



Sacramento Regional

2014 Drought Response



Tom Gohring
11/20/14



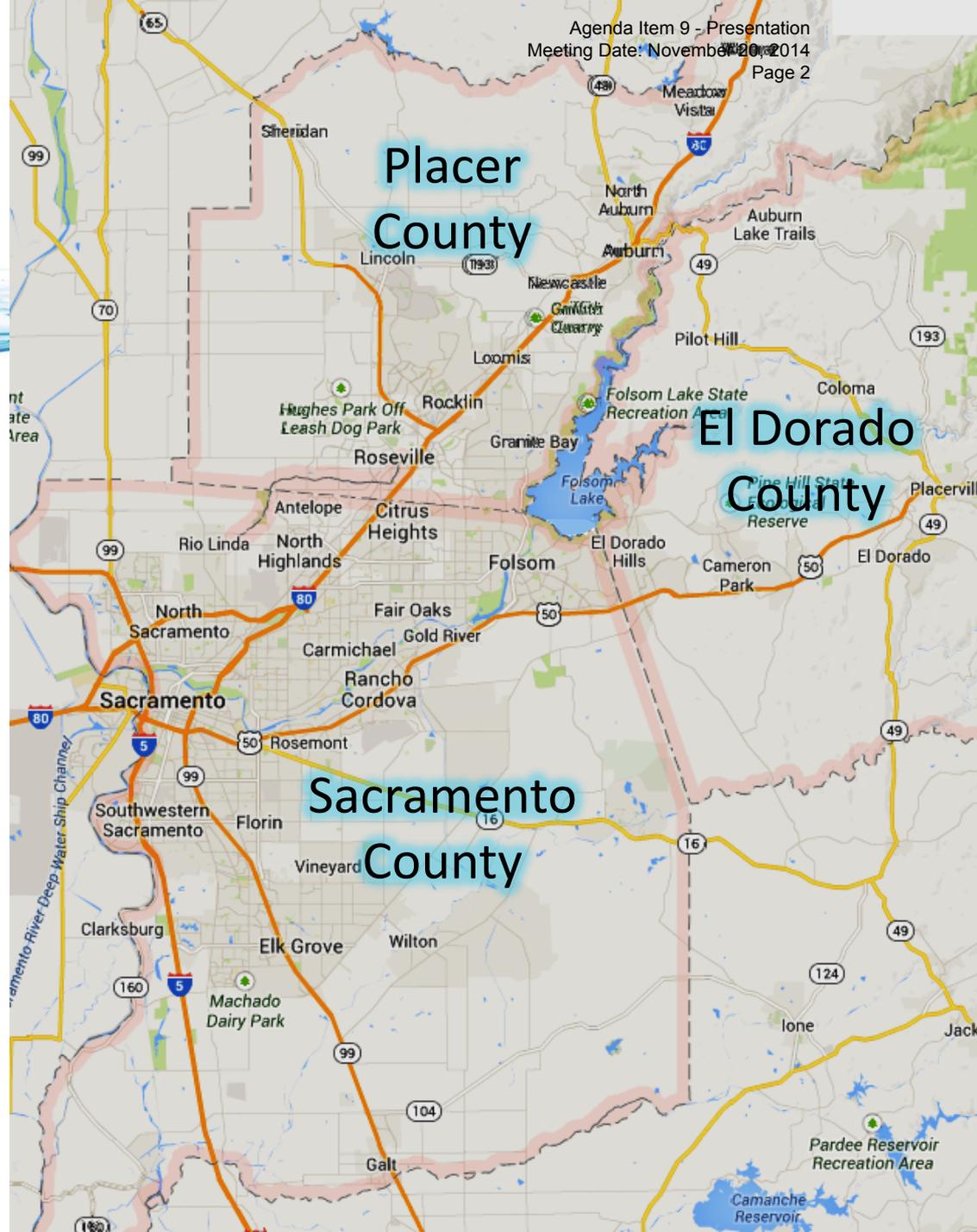
Sacramento Region

Cities:

- Sacramento
- Roseville
- Folsom
- Rancho Cordova

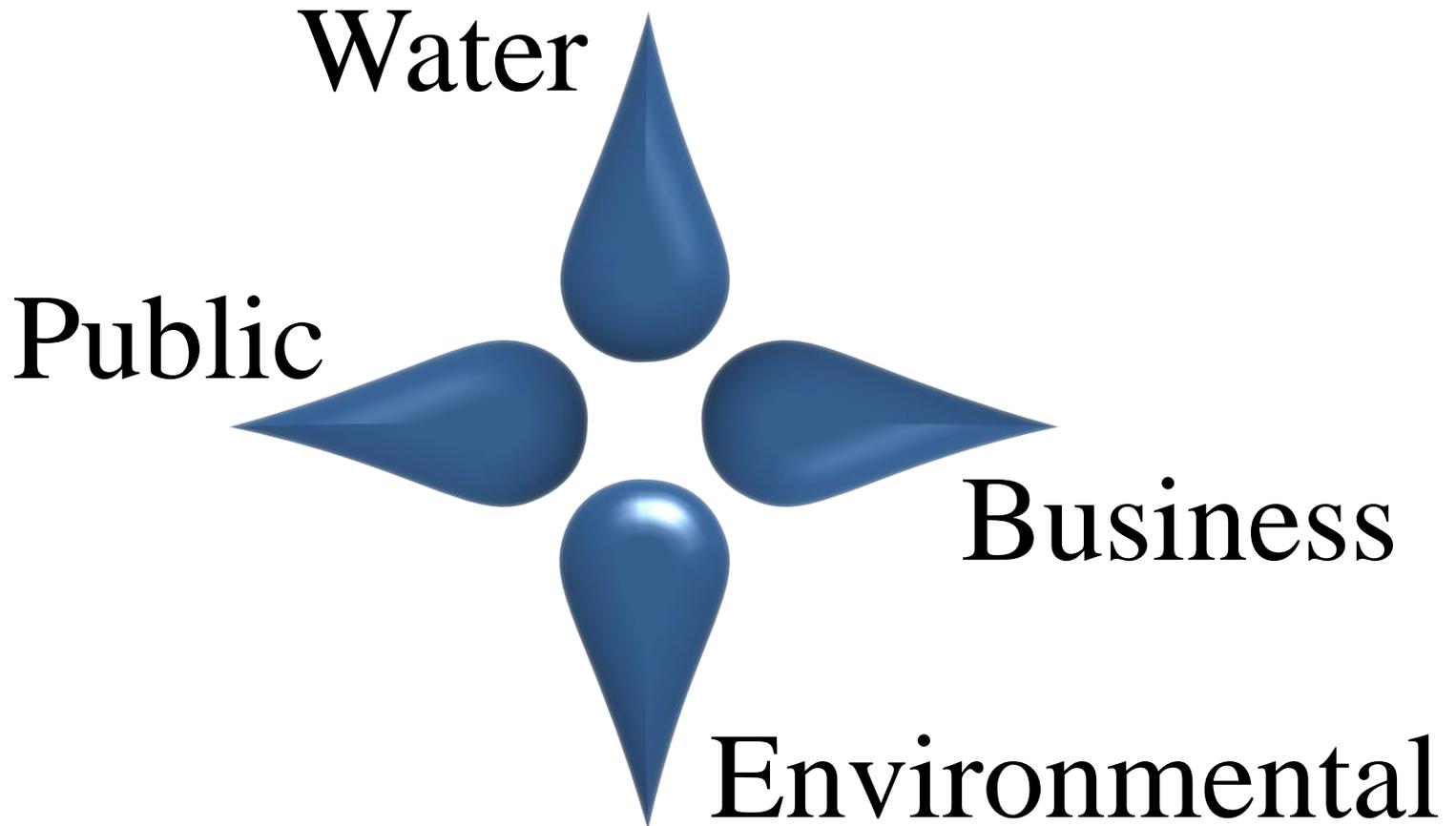
Communities:

