

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY  
BOARD POLICY COMMITTEE MEETING**

**October 7, 2016**

Correspondence and media coverage of interest between September 16, 2016 and October 4, 2016

**Correspondence**

Date: September 21 2016  
From: Michael Hurley, Water Resources Manager  
To: Steve Ritchie, SFPUC Asst. General Manager, Water Enterprise  
Subject: BAWSCA Comments on Water System Improvement Program 2015-16 Annual Report

**Media Coverage**

**Water Supply Conditions:**

Date: October 5, 2016  
Source: Maven's Notebook  
Article: Statewide Water Conservation Drops Below 18 Percent in August

Date: October 3, 2016  
Source: UC Davis Center for Watershed Sciences  
Article: Drought Prospects in California for the New 2017 Water Year – October 1, 2016

Date: October 3, 2016  
Source: San Francisco Examiner  
Article: CA water year ends with 60% of state still in extreme drought

Date: October 3, 2016  
Source: San Francisco Chronicle  
Article: Another dry year on California's books as 'drought continues'

Date: September 30, 2016  
Source: Water Deeply  
Article: California Forecasters in 'Crapshoot' Predicting Winter Weather

**Water Policy:**

Date: October 4, 2016  
Source: Water Deeply  
Article: Legislative Update: Six New California Laws Impacting Water

Date: October 4, 2016  
Source: Modesto Bee  
Article: River flow proposal stirs debate in Turlock and Sacramento

Date: October 4, 2016  
Source: Merced Sun-Star  
Article: Water creates the connection between farms and our families

Date: October 3, 2016  
Source: Sacramento Bee  
Article: Farms and cities need groundwater to survive

Date: October 1, 2016  
Source: Modesto Bee  
Article: Who will go extinct first, salmon or Valley farmers?

Date: September 28, 2016  
Source: California Ag Today  
Article: More Planned Water Diversions From Farms to Fish – Not Just by Federal, but Also State Officials

Date: September 27, 2016  
Source: Modesto Bee  
Article: State plan for rivers doesn't hold water, MID says

Date: September 16, 2016  
Source: KQED Science  
Article: Bay Area Water Supply in the Crosshairs of New River Plan

**Water Supply:**

Date: October 6, 2016  
Source: Environmental Leader  
Article: Water Treatment, Reuse: an \$11 Billion Opportunity for Water Tech Companies

Date: October 6, 2016  
Source: Water Deeply  
Article: How California Is Learning to Love Drinking Recycled Water

Date: October 4, 2016  
Source: Water Deeply  
Article: Growing Evidence Highlights Cracks in California Delta Tunnels Plan

Date: September 27, 2016  
Source: Modesto Bee  
Article: Twin tunnels, Delta and Tuolumne are all connected

**Water Quality:**

Date: September 28, 2016  
Source: Central Valley Business Times  
Article: Californians getting more protection from lead

Date: September 26, 2016  
Source: Half Moon Bay Review  
Article: Watershed too important to risk unmanaged public access



September 21, 2016

Steve Ritchie, Assistant General Manager, Water Enterprise  
San Francisco Public Utilities Commission  
525 Golden Gate Avenue, 13<sup>th</sup> Floor  
San Francisco, CA 94102

**Subject: Comments on Water System Improvement Program 2015-16 Annual Report**

Dear Mr. Ritchie,

BAWSCA has reviewed the San Francisco Public Utilities Commission's (SFPUC) Water System Improvement Program (WSIP) 2015-16 Annual Report (Report) dated September 1, 2016. Last year, BAWSCA formally requested that the SFPUC revise the format and content of the WSIP annual report for 2015-2016 to be more inclusive of issues of importance to BAWSCA. WSIP Director Dan Wade and his staff have done an excellent job in addressing BAWSCA's concerns. The Report is much more informative and thorough, and is the most comprehensive and on-point annual report that the SFPUC has published to date.

BAWSCA's letter of September 29, 2015 requested that both the executive summary and main report be revised to address a range of issues related to project and program risks and related costs and delays, level of service (LOS) issues, project shutdowns, and program rebaselines.

The Report's Executive Summary is much more robust and informative for readers and covers the major issues as requested. Of particular note in the main report is a comprehensive discussion on the water supply LOS goal and the impacts of project delays on this goal. Additionally, the program budget risk discussion is much more comprehensive with the detail about risks and budget management presented in a very up-front, comprehensive way. Finally, the budget risk analysis has an excellent discussion about exposures and contingencies.

**Recommendations:**

For more context in next year's report, and for the benefit of BAWSCA, other stakeholders and the water customers, it is recommended that the following additional items be added:

1. A comparison column comparing budget and schedule to 2005, as is done in the WSIP quarterly reports.
2. Information on the years in which budget and schedule rebaselines have taken place.
3. A short section discussing which projects slipped in schedule and budget during the previous year.
4. Add a footnote to Table 5-1 (pages 31-35) to repeat the explanation of carrying a negative variance for the Program Management project that is presented in the text.

In summary, the WSIP 2015-16 Annual Report is the best ever produced by the SFPUC and BAWSCA appreciates Mr. Wade's thoughtful responses to BAWSCA's request for changes to the report.

Sincerely,



Michael Hurley  
Water Resources Manager

cc: Assembly Member Freddie Rodriguez, Chair, Joint Legislative Audit Committee  
Senator Richard Roth, Vice-Chair, Joint Legislative Audit Committee  
Timothy Strack, Chair, California Seismic Safety Commission  
Karen Smith, Director, California Department of Public Health  
SFPUC Commissioners  
BAWSCA Board of Directors  
Mark Starr, Deputy Director, Center for Environmental Health, California Department of Public Health  
William Draper, Division Chief, Drinking Water & Radiation Laboratory Branch, California Department of Public Health  
Cindy Forbes, Deputy Director, Division of Drinking Water, State Water Resources Control Board  
Stefan Cajina, Chief of North Coastal Section, State Water Resources Control Board, Division of Drinking Water  
Vlad Rakhimov, Staff Engineer, North Coastal Section, State Water Resources Control Board, Division of Drinking Water  
Richard McCarthy Executive Director, California Seismic Safety Commission  
Fred Turner, Structural Engineer, California Seismic Safety Commission

## **Statewide Water Conservation Drops Below 18 Percent in August**

Maven's Notebook | October 5, 2016 | State Water Resources Control Board

### *Water Suppliers Urged to Maintain Conservation Message*

The State Water Resources Control Board today announced that urban Californians' monthly water conservation declined to 17.7 percent in August, down from 27 percent savings in August 2015, raising concerns that some water suppliers are abandoning their focus on conservation as California heads into a possible sixth drought year.

Californians continue to conserve water in significant amounts even in the absence of state-mandated conservation targets. The cumulative average savings from June 2015 through August 2016 was 23.3 percent, compared with the same months in 2013. Since June 2015, two million acre-feet of water has been saved — enough water to supply 10 million people, more than one-quarter the state's 38 million population, for a year.

However, water conservation has dropped steeply among some local water suppliers. These declines highlight the need for continued education and dialogue with customers on the importance of conserving and using water as efficiently as possible. As the State Water Board continues to monitor conservation levels, a return to state-mandated conservation may be necessary beginning next year.

"The statewide August conservation results raise questions, and we are examining the data to understand why some areas slipped more than others," said State Water Board Chair Felicia Marcus. "Are we seeing relaxation of conservation messaging and programs, or are we seeing abandonment of programs? One may be appropriate, the other is not. It's a mixed picture. Many communities who certified that they didn't 'need' to conserve are still conserving up a storm, while others have slipped more than seems prudent."

Marcus added: "While last year's rain and snow brought a respite for urban California, we are still in drought, and we can't know what this winter will bring. What we do know is that climate change will continue to make our water years even more unpredictable, so we need to retain our conservation habits for the long term, rain or shine, drought or no drought."

### **Conservation Data**

- Statewide water savings for August 2016 was 17.7 percent (124,094 acre-feet or 40.4 billion gallons), a decrease from July 2016's 20 percent savings, and also a decrease from August 2015's 27 percent statewide savings (63.5 billion gallons). August 2016 water savings are 36 percent lower than August 2015.
- Cumulative statewide percent reduction for June 2015 – August 2016 (fifteen months) is 23.3 percent, which equates to 2,024,599 acre-feet (659.7 billion gallons).
- Statewide average R-GPCD for August 2016 was 114.1 gallons; slightly up from 113.5 R-GPCD in July 2016 and also above 102.2 R-GPCD reported for August 2015. [All August data can be found on this page.](http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml)

Conservation levels have remained significant for many communities that had certified that they did not need top down mandates to keep conserving.

