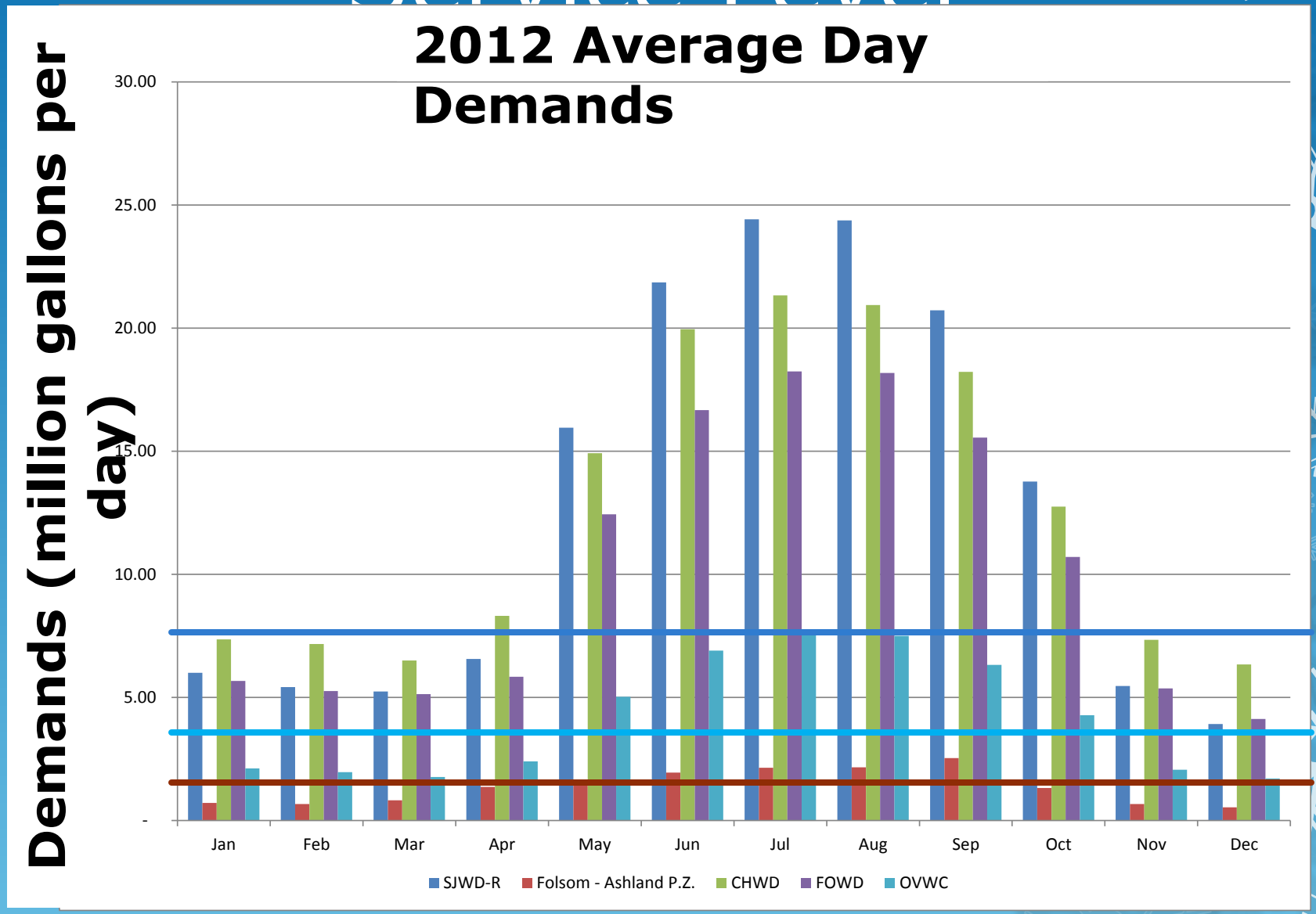
SJWD EMERGENCY OPERATION PLANS

Keith Durkin
Assistant General Manager
SJWD

Emergency (Supply Reliability) Plans

- Political/Institutional
  - Advocating for operations plans at Folsom Reservoir so that deliveries can be made under all conditions
  - Collaboration with local/regional/statewide/federal agencies on system operations to limit impacts
- Conservation and Public Outreach
- Water Supply Projects to Meet Minimum Acceptable Service Level w/o Supply from Folsom Reservoir