- Carmichael
- Granite Bay
- Citrus Heights
- Fair Oaks
- Rio Linda



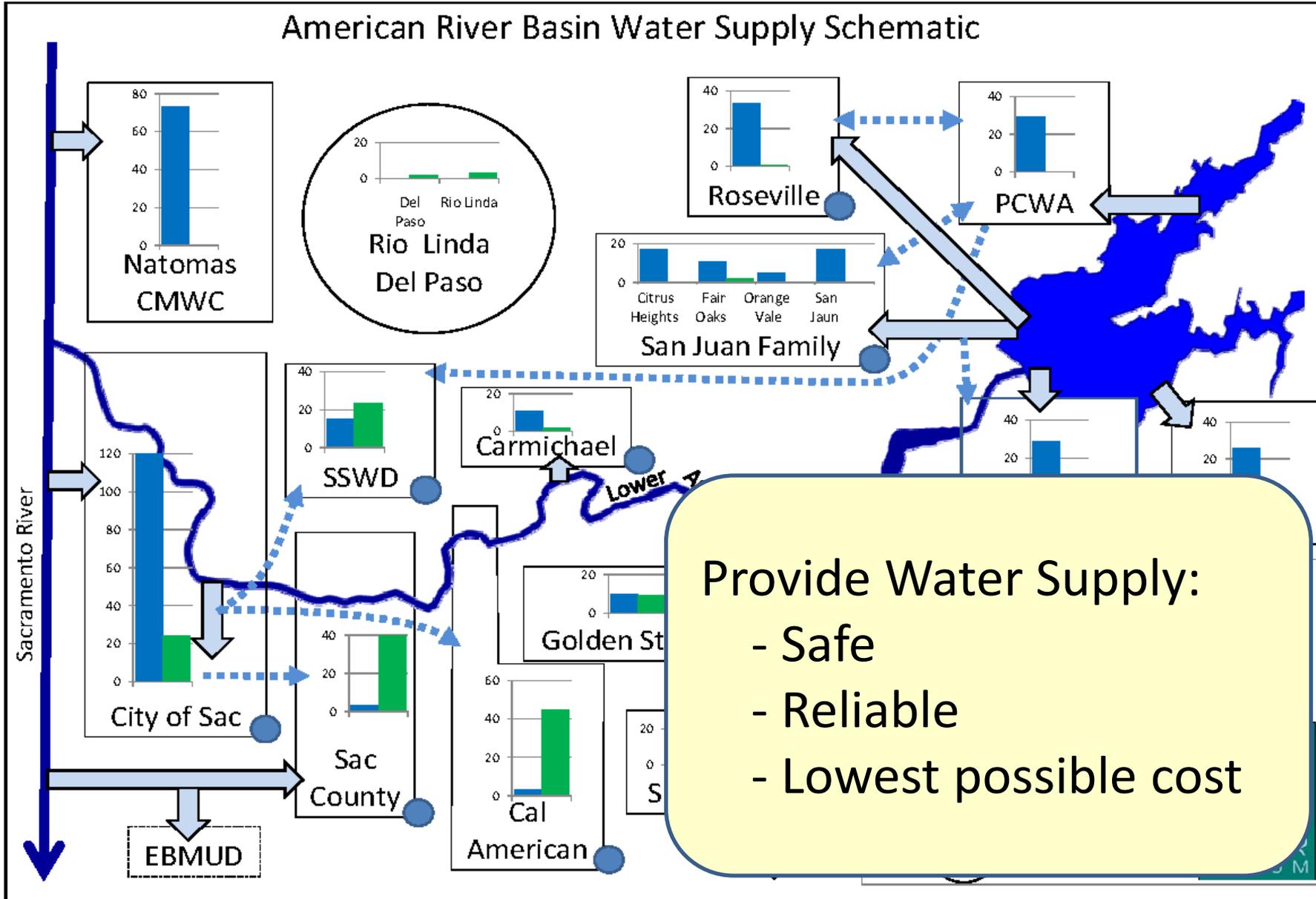
The Water Forum Agreement

Truce Among 4 Caucuses



As Viewed by Purveyors

American River Basin Water Supply Schematic



As Viewed by EnviroS



Protect the
Natural Resource