Under the board's revised emergency water conservation regulations, urban water agencies have the ability to set their own conservation standards based on a "stress test" of supply reliability. Water suppliers had to document that they have sufficient supplies to withstand three years of continuous drought or take additional measures that include state-imposed mandatory conservation targets. The regulation is in effect through January 2017. Those stress test results are [here](http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/emergency_regulation.shtml) ([http://www.waterboards.ca.gov/water\\_issues/programs/conservation\\_portal/emergency\\_regulation.shtml](http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/emergency_regulation.shtml))

Of more than 400 local water agencies in California, 343 suppliers passed their stress test. Of those, 114 suppliers – or about a third – saved more than 20 percent in August, compared with the same month in 2013. These suppliers serve more than seven million people and include Sacramento, Alameda County Water District, San Gabriel Valley Water Company, San Gabriel Valley Fontana Water Company, Los Angeles County Public Works Waterworks District 40 (Antelope Valley), California-American Water Company Sacramento District, Contra Costa Water District, San Bernardino, Oceanside, Hayward, and Pomona.

While some local water suppliers may have relaxed water use restrictions from those that were in place last summer, most agencies have kept up locally mandated restrictions and targets, which is appropriate and which the state strongly encourages. Regardless of a supplier's individual conservation requirement, the statewide prohibitions on specific wasteful practices such as fountains without recirculating pumps, or irrigation of turf in street medians, remain in place.

### **Focus on Local and Regional Results**

Some suppliers have seen modest reductions in conservation levels, based upon visibly improved water supply conditions or modest adjustments in their local conservation requirements. However, some suppliers have seen significant drops in conservation savings, raising questions about whether those suppliers are effectively communicating the need to conserve with their customers.

For example, among the 31 water suppliers that reported water savings between one and 10 percent in August 2016, a dozen of them had dropped from more than 20 percent savings a year earlier. This group includes Casitas Municipal Water District, Folsom, La Habra, Los Angeles County Public Works Waterworks District 29 (Malibu), Mountain House Community Services District, South Tahoe Public Utilities District, and Woodland. Some of these are in areas with improved water supply conditions; others are not.

Still, conservation remained high in many communities, and the total volume of water used in August 2016 was significantly lower than the same time period in 2013.

Some communities continue to maintain low overall per capita residential water use, which may not be reflected in percentage change, but illustrates a long-term commitment to efficient water use. For instance, Daly City, East Palo Alto, South Gate, and Golden State Water Company Florence Graham (South LA County) are examples of communities saving less than 10 percent in August 2016, yet the daily per capita use is already well below what a city in the Sacramento Region may be using on a daily basis. For agency data on water savings and average daily use, visit [here](#).

([http://www.waterboards.ca.gov/water\\_issues/programs/conservation\\_portal/conservation\\_reporting.shtml](http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml))

“Percentages alone tell only part of the story, because a 15 percent reduction by someone using under 100 gallons per person a day can be more challenging than a 30 percent reduction by someone using 250 or 300 gallons a day,” Marcus said. “That’s true of agencies and it is true for individuals. In particular, we urge suppliers where conservation levels have dropped steeply to reach out to high use customers to find ways to conserve, and to join their community’s conservation efforts. The legislature’s passage and Governor’s signing of SB 814 will help water suppliers send monetary signals to their highest users about the need to keep conserving while the drought continues. Most important, it sends a signal that all Californians are in this together and that fairness includes those who use the most doing their part along with the rest of us.”

SB 814 (Hill) requires urban water suppliers to establish financial penalties for excess water use during droughts. Suppliers can either create excess-use ordinances with defined penalty amounts, or they can adopt rate structures that charge their highest users more during drought emergencies.

### **Status of Permanent Water Use Efficiency Targets Effort**

The recently adopted regulation is part of a wider effort to build on short-term, emergency water restrictions to establish permanent conservation measures that improve long-term drought preparedness and eliminate the worst water-wasting practices. These actions will help achieve a top priority of the state’s Water Action Plan – to “Make Conservation a California Way of Life.”

In May, Governor Edmund G. Brown Jr. issued an executive order calling for new permanent water use efficiency targets for each urban water supplier and for strengthening local Water Shortage Contingency Plans. The local “stress test” data and three-year resiliency plans collected by the State Water Board will serve as a bridge to these actions and inform the development of new water use efficiency targets.

The Board’s work with state partner agencies to craft a long term framework to meet Governor Edmund G. Brown Jr.’s executive order calling for new water use efficiency targets, permanent prohibitions on water waste, and improved drought planning continues. The Governor’s Executive Order calls on state agencies, including the State Water Board, Department of Water Resources, California Public Utilities Commission, Department of Food and Agriculture, and the California Energy Commission to transition to permanent, long-term improvements in water use. The Department of Water Resources and State Water Board are directed to develop new water use targets as part of a permanent framework for urban water agencies.

Those new targets build upon existing state law, and will be based on strengthened standards for indoor water use; outdoor irrigation; commercial, industrial, and institutional use; and water lost through leaks. The state agencies are preparing a report, due January 10, 2017, that will detail the proposed framework, new standards, and implementation timeline. Information about the Executive Order can be found [here](http://www.water.ca.gov/wateruseefficiency/conservation/) (<http://www.water.ca.gov/wateruseefficiency/conservation/>).

Prohibitions also remain against homeowners associations or local governments taking action against homeowners who reduce or stop watering lawns. As directed by the executive order, the State Water Board will be making these prohibitions permanent.

## **Background**

California has been dealing with the effects of an unprecedented drought. To learn about all the actions the state has taken to manage our water system and cope with the impacts of the drought, visit [www.Drought.CA.Gov](http://www.Drought.CA.Gov). Every Californian should take steps to conserve water. Find out how at [SaveOurWater.com](http://SaveOurWater.com). While saving water, it is important to properly water trees. Find out how at [www.saveourwater.com/trees](http://www.saveourwater.com/trees). In addition to many effective local programs, state-funded turf removal and toilet replacement rebates are also available. Information and rebate applications can be found at: [www.saveourwaterrebates.com/](http://www.saveourwaterrebates.com/).

# # #



## **Drought Prospects in California for the New 2017 Water Year – October 1, 2016**

UC Davis Center for Watershed Sciences | October 3, 2016 | Jay Lund

Happy New Water Year 2017!

Hopefully everyone has recovered from their celebrations.

The 2016 drought year is over. It was milder year than the four previous drought years. The great wet hope of the “Godzilla” El Nino did not end the drought, but brought only near average precipitation.

Going into the new water year, California remains in a drought.

Here are some highlights of current conditions, with links from the California Department of Water Resources’ California Data Exchange Center (CDEC) at <http://cdec.water.ca.gov>.

### **Reservoir and Groundwater Storage Conditions**

Major reservoirs in California begin this new water year about 3.3 maf lower than long-term average surface storage on September 30. Groundwater is likely to be recovering in the northern parts of California, but is probably continuing to drop in large parts of the southern Central Valley which are still receiving less water than expected, and are subject to overdraft even in non-drought years. Cumulative drought groundwater overdraft probably now exceeds 12 maf. (Alas, California does not maintain estimates on long-term groundwater balances, but this will come someday.)

Total water storage is probably depleted 15-20 maf from pre-drought conditions. Soil moisture in much of the Sierras and Central California remains in drought conditions (due to both unusually high temperatures and lower precipitation). Like groundwater, conditions of forests and native fishes are severely depressed and are likely to see substantial drought impacts for years after hydrologic conditions improve.

But this seemingly bad situation is substantially better than in October 2015.