"Minimum Acceptable Service Level"

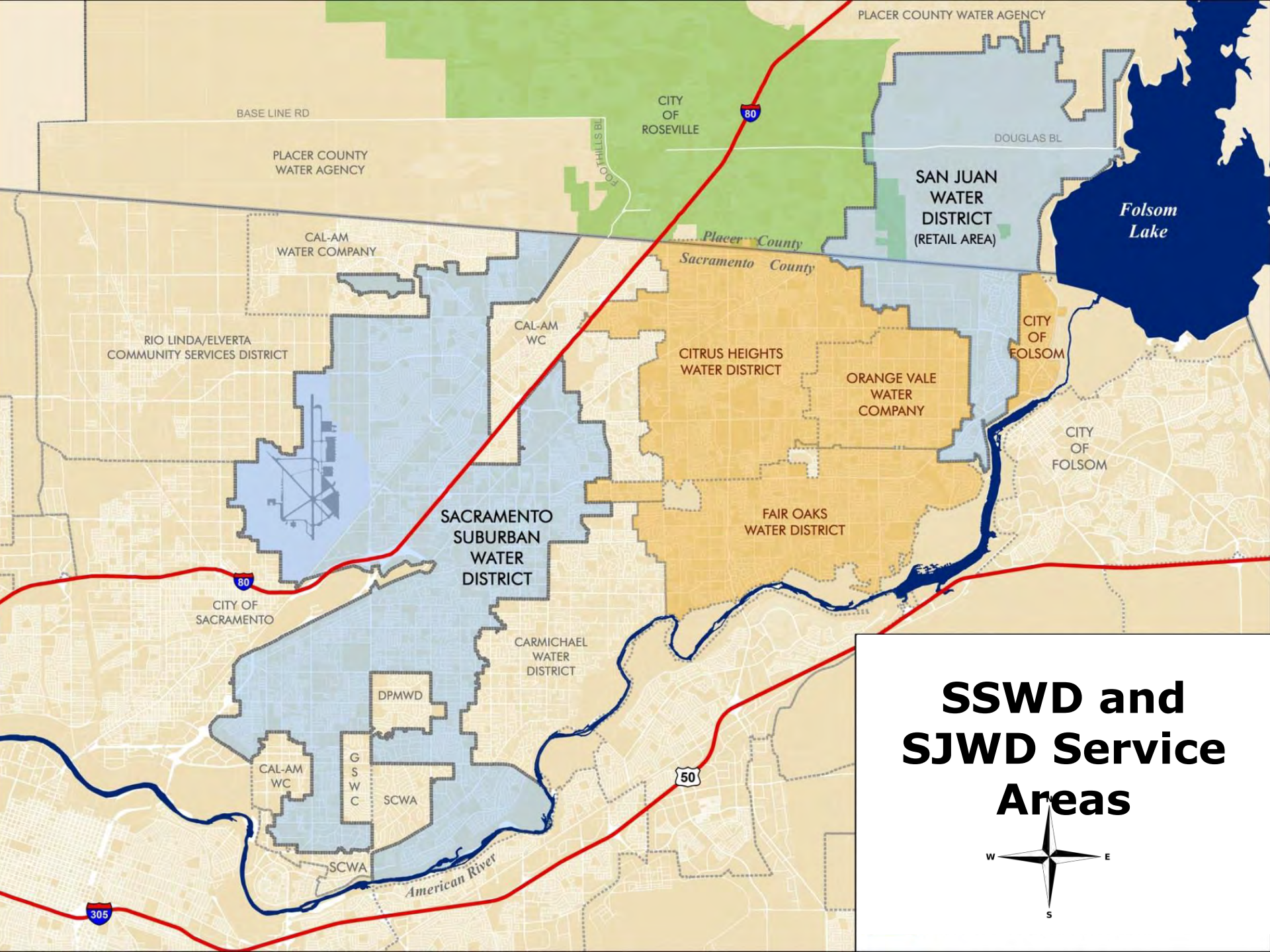


Emergency Water Supply Projects

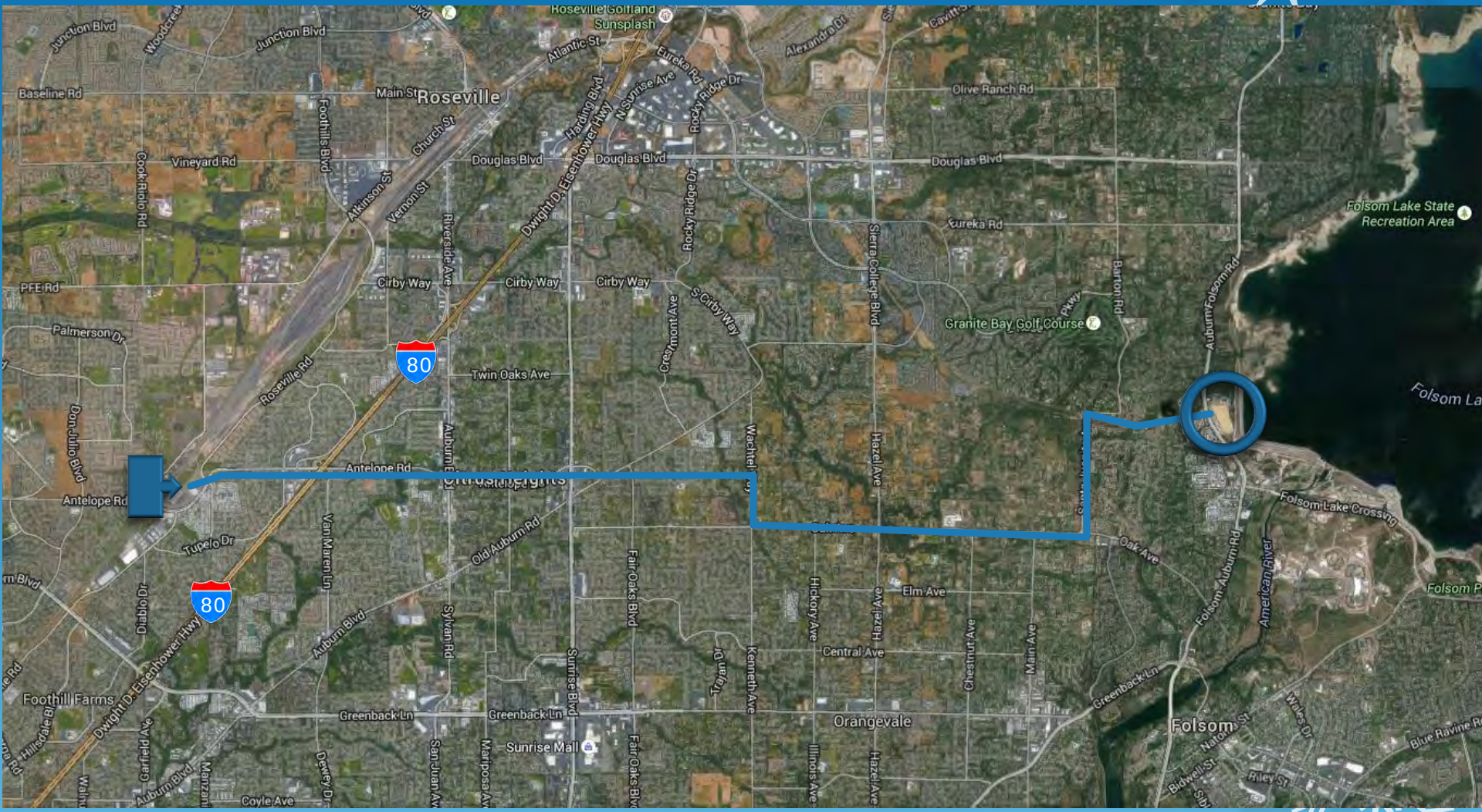
- SJWD completed an evaluation in early 2013 to identify feasible projects to improve water supply that could be quickly implemented. Two primary projects were identified:
  - SSWD Groundwater "Pump Back" Project
  - New System Intertie with PCWA