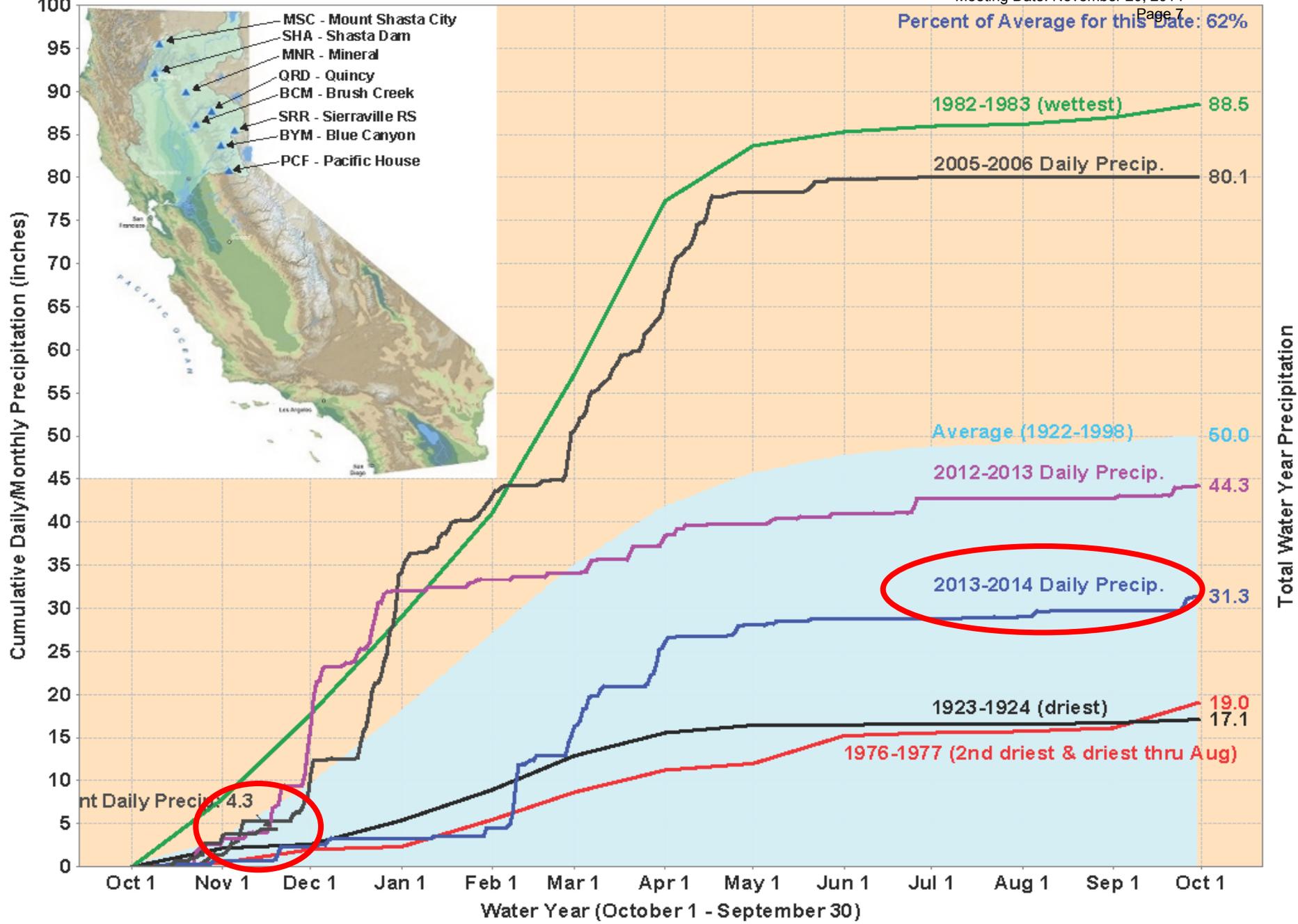


How Bad Was 2014

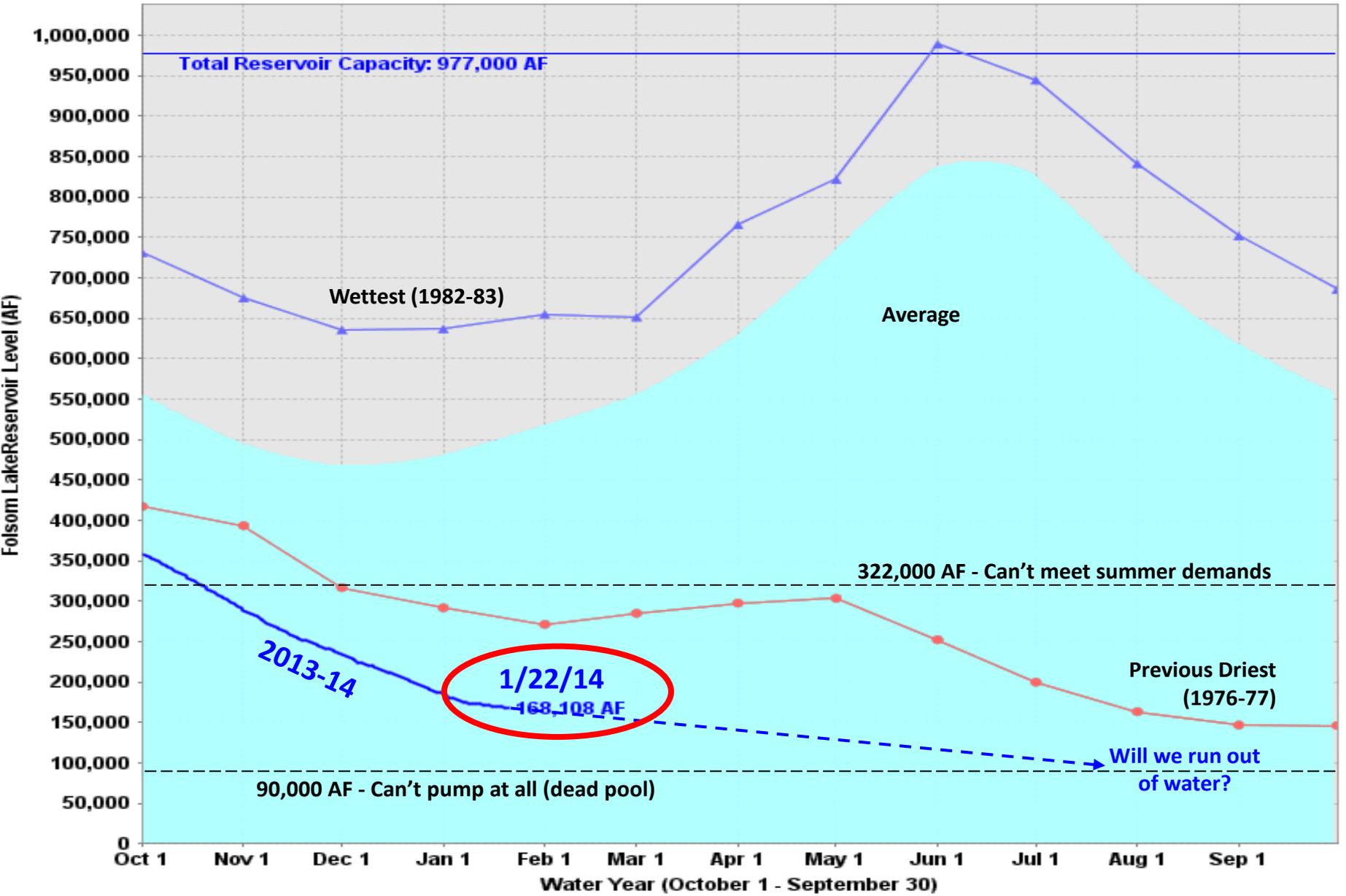
- Low Folsom Lake Levels
 - Reduced surface water supply
 - Potential water intake problems
- Low Sacramento and American River Levels
 - ~~Potential~~ water intake problems