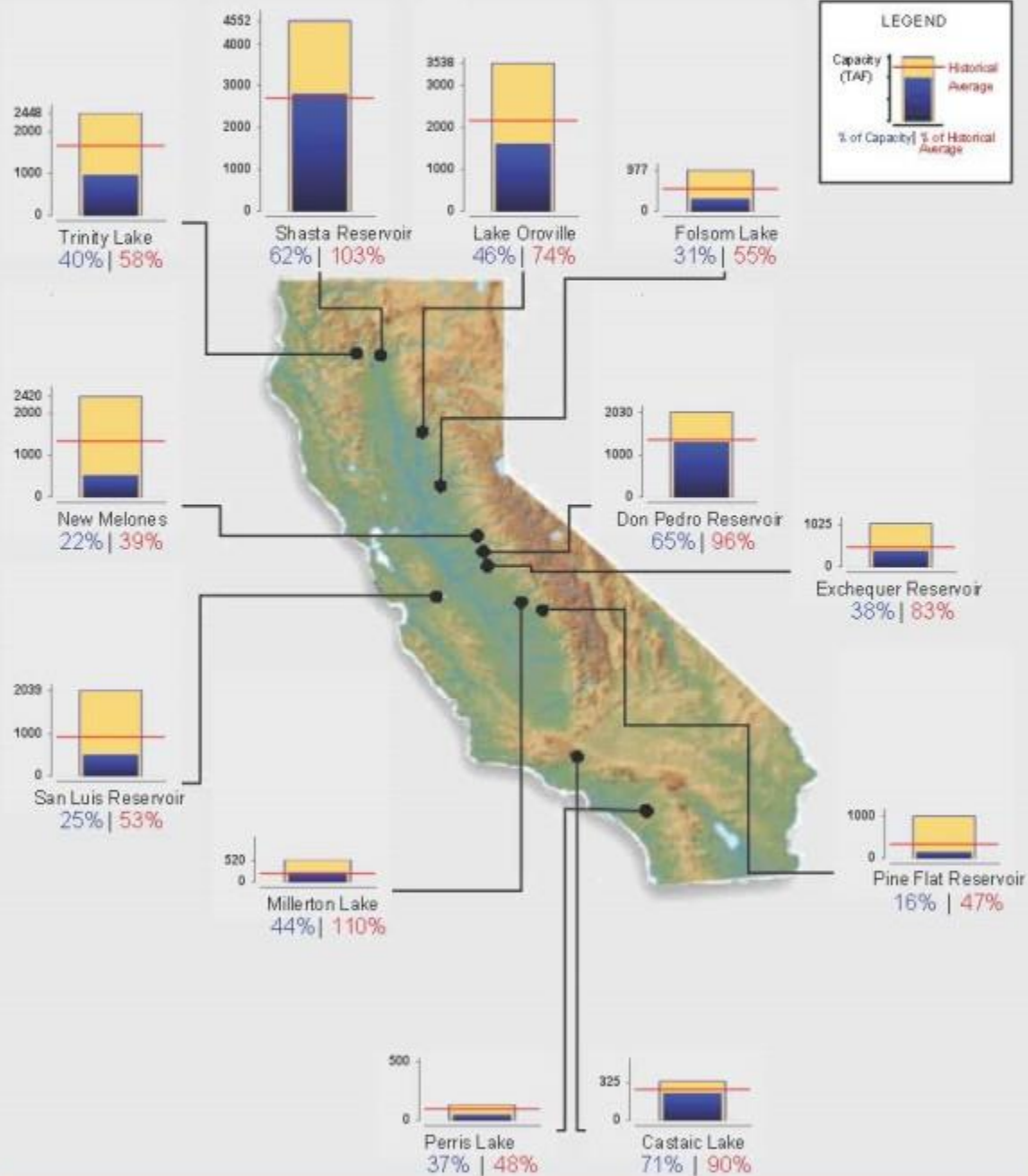
Many reservoirs are in pretty good shape in terms of overall storage, certainly compared with October 2015. Shasta, Oroville, New Don Pedro, and many other sizable reservoirs are entering the new water year with near-average storage levels. Shasta levels must now be viewed more cautiously, however, because of heightened concerns for operational disruptions due to depressed populations of endangered winter run salmon. Most surface storage depletions (current storage relative to their historical average) remain in reservoirs at New Melones (tributary to the San Joaquin River, 800 taf depletion), Trinity (in the north, 700 taf depletion), San Luis (which relies on Delta exports to fill, 450 taf depletion), and Oroville (550 taf) and Folsom (250 taf depletion), which were depleted somewhat to make up for reduced releases from Shasta due to temperature concerns. Lake Cachuma, which serves the Santa Barbara region is also nearly exhausted with only 14 taf remaining and a drought depletion of 135 taf.



# Reservoir Conditions

Ending At Midnight - September 30, 2016

## CURRENT RESERVOIR CONDITIONS



Graph Updated 10/01/2016 04:45 PM

Figure 1. Major reservoir storage in California at end of 2016 water year

## Ecosystem Conditions

Fish – Native fish populations in California are largely down during the drought, with some down by frightening percentages, such as winter run salmon. These populations effects will likely require years of effort to recover and make management of future drought years more important.

Waterfowl – [Duck populations](#) improved considerably in 2016 from 2015, which were about 25% below the long term average.

Forests – The accumulated effects of drought and warmer temperatures are likely to leave [forests](#) susceptible to diseases, pests, and further drought conditions. There is little that water managers can do to affect drought impacts to forests, although this might be one of the drought's biggest and most long-lasting effects.

Native ecosystems in good shape should allow more flexibility for agricultural and urban water supply operations. Alas, this is not the case. Ecosystem storage, so to speak, is severely depleted.

## Will the 2017 Water Year Be Dry?

Statistics from about 100 years of historical records show not a lot of correlation of unimpaired runoff between years.

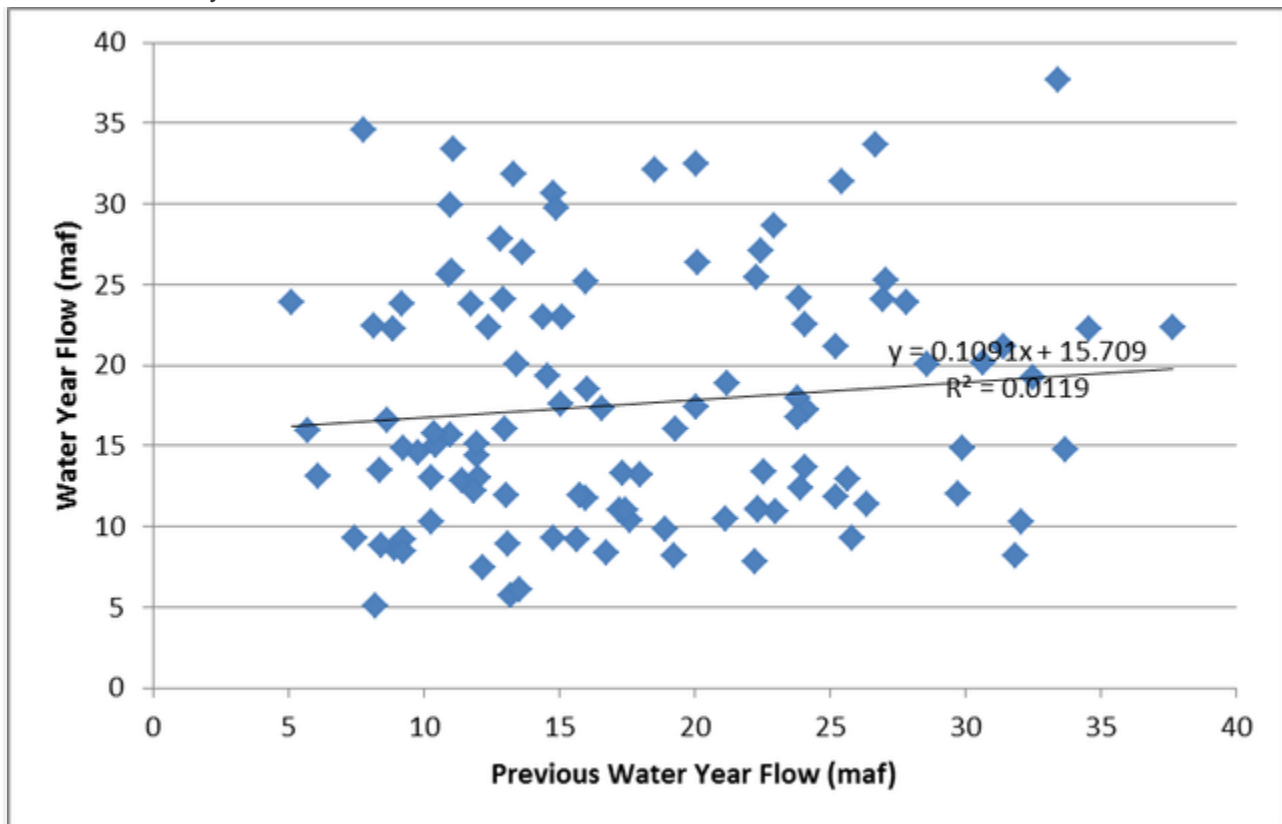


Figure 2. Scatter plot of Water Year runoff for Sacramento River since 1921

When digested by quintiles, Table 1, only slightly more insight is gained. Very dry years seem more likely to beget another very dry year and not a very wet year. And both very dry and middling years have a slight, and probably not statistically significant, chance of producing another drier runoff year. Some of these effects might be residual due to the new water year beginning with drier soil moisture and groundwater conditions than average. (Note, this quintile (20%) water year classification differs from the DWR water year classification which includes a weighting of the previous year's runoff, and so has a built in higher correlation.)