SSWD - SJWD Antelope Booster Pump Station Pump Back Project

- Provides 14.4 MGD of groundwater from SSWD to SJWD
- Utilizes existing major transmission pipeline normally used to deliver surface water to SSWD from SJWD water treatment plant
- Requires new pump station at existing SSWD Antelope storage tank site to “pump back” groundwater



SSWD and SJWD Service Areas


Roseville Golfland Sunsplash
Junction Blvd
Baseline Rd
Main St
Roseville
Atlantic St
Eureka Rd
Harding Blvd
N Sunrise Ave
Rocky Ridge Dr
Olive Ranch Rd
Foothills Blvd
Church St
Vineyard Rd
Douglas Blvd
Cook Riolo Rd
Atkinson St
Vernon St
Riverside Ave
Dwight D Eisenhower Hwy
Folsom Lake State Recreation Area
Eureka Rd
PFE Rd
Cirby Way
S Cirby Way
Crestmont Ave
Sierra College Blvd
Barton Rd
Auburn Folsom Rd
Granite Bay Golf Course
Palmerson Dr
Roseville Rd
80
Twin Oaks Ave
Don Julio Blvd
Antelope Rd
Wachtel Way
Hazel Ave
Folsom Lake Crossing
Tupelo Dr
Old Auburn Rd
Oak Ave
Van Maren Ln
Auburn Blvd
Fair Oaks Blvd
Hickory Ave
Elm Ave
Folsom Auburn Rd
American River
Diablo Dr
Sylvan Rd
Central Ave
Chestnut Ave
Main Ave
Foothill Farms
Greenback Ln
Sunrise Blvd
Kenneth Ave
Orangevale
Folsom
Sunrise Mall
Garfield Ave
Dewey Dr
San Juan Ave
Mariposa Ave
Illinois Ave
Coyle Ave
Riley St


-15, 8:24AM Manifold lift underway.

Setting forms for building drains.

-15, 7:05AM Bolts being set on BFV.

15, 6:09AM A slump sample was taken off the pump
As the concrete pour started, Dana, with Paragon Ge

31AM Tie Rod bracing installed; note rod passing through

8-19-15, 7:31AM Work on roof and drain line.

Antelope Booster Pump Station Pump Back Project

- SJWD cost share of project ~ $2.5 million
- Project is on schedule; on budget
- Start-up and testing scheduled for September 15th
- Substantial completion September 22nd; final October 10th