Actual

Northern Sierra Precipitation: 8-Station Index, November 19, 2014



Folsom Res. Was at Record Low Level

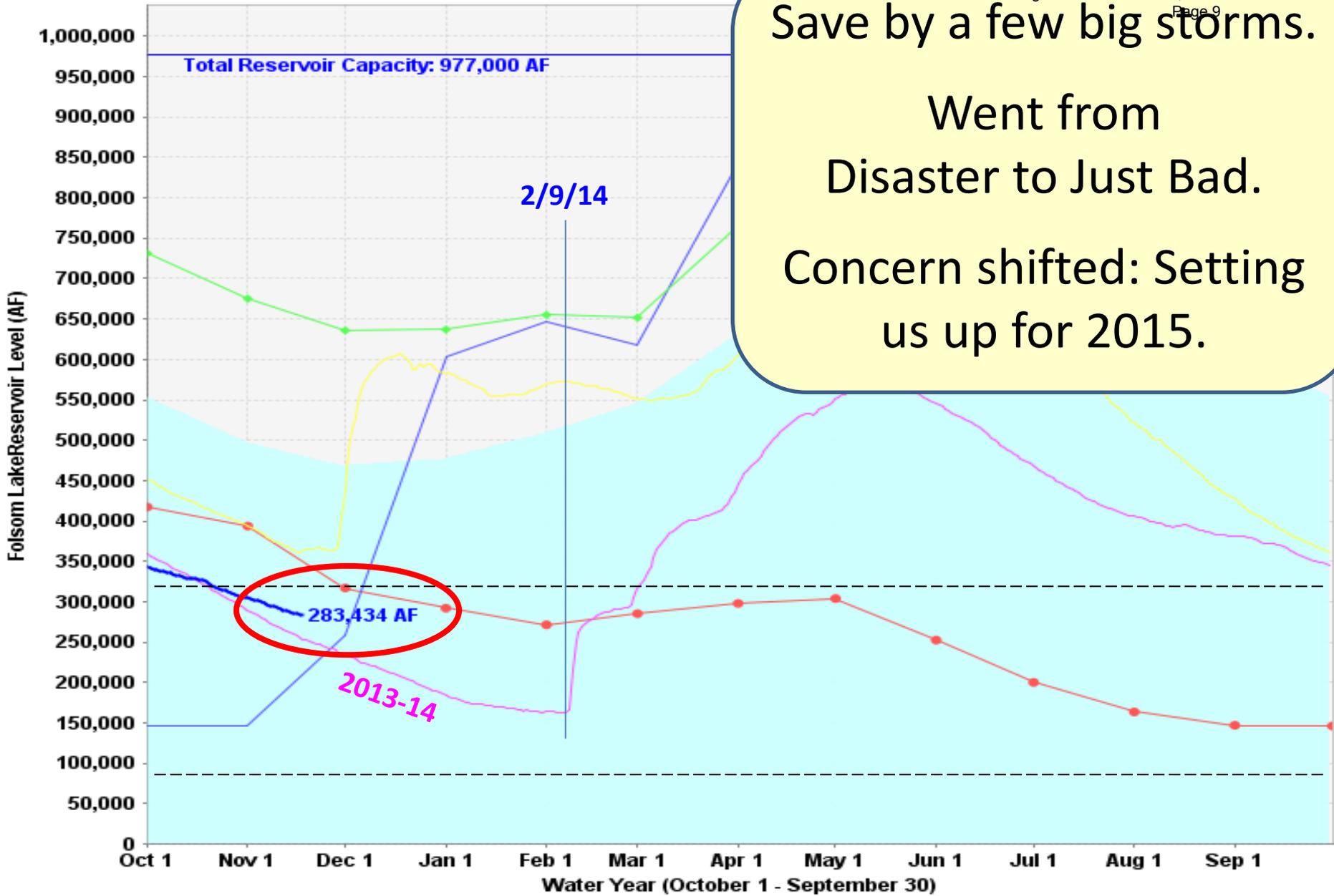


Folsom Lake Storage

Save by a few big storms.

Went from
Disaster to Just Bad.

Concern shifted: Setting
us up for 2015.





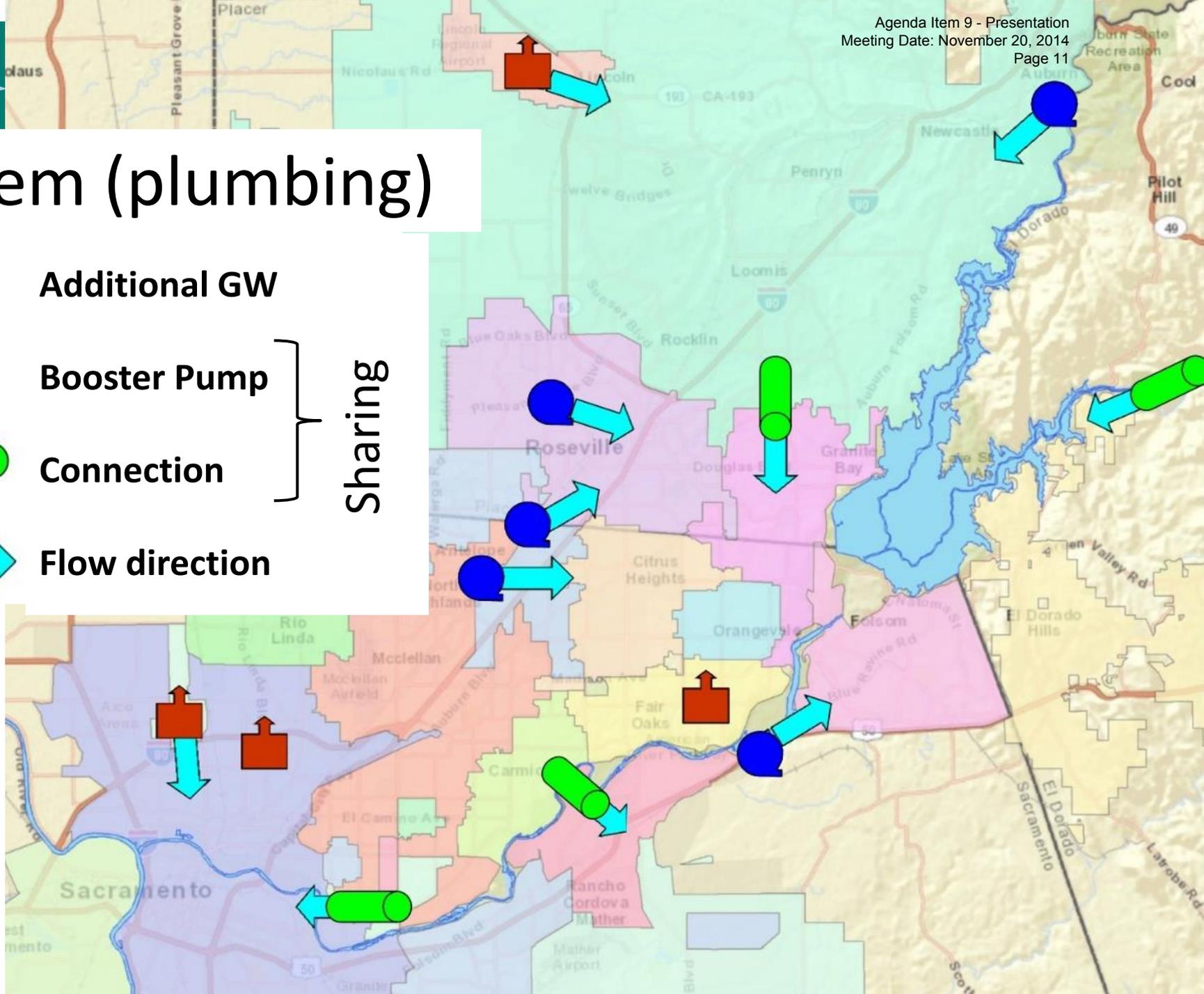
Our Response

- System (plumbing) improvements
- Demand management
- River ecology triage
- Collaboration