Next Year	Probability Next Year				
	Historical	Sacramento Valley		San Joaquin Valley	
		Now	Now	Now	Now
		Very Dry	Middling	Very Dry	Middling
Very Dry	20%	0.32	0.23	0.30	0.17
Dry	20%	0.14	0.27	0.17	0.30
VD or Dry	40%	0.45	0.50	0.48	0.48
Middling	20%	0.27	0.14	0.09	0.26
Wet	20%	0.18	0.14	0.22	0.13
Very Wet	20%	0.05	0.23	0.17	0.13

Table 1. Probabilities of wet and dry conditions from historical data

### Thoughts for the coming drought year

Welcome to California water, where anything can happen.

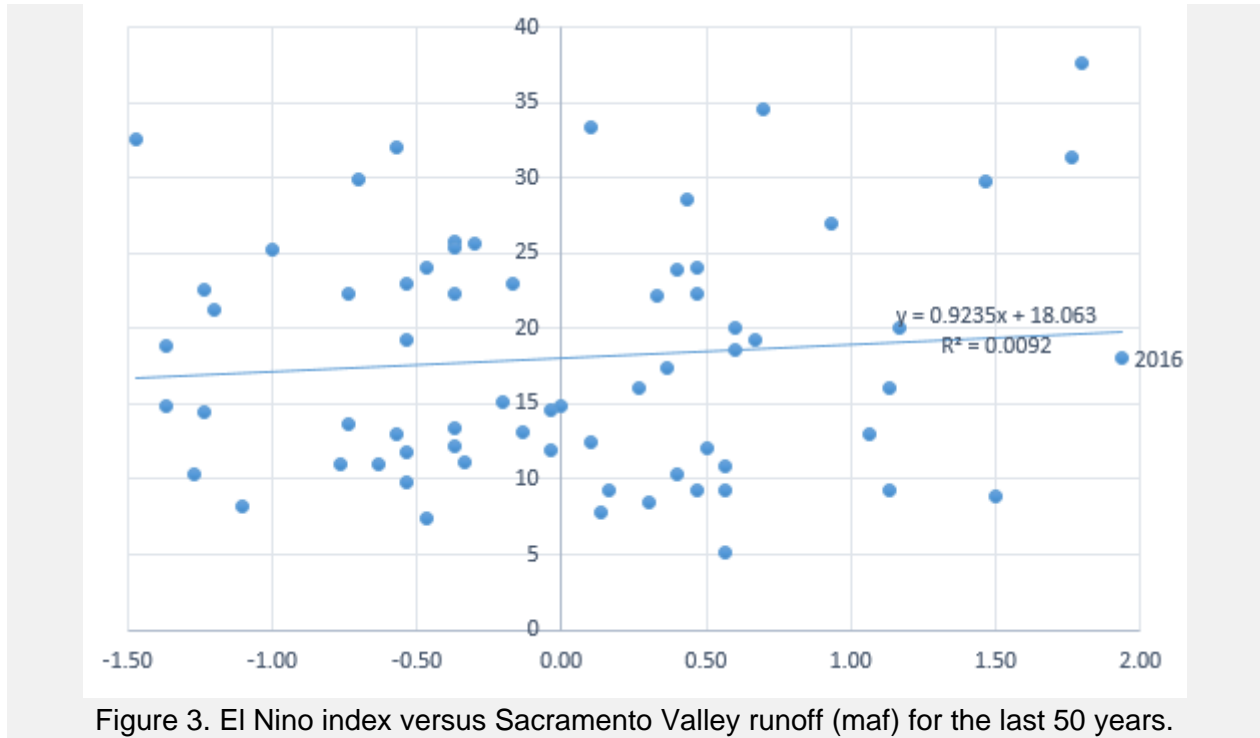
It is best to be prepare for another drought year (and prepare for floods as well).

Even if precipitation is average, there will still be residual storage depletion and ecosystem effects from the previous dry years. These effects will be harder to manage if the coming year continues to be much warmer than average. Except for some ecosystem and rural community conditions, which remain quite serious, there is no reason for panic. (Panic is often counterproductive – urgency would be appropriate.)

Many farmers in the southern Central Valley will still feel the effects of water scarcity, even if the hydrologic drought ends, as ending overdraft and greater environmental demands and restrictions for the Delta and San Joaquin River impinge on historical water delivery expectations. They have a long-term problem worsened by the drought. Farmers in the Sacramento Valley face some years of disruptions in the timing of water deliveries due to temperature problems for winter run salmon.

In any event, and especially if 2016-2017 is dry, there is urgency to make progress on state, federal, regional, and local water management. Groundwater, water conservation, water markets, and the Delta remain urgent management concerns, which will interact and require a common state water accounting system sooner rather than later.

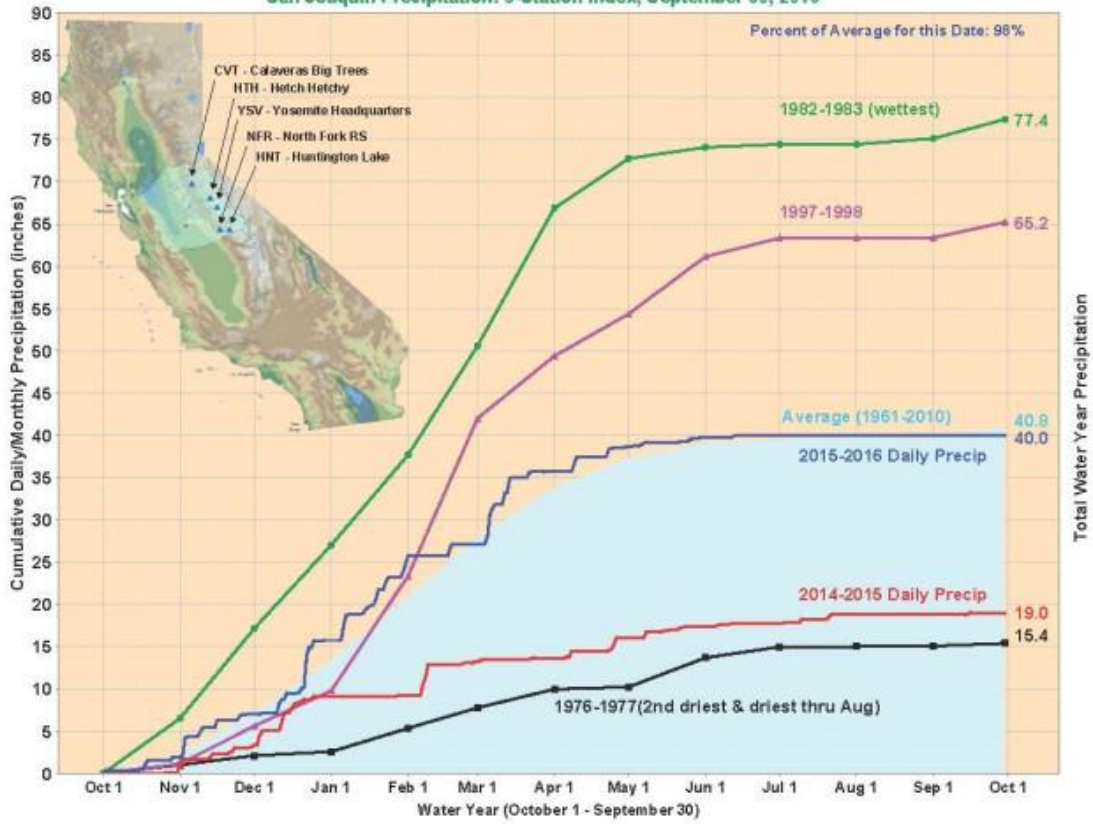
And El Nino? The great wet hope will continue, but one should probably consider the historical correlation of El Nino with northern California runoff, below, and dissipate less time with speculative predictions and invest more time on moving California forward with its difficult water problems.