Barton Road PCWA Intertie Project

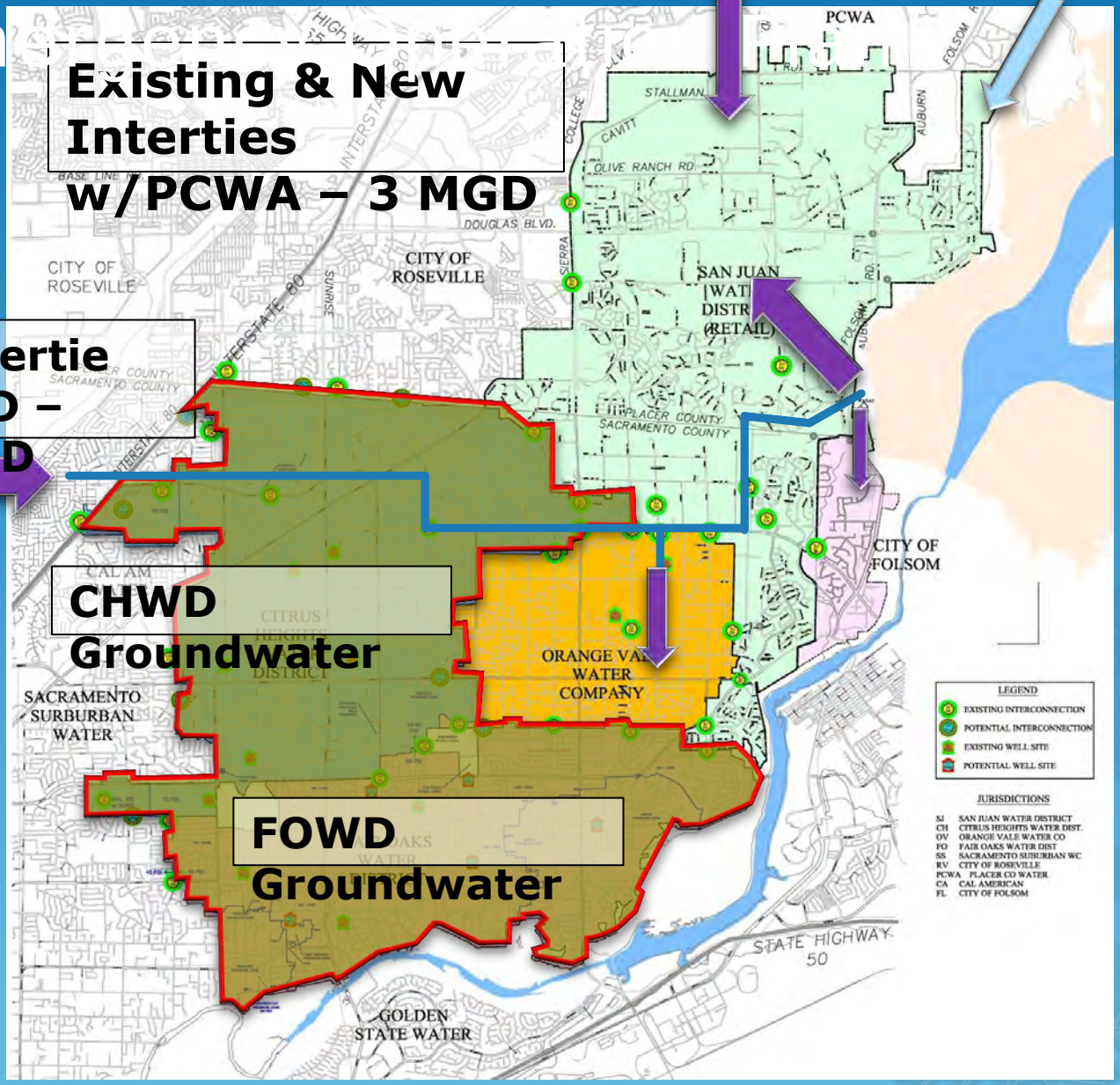
- Pipeline connecting the SJWD and PCWA service areas along Barton Road between Indian Springs and Cavitt Stallman Roads
- In combination with existing intertie on Auburn Folsom Road, can provide 3 MGD to either agency from other


NO
OUTLET
DEERE

Barton Road PCWA Intertie Project

- SJWD share of costs ~ $600,000
- On schedule, on budget
- Testing and start-up week of September 14th
- Project completion September 30th

Em


Existing & New Interties w/PCWA – 3 MGD
New Intertie w/SSWD – 14.4 MGD
CHWD Groundwater
FOWD Groundwater
PCWA
SAN JUAN WATER DISTRICT (RETAIL)
CITY OF ROSEVILLE
CITY OF FOLSOM
ORANGE VALE WATER COMPANY
SACRAMENTO SUBURBAN WATER
GOLDEN STATE WATER
CAL AM
CITRUS HEIGHTS WATER DISTRICT
STATE HIGHWAY 50
PLACER COUNTY
SACRAMENTO COUNTY
LEGEND
EXISTING INTERCONNECTION
POTENTIAL INTERCONNECTION
EXISTING WELL SITE
POTENTIAL WELL SITE
JURISDICTIONS
SJ SAN JUAN WATER DISTRICT
CH CITRUS HEIGHTS WATER DIST.
OV ORANGE VALE WATER CO
FO FAIR OAKS WATER DIST
SS SACRAMENTO SUBURBAN WC
RV CITY OF ROSEVILLE
PCWA PLACER CO WATER
CA CAL AMERICAN
FL CITY OF FOLSOM

Questions?