System (plumbing)

-  Additional GW
 -  Booster Pump
 -  Connection
 -  Flow direction
- } Sharing





System (plumbing) Improvements

<u>Project</u>	<u>District</u>	<u>Project Cost</u>	<u>Grant Award</u>	<u>Purpose</u>
WELL #2 REACTIVATION	City of Lincoln	\$262,167	\$196,625	Groundwater well
NELSON WELL IMPROVEMENTS	City of Lincoln	\$292,167	\$219,125	Groundwater well
STRIKER WELL UPGRADES	Sacramento County Water Agency	\$673,333	\$505,000	Groundwater well
PHASE 2B WELL REHABILITATIONS	City of Sacramento	\$1,589,112	\$597,084	Groundwater well
MADISON WELL CONSTRUCTION	Fair Oaks Water District	\$1,850,000	\$719,375	Groundwater well
AGRICULTURAL DROUGHT RESPONSE INCENTIVES PROGRAM	Placer County Water Agency	\$411,167	\$306,875	Demand management
REGIONAL WATER EFFICIENCY DROUGHT MEASURES	Regional Water Authority	\$1,366,623	\$1,013,750	Demand management
MAIN DITCH PIPING	El Dorado Irrigation District	\$4,982,333	\$1,021,250	Demand management
SACRAMENTO RIVER PUMP STATION MODIFICATIONS	City of Sacramento	\$209,111	\$156,833	Low river level response
LOWER AMERICAN RIVER PUMP STATION MODIFICATIONS	City of Sacramento	\$209,111	\$156,833	Low river level response
ENTERPRISE INTERTIE IMPROVEMENTS	Sacramento Suburban Water District	\$163,167	\$118,125	Supply sharing
HAZEL/50 INTERTIE IMPROVEMENTS	City of Folsom	\$729,833	\$546,000	Supply sharing
BARTON ROAD INTERTIE	San Juan Water District	\$1,800,000	\$719,375	Supply sharing
PFE AND ZONE 4 PUMP STATIONS	City of Roseville	\$2,258,333	\$1,142,500	Supply sharing
AMERICAN RIVER PUMP STATION IMPROVEMENTS	Placer County Water Agency	\$2,500,000	\$860,625	Supply sharing
ANTELOPE BOOSTER PUMP STATION EXPANSION	Sacramento Suburban Water District	\$2,870,000	\$710,625	Supply sharing
LOWER AMERICAN RIVER PIPELINE	Carmichael Water District	\$5,143,333	\$775,000	Supply sharing
	Total	\$27,309,790	\$9,765,000	

(Ongoing) Improvements

Leverage past investment:
 GW banking
 Interties/planning
 Collaboration

Thank you Calif.

Project Purpose	Number of Projects	Project Cost	Grant Award
Supply sharing	7	\$15,464,666	\$4,872,250
Demand management	3	\$6,760,123	\$2,341,875
Groundwater access	5	\$4,666,779	\$2,237,209
Low river level	2	\$418,222	\$313,666
Total	17	\$27,309,790	\$9,765,000



Demand Management Regional Water Authority (RWA)

www.BeWaterSmart.info

The screenshot shows the homepage of the Be Water Smart website. At the top left is the "Be WATER SMART Regional Water Authority" logo. To its right is a navigation menu with "HOME", "ABOUT", and "HOW DO I FIND?". A search bar is located to the right of the menu. Social media icons for Dribbble, Facebook, YouTube, and a calendar showing "31" are also present. The main content area features a large banner with a close-up image of a leaking faucet. The text on the banner reads "Leaky Faucet?" and "Find the Top Tips to Save Water Indoors." with a "Learn More" button. Below the banner are three columns of content: "Rebates & Services" with an image of a toilet, "Top Ways to Save" with an image of a green lawn, and "Find Your Water Provider" with a map. At the bottom, there are sections for "Drought Information" and "Announcements".

HOME ABOUT HOW DO I FIND? Search...

Be WATER SMART
Regional Water Authority

d f YouTube 31

Leaky Faucet?
Find the Top Tips to Save Water Indoors.
Learn More

Rebates & Services

Top Ways to Save

Find Your Water Provider

Drought Information
The governor has declared a statewide drought. Find out what the drought means

Announcements
City of Lincoln Declares Stage Two - Water Alert



Welcome to the Sacramento Region Smart Sprinkler Scheduler

BASED ON CURRENT WEATHER

Calculates run-time minutes per week
for a single sprinkler zone.



Scheduling for [drip zones](#) is not included.

Begin with the following:

Basic Scheduler [See video](#)

Advanced Scheduler

Closest city (required) ▼

Zip code (required) ▼ [help](#)

Watering restrictions ▼



[What are my city's restrictions?](#)

Provided with the generous support of Water Forum



[California American Water](#)



[Carmichael Water District](#)



[Citrus Heights Water District](#)



[City of Folsom](#)



[City of Lincoln](#)



[City of Roseville](#)



[City of Sacramento](#)



[City of West Sacramento](#)



[Del Paso Manor Water District](#)



[El Dorado Irrigation District](#)



[Elk Grove Water District](#)



[Fair Oaks Water District](#)



[Golden State Water Company](#)



[Orange Vale Water Company](#)



[Placer County Water Agency](#)



[Rancho Murieta Community Service District](#)



[Rio Linda / Elverta Community Water District](#)



[Sacramento County Water Agency](#)



[Sacramento Suburban Water District](#)



[San Juan Water District](#)





The People Have Acted

DROUGHT CHAMPS
SACRAMENTO REGION LEADS
STATE IN WATER CONSERVATION



BeWaterSmart.info



Overall: 19% Reduction



River Ecology Triage

- Stepped up monitoring
- Adaptive management – on the fly
- Collaboration
- More monitoring