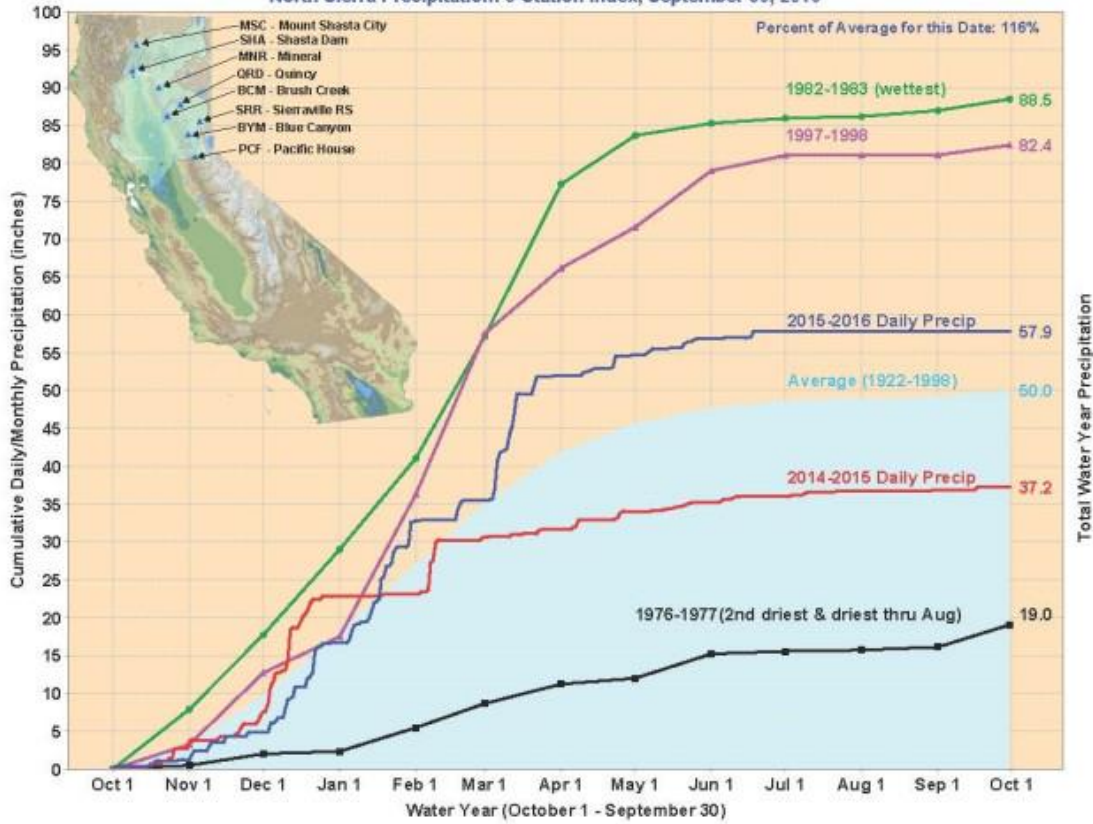
### 2016 Water Year Precipitation

Precipitation totals for the ending water year were average-ish historically, and great compared with the previous two years, but made worse due to continued high temperatures. Below are the final cumulative plots for the 2015-2016 water year, with some comparative companionship.

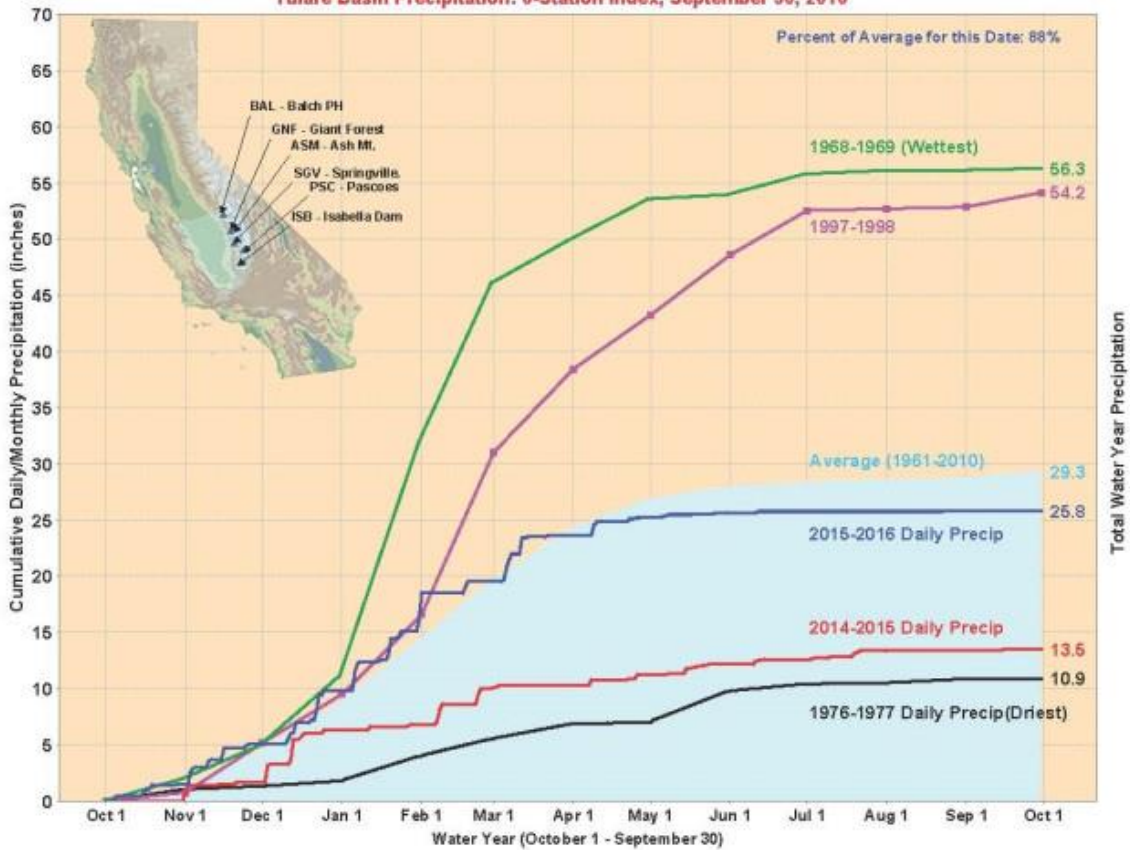
### San Joaquin Precipitation: 5-Station Index, September 30, 2016



### North Sierra Precipitation: 8-Station Index, September 30, 2016



**Tulare Basin Precipitation: 6-Station Index, September 30, 2016**



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## **CA water year ends with 60% of state still in extreme drought**

San Francisco Examiner | October 3, 2016 | Bay City News

California's 2016 water year ended Friday, marking a fifth consecutive dry year with low snowfall, officials from the Department of Water Resources said.

As state water officials measure it, the "water year" runs from Oct. 1 to Sept. 30 each year.

Officials said that 2016's water year is listed in the record books as "dry" statewide, despite that parts of northern California experienced above-average precipitation.

The National Oceanic and Atmospheric Administration's Climate Prediction Center sees slightly better than even odds that La Nina conditions will develop this fall and winter, though that does not necessarily mean there will be substantial rainfall, however.

Sixty percent of the state remains in severe or extreme drought, water officials said.

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## **Another dry year on California's books as 'drought continues'**

San Francisco Chronicle | October 3, 2016 | Kurtis Alexander

October is the time for optimism about water in California.

The forecasts start calling for rain as the coming winter offers hope of relief for the state's thirsty rivers and reservoirs. Just this weekend, parts of Northern California saw up to three quarters of an inch of rain, while the first big snow shut down Highway 120 in Yosemite.

Hydrologically speaking, Oct. 1 also marked the official start of the state water year. But as much as the milestone brought the prospect of drought-busting storms ahead, it highlighted the grim reality of the past 12 months.

State water officials last week described the 2016 water year, running from Oct. 1, 2015 to Sept. 30, as disappointingly "dry" — the fifth year of "meager precipitation" helping fuel the historic drought.

"Without hesitation, the assessment is that the drought continues and we continue to encourage conservation," said Doug Carlson, a spokesman for the state Department of Water Resources.

While the northern part of the state, where most of California's water supply comes from, saw above-average precipitation during the water year — about 116 percent — it wasn't enough to make up for previous deficits, nor help the much drier Southland.

Northern California remains about 15 percent below average for precipitation over the past five years, according to state data. Southern California is more than 50 percent below average.

Making matters worse, warmer-than-normal temperatures this past year meant more rain than snow, which doesn't bode well for water supplies. Snow in the Sierra serves as a natural reservoir that, if sufficiently built up, stretches through the summer when man-made reservoirs run dry.

It's important to note that California's hundreds of water agencies rely on different supply portfolios, putting each in distinctly different positions at the end of the water year. Most Bay Area suppliers have said they can weather at least three more dry years.

State regulators, meanwhile, have dropped mandatory conservation rules and are allowing local communities to determine whether they need to threaten sanctions.

The prognosis for the coming water year remains far from certain. The development of La Niña conditions in the Pacific Ocean over the summer recently ceased, giving forecasters little clue on whether winter will be wet or dry.

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## California Forecasters in ‘Crapshoot’ Predicting Winter Weather

Water Deeply | September 30, 2016 | Ryan Sabalow

Last year at this time, weather forecasters had a pretty good idea of what was in store as California headed into the rainy season; the Pacific Ocean surface was warming, and they were predicting one of the strongest El Niño weather patterns in recorded history.

El Niño ended up making an appearance, but it didn't bring the series of gully washers for which some had hoped. This year, the forecast is even less certain.

“It really is a crapshoot,” said Michelle Mead, a meteorologist with the Sacramento office of the National Weather Service. “We don't know exactly what we're going to get, and it's going to be storm-by-storm dependent.”

In other words, there's nearly as much chance of California experiencing average precipitation or even flooding as there is of it having another dry winter akin to 2015 when Gov. Jerry Brown stood on a patch of bare grass where several feet of Sierra snow should have been and declared a statewide drought emergency.

The uncertainty lies in what forecasters describe as neutral conditions in the vast area of the Pacific that creates El Niño or La Niña weather patterns. When the surface of the ocean warms, it's more likely to lead to the wet years typically associated with El Niño. Conversely, cooler ocean temperatures often produce drier La Niña conditions in California. This year, it's neither warm enough nor cool enough to make a call.

The vague long-term forecast comes as California hits a key benchmark that forecasters and water managers use to track the state's hydrological conditions. The so-called “water year” ended Friday.

State officials say the data compiled during the 2016 water year shows that California remains mired in a five-year drought. The hottest summer on record certainly didn't help ease the problems plaguing the state, including irrigation-water shortages, plummeting groundwater basins, increased risk of wildfire and millions of dying Sierra trees.

While some heavy storms brought rain to parts of Northern California and snow to the Sierra, an unseasonably warm and dry February brought a hurried shrinking of the snowpack.

Arthur Hinojosa, the Department of Water Resources official overseeing the agency's statewide drought response, said it wasn't particularly surprising. Over the past few years, snow has begun to melt much earlier than normal. Historically, peak snowpack levels were measured in April. Lately, it's mid-March or earlier.

“Although we did see some decent amounts of total [Northern California rainfall], the snowpack wasn't on par with that percentage-wise,” Hinojosa said. “There was less snow proportionally than we're used to seeing historically. This is in a large part due to the warm year it was.”

Should the trend persist into this rainy season, it doesn't bode well for the massive water-delivery system of reservoirs and canals operated by the state and federal governments. Rivers were dammed to take advantage of historic weather patterns, with a focus on regulating flows to

prevent downstream flooding during heavy storms and capturing snowmelt to buoy California through summer and fall.

The state's approximately 1,500 reservoirs apportion water over the year to meet the demand for farm and landscape irrigation, drinking water and fish and wildlife habitat. The vast man-made conveyance network is capable of funneling Mount Shasta snowmelt 700 miles (1,100km) south to San Diego.

The Northern California rains brought some relief since the region is home to the largest reservoirs. The total statewide reservoir storage is around 82 percent of average, Hinojosa said. That is a rosier picture at the end of September than last year at this time, when storage was 55 percent of average.

Southern California, meanwhile, remains especially dry. The Colorado River Basin, which provides a critical source of water used by the area's cities and farms, is coming off the driest 16-year period in the historical record.

Forecasters say that, all told, it's going to take a long time before anyone declares California's drought over.

"Really, to fully erase the drought, you'd need multiple, consecutive wet winters and, ideally, cooler years in terms of getting a nice accumulation of mountain snowpack," said Daniel Swain, a climate scientist at UCLA's Institute of the Environment and Sustainability.

There is some good news in the short-term forecast, at least for Northern Californians tired of the summer heat.

National Weather Service forecasters say it's about to get substantially cooler in the region. Sacramento temperatures should begin dipping into the mid-80s by Thursday, and on Sunday there's a slight chance of showers with a high near 69°F (21°C). It could even snow that day in Truckee.

###

*This story first appeared in the Sacramento Bee. For more coverage of the California drought and water issues, please visit the Sacramento Bee.*

## **Legislative Update: Six New California Laws Impacting Water**

*Gov. Jerry Brown recently signed several new bills into law that impact California water. We take a look at six of these, which include measures aimed at providing help for failing water agencies, cutting down on excessive water use and making the most of stormwater.*

Water Deeply | October 4, 2016 | Tara Lohan

The end of September meant both the end of the 2016 water year and a deadline for signing new legislation. In the past few weeks California Gov. Jerry Brown has signed a bevy of new bills into law, many of them addressing drought or water issues in the state.

Some affect water indirectly. Senate Bill (SB) 859, which establishes a Healthy Soils Program, is written to help build quality agricultural soil to increase carbon sequestration, but healthy soils also help retain more water. SB 1414 aims to help increase energy efficiency, which can also help save water.

California Gov. Jerry Brown speaks at the Association of California Water Agencies conference in Sacramento on January 14, 2016. Gov. Brown recently signed new bills into law impacting California water. (Rich Pedroncelli, AP)

Below are six other bills that address drought and water issues head on:

### **Senate Bill 552: Help for Failing Water Agencies**

The vast majority of California's water agencies deliver a safe and reliable supply of water, but some are failing to make the grade. SB 552, written by Sen. Lois Wolk, allows the State Water Resources Control Board to bring in an outside contractor to help struggling water agencies meet water standards.

"This bill will allow the Board to order a water system which is consistently failing to provide safe, clean and affordable drinking water to accept a contract administrator who will be able to immediately implement a number of measures to help ratepayers, and also to create a long-term sustainability plan for the system," said attorney Deborah Ores of the Community Water Center.

### **Senate Bill 1263: Banning Small Water Agencies**

This bill by Sen. Bob Wieckowski is another intended to protect drinking water. But it takes a different approach. Smaller water agencies tend to be more likely, because of limited resources, not to meet reliability or quality regulations, so to protect public health SB 1263 would ban the creation of new, small water districts.

"It aims to guarantee the safety and reliability of drinking water statewide by encouraging new developments to tie into existing water districts rather than create their own," Michael Levitin wrote for Water Deeply. "The measure would especially help low-income communities that cannot afford to pay for improved water quality, and could specifically impact Central Valley cities such as Merced, Bakersfield, Fresno and the rural regions around them that have seen innumerable small water agencies sprout up in recent decades to keep pace with population growth."

### **Senate Bill 814: Curbing Excessive Water Use**

Water guzzlers beware. SB 814, written by Sen. Jerry Hill, would require urban water agencies to define and discourage excessive water use during state-designated drought emergencies that require water restrictions. Agencies could use a rate structure or an excessive-use ordinance that would come with fines and possible drought-shaming.

“This legislation ensures that every urban retail water supplier has a tool to curb excessive water use by customers,” said Hill. “Households that guzzle water – while their neighbors and most other Californians abide by mandatory reductions – will no longer be able to hide and persist in their excess.”

### **Assembly Bill 1755: Water Data**

One of the biggest things to come out of California’s ongoing drought is a focus on better collection and sharing of water data. Assembly member Bill Dodd’s Assembly Bill 1755 takes a step in that direction with the creation of a platform to share water data.

According to the bill’s text, it would “create, operate and maintain a statewide integrated water data platform that, among other things, would integrate existing water and ecological data information from multiple databases and provide data on completed water transfers and exchanges.”

The integration of data would include information from the State Water Project and federal Central Valley project; streamflow conditions from the United States Geological Survey; fish abundance from California’s Department of Fish and Wildlife, as well as the U.S. Fish and Wildlife Service, the Forest Service and the National Oceanic and Atmospheric Administration; and information on water transfers and exchanges.

### **Assembly Bill 935: Irrigation Water for Users Friant-Kern Canal**

Assembly member Rudy Salas’ bill, AB 935, may help move 15,000–30,000 acre-feet (18.5–37 million cubic meters) of water a year to nine irrigation districts that compose the South Valley Water Association in the San Joaquin Valley.

The bill “authorizes \$7 million in state money to build pumps to move water north to about Terra Bella via reverse flow pump-back facilities still to be built,” the Fresno Bee reported. “Water would be pumped out of the lower San Joaquin River and into the California Aqueduct on the west side of the San Joaquin Valley, transported south to the Cross Valley Canal, then east to the Friant-Kern Canal.”

It’s not a done deal yet as money would need to be appropriated in next year’s budget.

### **Assembly B 2594: Capturing Stormwater**

Assembly member Rich Gordon’s AB 2594 helps move stormwater from nuisance to resource. The new law lets water agencies collect stormwater and then make the most of it – including reusing it, recharging groundwater with it, selling it or using it to boost water quality.

“For too long, clean, crisp storm water has been viewed as a problem. In reality, stormwater is a gift – a solution to drought,” said Gordon in a statement about his bill. “AB 2594 allows those that capture stormwater to use it.”



## **River flow proposal stirs debate in Turlock and Sacramento**

Modesto Bee | October 4, 2016 | John Holland

Four of the five board members at the Turlock Irrigation District voted Tuesday against the state's proposed boost in river flows. Meanwhile, the fifth board member was in Sacramento to press the same case.

TID leaders warned that the doubling of reservoir releases for fish would force farmers to increase groundwater pumping and could mean no Tuolumne River water at all in dry years.