Sunrise Side Channel at 1000 cfs



Sunrise Side Channel at 500 cfs





River Ecology Triage

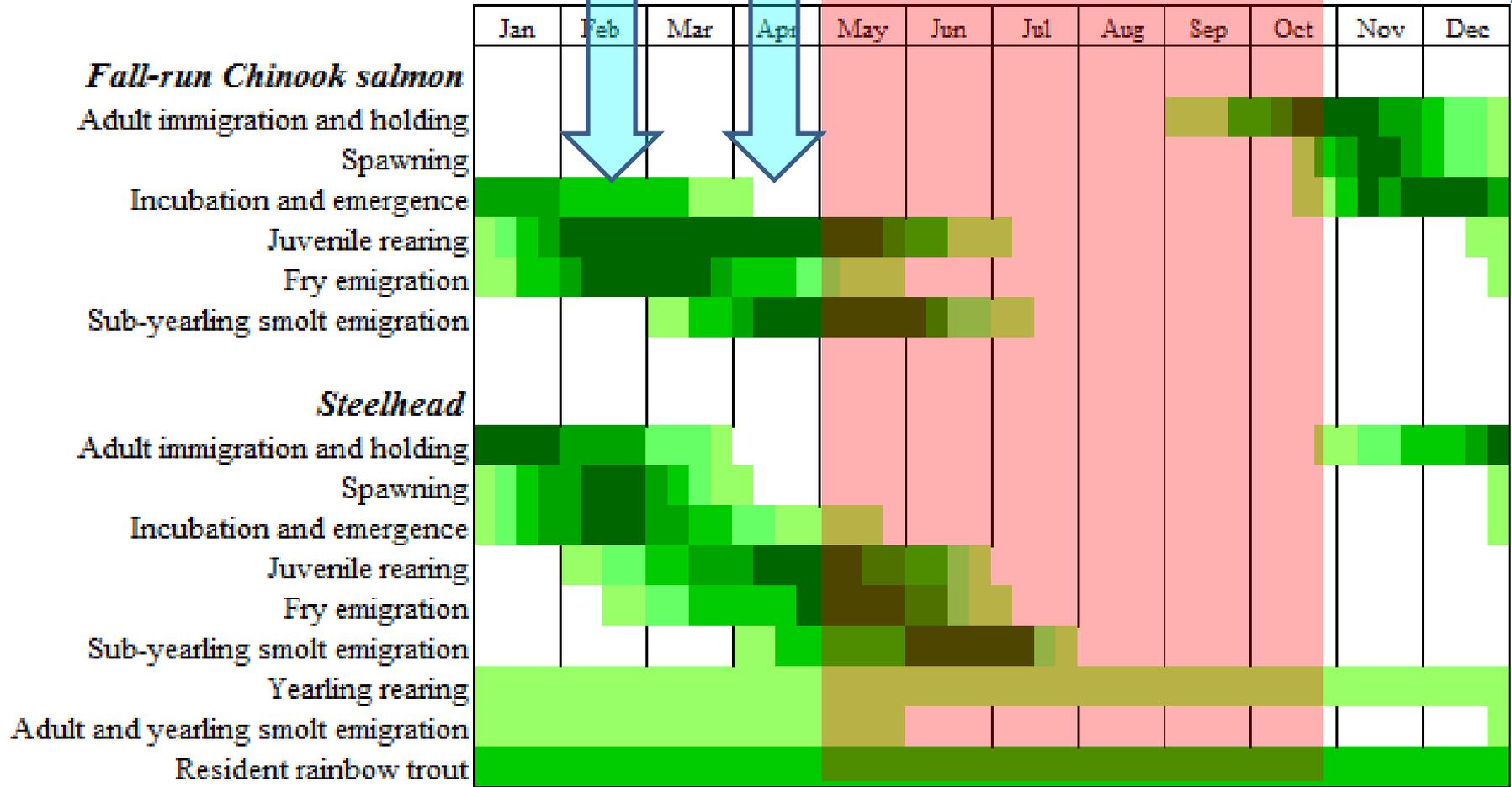
Monitoring: Understand the problem





Adaptive Management

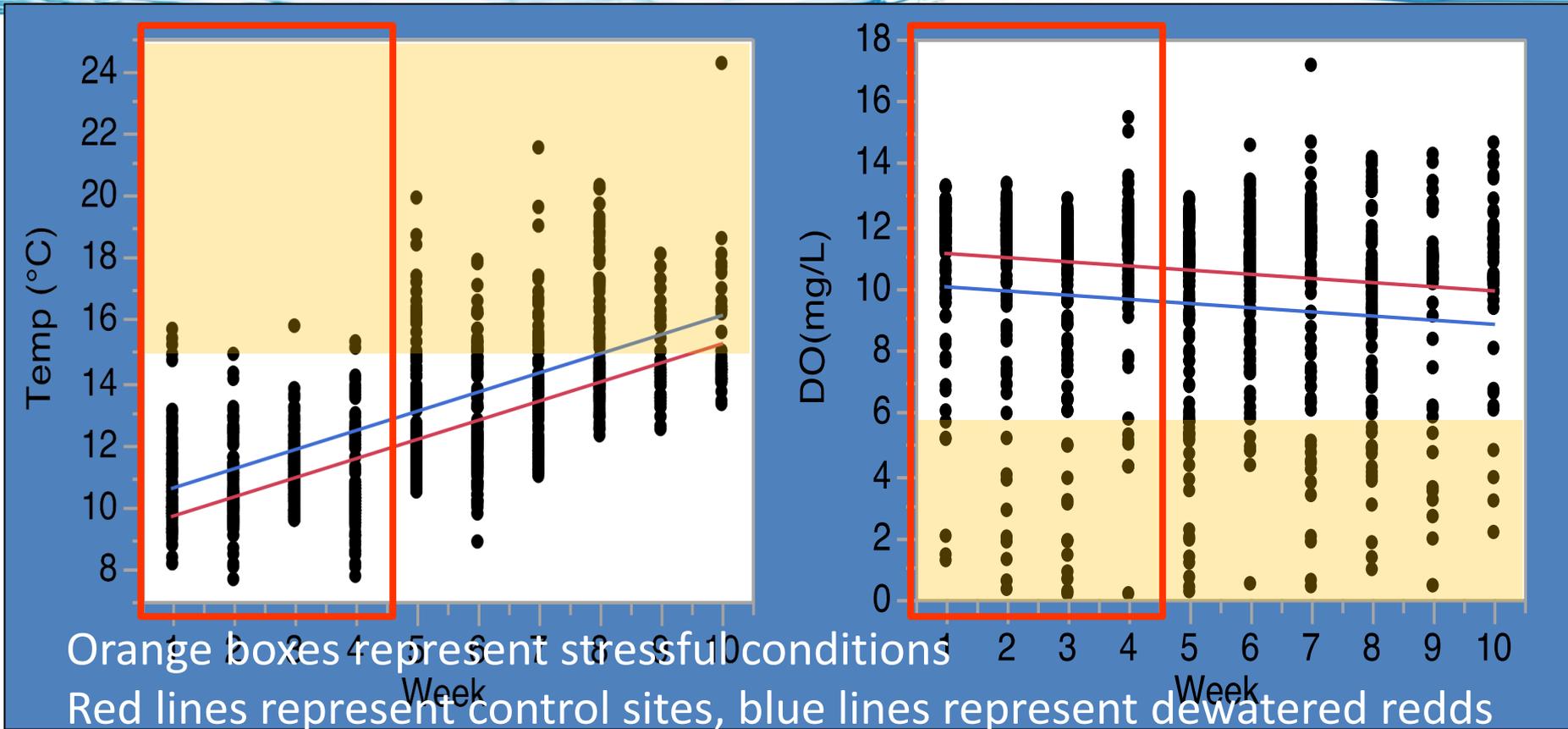
Salmonid Lifecycle in Lower American River