"This is a water grab, and it's a fight," General Manager Casey Hashimoto said before the board passed a resolution against the plan for the Stanislaus, Tuolumne and Merced rivers.

Board member Michael Frantz missed the meeting so he could testify before the California State Board of Food and Agriculture. Supporters of increased flows also spoke to the board, which advises the Brown administration but does not have decision-making powers.

"There's a clear recognition I think by all that flow is an important factor in (salmon) health and in their survival as a species," said Steve Rothbert, the California director for American Rivers.

The Sept. 15 proposal from the State Water Resources Control Board calls for 40 percent of pre-dam river volume from February through June each year. That is when water suppliers capture most of their rainstorm runoff and snowmelt. The flows could range from 30 percent to 50 percent to adapt to specific conditions.

The state water board is taking public comment until Nov. 15 and could make a decision in spring 2017. In the meantime, it has urged interested parties to work on compromises that could involve fishery improvements other than flow.

Frantz said predation by non-native bass is a bigger threat to salmon than water diversions. He suggested barriers in the rivers and bounties for anglers.

"It seems reasonable to block them," Frantz said. "They're bad. They're harming a native fish."

Non-flow options could include restoration of salmon spawning gravel, creation of floodplain to provide shelter and food for the young fish, and control of invasive plants such as water hyacinth.

The 40 percent threshold would have cost 6,576 jobs and \$1.6 billion in economic output if it had been in place in the very dry 2015, according to a study for TID and the Modesto Irrigation District.

Food and agriculture board member Mike Gallo a dairy farmer and cheesemaker near Atwater, questioned the much smaller economic effects predicted by the state water board. He said it did not account for the effects of extended drought on permanent crops, which include orchards and vineyards.

Earlier in Turlock, TID board member Ron Macedo said the three San Joaquin River tributaries could be the start of a state effort to boost rivers flows elsewhere.

"This resonates throughout the state because this is an attack on our water rights," he said.

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## **Water creates the connection between farms and our families**

Merced Sun-Star | October 4, 2016 | Leonard Van Elderen

Maybe it was a tomato, head of lettuce or a chunk of cheddar. Chances are, the Central Valley farmers our firm has financed through loans or lines of credit have grown something that has reached your dinner table.

We have a farm-to-fork connection. Today, the challenging part of that connection is water.

Rural and urban California have done a great job following state directives to lower rural and residential water use during the historic five-year drought. The actual savings varies throughout California, from 100 to 200 gallons per person each day around the home. That's a very significant savings.

But consider the water it takes to grow the food one person consumes in a day. The typical daily diet requires approximately 900 gallons of water to produce our vegetables, fruit, pasta, dairy and meat. Water conservation is a job for all of us, yet our greatest water use isn't what we use in our homes – this is only about 10 percent of the state's supply.

More than 50 percent of California's water is used to enhance the environment. The balance, about 40 percent, is the water that grows the food we eat and creates the jobs that we depend on to feed our families.

Our challenge at Yosemite Farm Credit during these difficult times is to finance those who grow our food, which requires water. This challenge goes far beyond having too little snow and rain. It confronts us as we seek a balance between the water demands of people and the environment.

The Central Valley is the food basket of the nation. Its highly productive land grows more than half of all U.S.-produced fruits, nuts and vegetables. Some farmers grow annual crops such as tomatoes and lettuce. Others grow permanent crops, including grapes, walnuts and almonds. It takes money to buy the land, install elaborate drip irrigation systems or purchase new, lower-emission tractors and harvesters.

We provide that money to farmers who face many challenges, including water availability and ongoing state regulations.

Having reliable groundwater when surface supplies are insufficient is an emerging challenge. In 2014, California passed legislation to limit groundwater use to sustainable levels. Achieving this goal will reduce available groundwater, meaning less water can be pumped from underground.

Another challenge is the state's management of our surface water supplies. The two pumping facilities that sustain many south-of-the-Delta farms are located near Tracy, on the edge of the Sacramento-San Joaquin Delta. Pumping has been restricted at times even when water flows are at their highest in an effort to protect endangered Delta smelt and migrating juvenile salmon. Despite the vast amount of water allowed to pass through the Delta in an effort to help these threatened species, their populations continue to decline.

Pumping restrictions increase while additional science-based habitat improvements are not adopted. This leads to even less water.

The greatest challenge now lies with the State Water Resources Control Board. The board recently released a new proposal to increase how much water will flow from our rivers through the Delta to the Pacific Ocean. They want to leave us with only 60 percent of the runoff for drinking water and food. That is much less water than our irrigation districts have been allowed to store in the past.

The 3,500-page proposal states the watersheds on the Stanislaus, Tuolumne and Merced rivers do not produce enough water to meet the needs of both humans and fish. Their proposed solution is to reduce the amount of surface water used by humans. If the state's plan – contained in its Substitute Environmental Document – had been in effect the past two years, there would have been zero water available for farmers in 2014 and 2015.

Less water for people will have personal and economic consequences. Without water, food doesn't grow and jobs go away.

The state water board needs to hear your concerns about how its proposal will be harmful to your family and community. For contact information, go to [worthyourfight.org](http://worthyourfight.org) and look under the Take Action tab.

You also have the opportunity to comment at public hearings in Sacramento on Nov. 2 and Nov. 10 or in Modesto on Nov. 4.

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Leonard Van Elderen is president and CEO of Yosemite Farm Credit, which serves Stanislaus and Merced counties; 85 percent of the company's clients use water that flows on the Stanislaus, Tuolumne and Merced rivers.

## **Farms and cities need groundwater to survive**

Sacramento Bee | October 3, 2016 | Aubrey Bettencourt

The federal and state water projects are struggling to deliver water to many users in the Bay Area, Central Valley and Southern California. Altogether, 84 percent of the state remains in moderate to exceptional drought.

In response to ever-greater cutbacks, cities and farmers resorted to pumping water from wells that tap underground aquifers. Major cities such as Los Angeles, San Jose, Fresno and Bakersfield – and hundreds of smaller towns – are only keeping their citizens alive with well water. Farmers and cities view wells as water supplies of last resort.

In 2015, the State Water Resources Control Board cut off all water deliveries a few weeks before harvest. Farmers turned to well water to avoid facing lost crops, dying animals and financial ruin.

When water deliveries did not resume this year, even after a so-called average winter of rain, they kept pumping. The surge in well drilling is a direct result of the surface water cutoffs and fear of future water regulations by the state.

The editorial board appears to believe that it's right to sever this last lifeline. Doing so cuts not just farmers' and cities' water supplies, but also relegates to the trash bin our long history of legal water property rights tied to land and multigenerational family businesses.

The state is irresponsibly picking winners and losers. Without recharging surface water, it's unlikely to heal our aquifers. It's improper for the governor and state bureaucrats to hold California in a perpetual drought-emergency penalty box.

The editorial was right about one thing. There is a water grab, but it's not by municipal users and agriculture. It's by the state bureaucracy, Legislature and governor. Control the water, and you control the economy of the state and every person in it.

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Aubrey Bettencourt is executive director of the California Water Alliance, a public policy and advocacy group. She can be contacted at [aubrey@californiawateralliance.org](mailto:aubrey@californiawateralliance.org).

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## **Who will go extinct first, salmon or Valley farmers?**

Modesto Bee | October 1, 2016 | Mike Dunbar

Here, on the front lines of the state's recently declared water war, we have more questions than ammunition.

Is the State Water Resources Control Board serious? Is the water board even in charge? Was Gov. Jerry Brown's call for "voluntary agreements," instead of regulatory demands, a suggestion or an order? Who will go extinct first – salmon or farmers?

OK, that's a rhetorical question; salmon have a huge head start. But the race isn't over. To recap:

- Battle was enjoined Sept. 15 when the water board re-released its justification for taking more water from the Merced, Tuolumne and Stanislaus rivers – which combine to create the San Joaquin before it reaches the Delta. In the original 2012 Substitute Environmental Document, the state demanded 35 percent of unimpaired flows from all three rivers for salmon's sake. The re-released version grew (from 1,200 pages to 3,100), as did the state's water demands. Regulators now want 40 to 50 percent of the rivers – up to 2 1/2 times more than the state takes now.

Such demands are a clear threat to a way of life that has evolved here over the past 150 years.

- Howls of outrage arose across the entire Northern San Joaquin Valley – with good reason. The state guessed its water grab would cause \$64 million in economic damage across three counties. People who live here say impacts will run into the hundreds of millions in each. Yet, in Sacramento, professional environmentalists insist it's still not enough – they want 60 percent, farming be damned. Both sides got 60 days to respond.