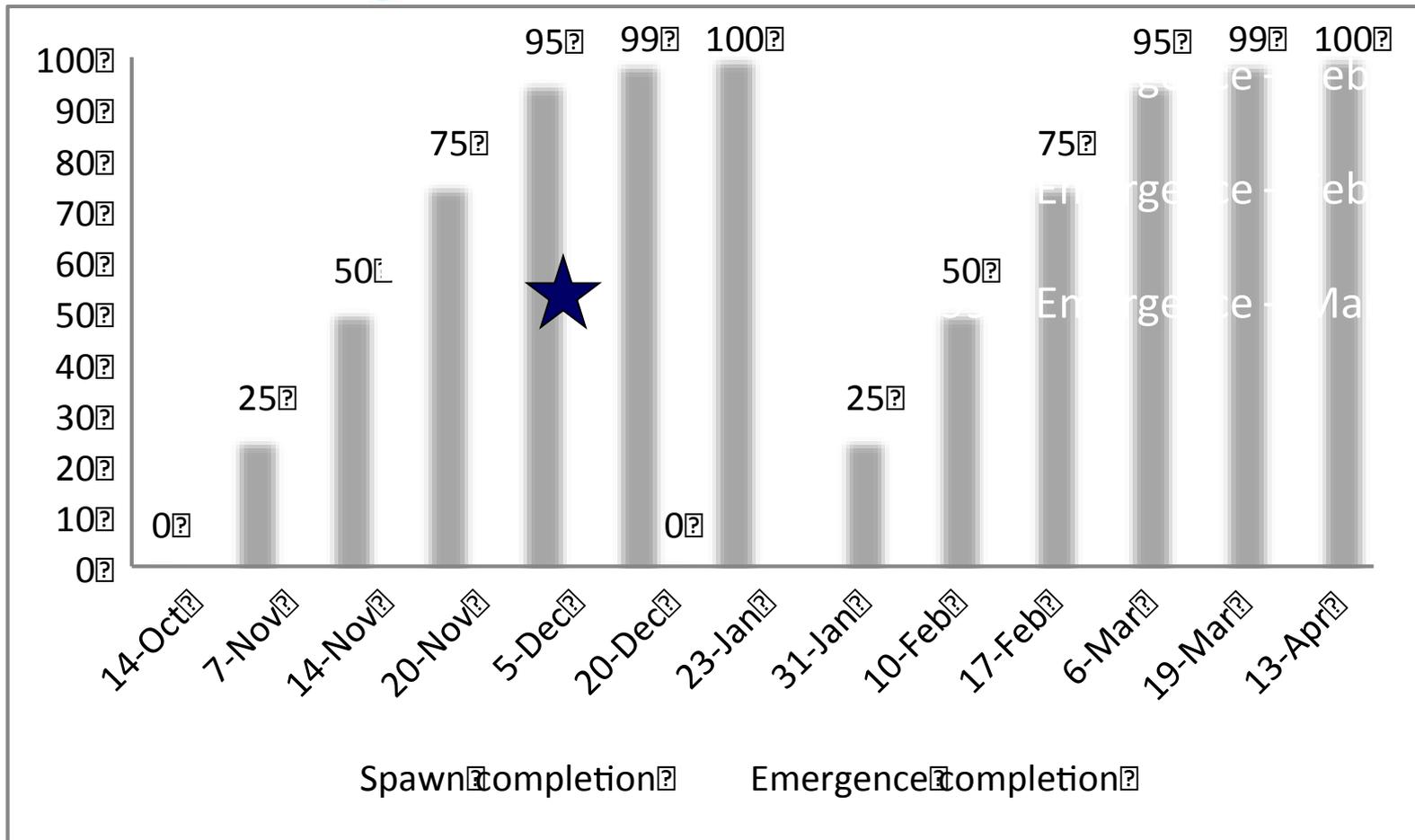
Fish concentrations: High Low

Inter-gravel water quality

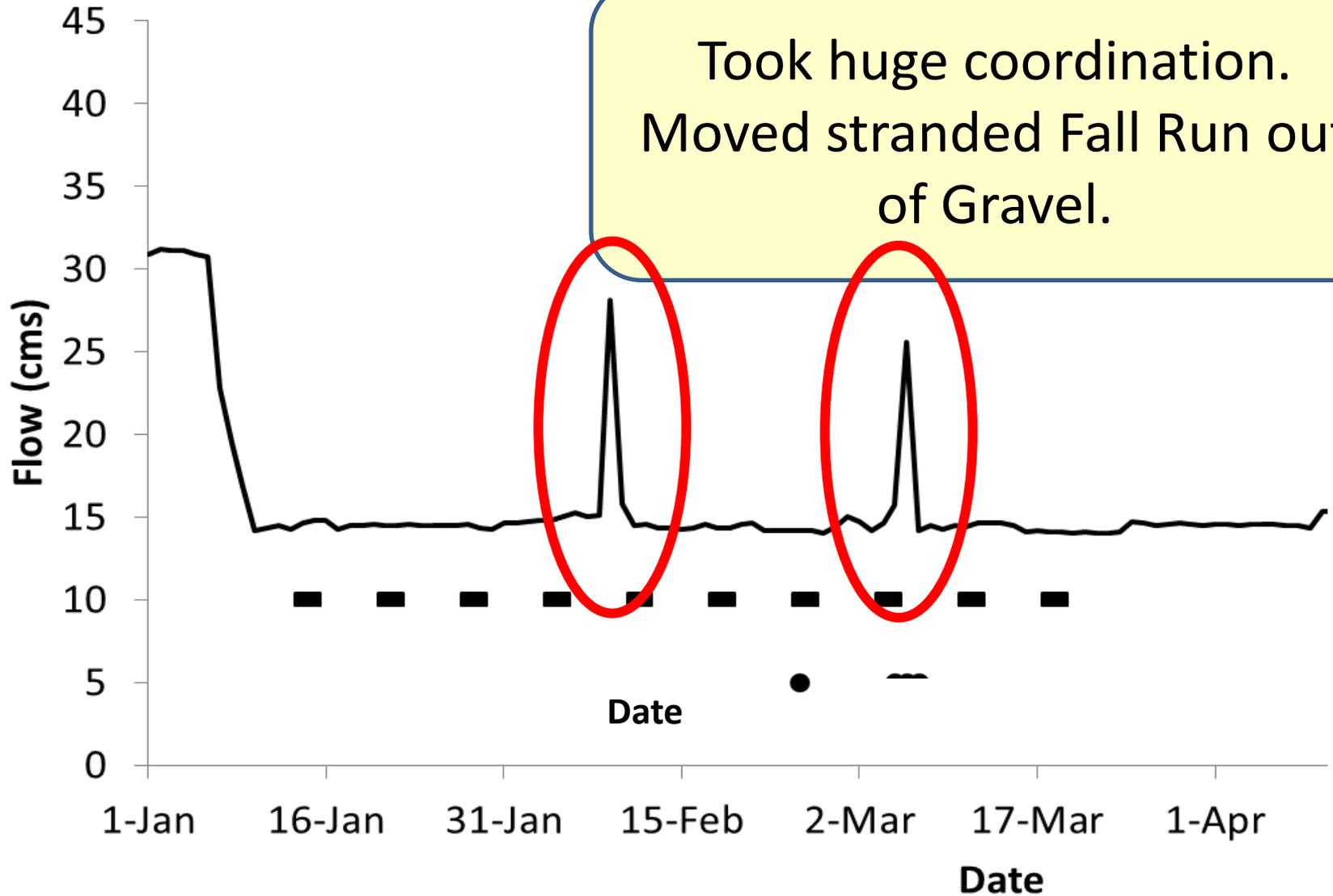
- Declining -



When to pulse flow?



Two flow pulse

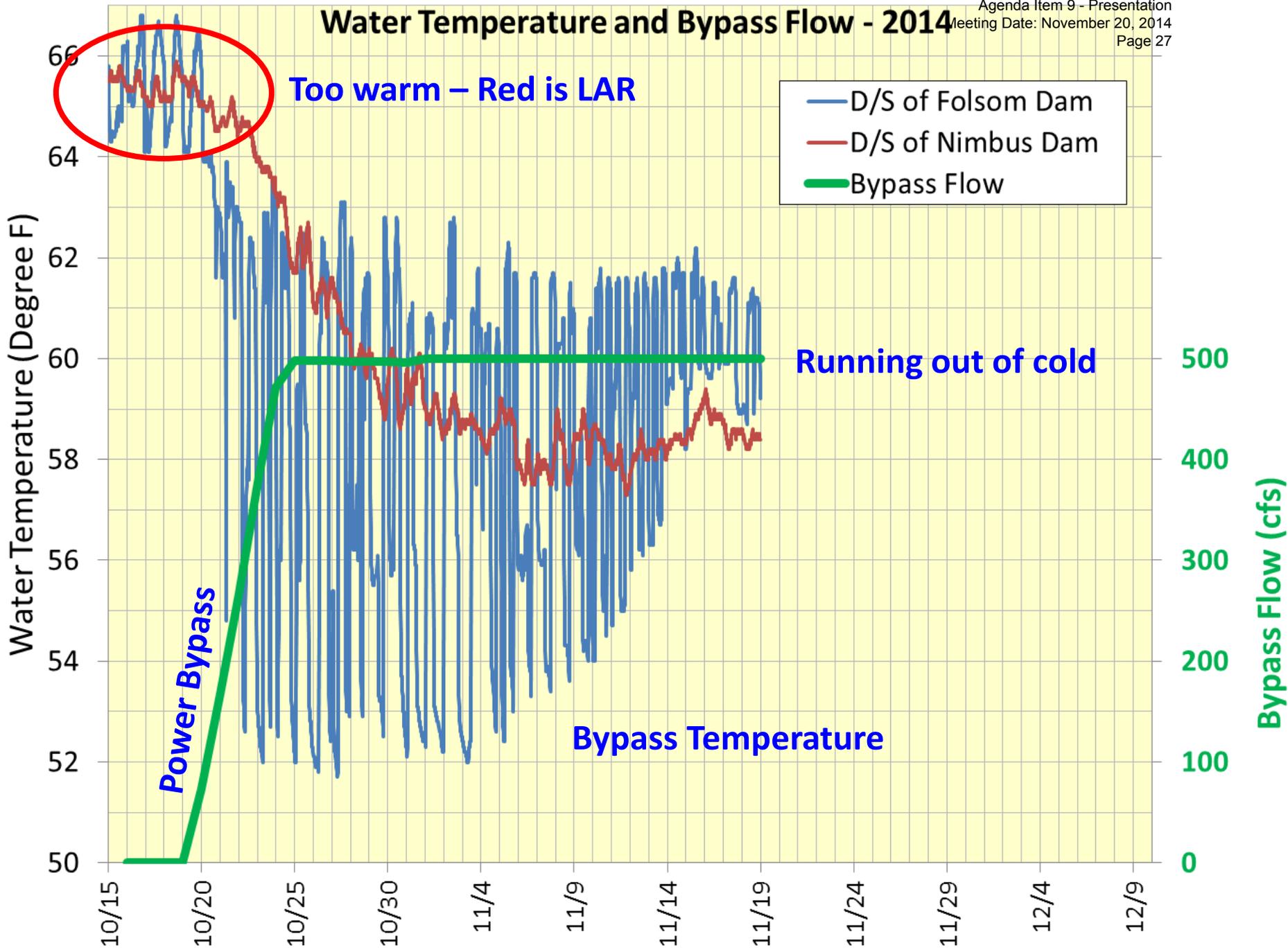




Temperature Management

- Low reservoir → Low cold water pool
- Low river → High temperature gain
- Took some risk with temperature plan
- Lower temperature target
- Early power bypass
- Responded to unique conditions

Water Temperature and Bypass Flow - 2014





Collaboration

Words can't describe...

- Series of Drought Conference meetings
- Deep information sharing
- Share the pain mentality
- Inter-agency common cause
- Expanded the room:
 - Water suppliers
 - Enviros
 - USBR
 - NMFS
 - USFWS
 - Cal DFW



What if the Drought Doesn't End?







SERIOUS DROUGHT
HELP SAVE WATER



FIRE DANGER

HIGH

TODAY





Californians Don't Waste.

**Taking steps to
conserve water
during the drought.**

DGS
DEPARTMENT OF GENERAL SERVICES





Conclusions

- We dodged a bullet
- Previous investments helped
- Moved quickly to make improvements
- Great citizen response: demand reduction
- River triage helped
- Collaboration success story
- Fingers crossed for 2015