- Four days later, the first response arrived – from Gov. Brown. He told the water board he wants the Natural Resources Agency to start working out "voluntary agreements" with water districts, and he wants a comprehensive plan including the Sacramento River and Delta, not just the San Joaquin's tributaries.

That looks like a lifeline, but we're never sure. Brown is the most astute politician in living memory and everyone knows his highest water priority is the two tunnels that will send much of the Sacramento's flow south before it ever reaches the Delta. Only higher San Joaquin flows will be left to keep the Delta from getting salty.

- Les Grober, one of the state's top water staffers, bravely came to Modesto to explain the board's thinking. But when questioned about developing a comprehensive plan, as the governor demanded, he deflected. That would be in "Phase 2"; he could speak only of Phase 1.

Phase 1 is taking our region's water. Phase 2 is re-evaluating how much flows down the Sacramento and out of the Delta. But there's also a Phase 3 – a "water rights proceeding," in the words of one state staffer. Those should be chilling words for any California farmer. Yes, state officials always point out that 50 percent of the Sacramento already goes to the ocean. Nothing to worry about, Wheatland.

But last February, environmentalists demanded even more and colder Sacramento water be used to help 500,000 salmon reach the sea. Front and center in those demands was a Bay Area salmon-fishing group, repeating its claim that fishing is a \$1.4 billion industry statewide and implying the salmon catch is as economically important as agriculture – an absurd assertion.

California's entire commercial salmon catch in 2014 was worth \$8.1 million – about half the value of crabs (\$17.4 million). That's about a fifth of what Stanislaus County farmers got for almond hulls last year. If fishing is a \$1.4 billion industry, then ag should also count the contents of every backyard garden and flower pot in the state.

- Finally, the same day Grober was being grilled in Modesto, two highly respected fish scientists conducted a symposium in Davis. Professors Peter Moyle and Jason Baumsteiger explained that fish owing their existence to conservation efforts, even in natural environments, are already extinct – humans have interfered. Fish raised in hatcheries and spawning in gravel beds shaped by front loaders are little more than aquarium specimens.

It's already happened on our rivers. FishBio biologists say the 10,000 salmon that spawned on the Stanislaus River last fall were all hatchery fish. The same is true for the few fish found on the Tuolumne and Merced. They wandered up our rivers because they didn't know where else to go.

The salmon on the San Joaquin aren't genetically distinct from the salmon spawning on the Sacramento or Russian or Klamath rivers. There's very little difference between them and the 720 million pounds of salmon caught in the Pacific Ocean each year. Salmon aren't endangered or even rare (unless undercooked).

After vast water releases failed to help fish migrate last year, no one here has faith in the state's single-focus salmon solution – ever-increasing flows.

Hicham Eltal, Merced Irrigation District deputy general manager, told Grober that his district has run the environmental models. "If you use 50 percent unimpaired flows, it won't be enough," said Eltal. "If you use 60 percent flows ... it won't be enough." In fact, even 100 percent of the Merced's flow won't work.

Under the state's assumptions, he said, "the fish are doomed."

Eltal said his agency doesn't accept that verdict, and will keep trying to help salmon survive – as must every water agency in the region.



Farmers might not be so lucky. Eltal noted they will either “crash” immediately under the state’s flow demands, or crash in the not-so-distant future under new state groundwater requirements.

Yes, the salmon have a head start on extinction. The only way farmers can avoid the same fate is to resist, but also commit to helping our rivers recover.

# # #

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## **More Planned Water Diversions From Farms to Fish-Not Just by Federal, but Also State Officials**

California Ag Today | September 28, 2016 | Patrick Cavanaugh

California's State Water Resources Control Board (SWRCB), regulators and environmental organizations want more water diversions to flow into the San Francisco Bay Delta Watershed to help save the declining Delta Smelt and Salmon. They have targeted three tributaries of the lower San Joaquin River; one of which is the Tuolumne River. Phase 1 of the Bay-Delta Plan is a real threat to all Modesto Irrigation District (MID) and Turlock Irrigation District (TID) customers including ag, urban water, and electric.

Coalitions for a Sustainable Delta, water diversions Michael Boccadoro a spokesperson for the Coalition for a Sustainable Delta, commented on the SWRCB: "They need to be pushed back. They need to be told no." Boccadoro explained the water in question represents about 400,000 acre-feet taken from communities, businesses and farms. Ironically 400,000 acre-feet is roughly equivalent to the capacity of Hetch-Hetchy Reservoir (360,400 acre-feet) that funnels water, unabated, to San Francisco.

"This is only Phase One of the Boards' decision," said Boccadoro. "This is going to eventually encompass the Sacramento River; this is just the beginning. This isn't by any stretch of the imagination the only potential impact agriculture would feel," he said.

Boccadoro, like other people in the industry, cannot fathom why the SWRCB needs to take this water when it doesn't seem to be doing anything beneficial for the endangered fish species. "This issue of continuing to take water that is providing no benefit—or no clear benefit—for fish, while we do nothing [to mitigate] the other stressors that are having a huge impact on the fish, has to stop," Boccadoro said.

Boccadoro noted, "It looks like Governor Brown has it in for farmers. We have problems with groundwater and increasing water scarcity in the state, and the result of this [plan] would be increased groundwater pumping—until they tell us we can't pump groundwater. At that point, they are basically telling us, 'You can't farm any more.'"

"It's a huge problem, said Boccadoro. "For whatever reason, it appears that the Brown administration has declared war on California agriculture. Enough is enough. We need to push back hard against the Water Board's decisions," noted Boccadoro.

"This is as good a place to fight as any as I can think of," Boccadoro explained. "We need to start the fight and continue the fight, which is the only way it's ever going to be turned back. The regulators and environmental groups must address the other stressors [to the endangered species]. Taking water from agriculture has not corrected the problem.

In the meantime Boccadoro hopes the farmers are taking notice. "I sure hope they're willing to come up here [to Sacramento] and demand that the state not take their water," he said.

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## **State plan for rivers doesn't hold water, MID says**

Modesto Bee | September 27, 2016 | Garth Stapley

Local water leaders on Tuesday formally scorned a state proposal to drastically change river levels, saying it would cripple farms and the economy and threaten people's drinking water in Modesto, San Francisco and beyond.

"To me, this is an outrage," said Greg Salyer, general manager of the Modesto Irrigation District. "This is probably the worst water threat we've ever had at MID."

The State Water Resources Control Board two weeks ago began circulating a draft plan aimed at reversing the damage done to wildlife when people began damming rivers about a century ago, holding water in mountain reservoirs for measured release when crops most need it in summer and fall. The plan could roughly double the flow in the Stanislaus, Tuolumne and Merced rivers, especially from Feb. 1 to June 30, helping fish migrate and keeping back saltwater intrusion but leaving far less for farms and cities.

"This really is awful," said the MID's John Mensinger. Although two of his fellow board members were absent Tuesday, the other three approved a formal resolution condemning the state's "regulatory overreach."

MID and its partner on the Tuolumne, the Turlock Irrigation District, estimated damage that would have been caused in this region if the plan had been in place in 2015, and found that the area would have lost \$1.6 billion in economic output, \$167 million in farm products, 6,576 jobs and a corresponding \$330 million in wages. Also, because of drought rules last year, neither district would have delivered a drop of river water to farmers, they said.

"That's pretty shocking," said MID spokeswoman Melissa Williams. "We've survived hydrological droughts. Can we really survive a regulatory drought?"

Although the districts enjoy some of the oldest water rights among all California agencies, the state plan could negate them by returning the Tuolumne to 40 percent of unimpaired flow, or natural flow if there were no dams. Local officials say it should be far less than 35 percent, while environmentalists and wildlife advocates would prefer 50 percent or more.

The districts created a campaign called "Worth Your Fight; Don't Go With the Flow" to help people be aware of the threat and give them a way to object. A new website, [worthyourfight.org](http://worthyourfight.org), has lots of information and an electronic petition people can sign. The page also encourages people to spread the word in social media and by obtaining window stickers and yard signs.

"Let them know this is an absurd grab on our water," MID board member Nick Blom said.

Assembly members Adam Gray, D-Merced, and Kristin Olsen, R-Riverbank, have asked the state water board to explain the assumptions used to develop its plan. The legislators suggest the state hold a series of meetings with various city, county, school and irrigation district leaders, and to extend from 60 days to 120 days the period established for public comment.

Kristin Olsen and Adam Gray, California Assembly members, in letter to state water board

“Our communities have been frustrated at the lack of communication and engagement,” Gray and Olsen said in a letter to the state water board.

The water board has scheduled hearings to receive feedback, set for Nov. 4 in Modesto and Nov. 2 and 10 in Sacramento. Gray and Olsen said Merced and Stockton also deserve hearings, as they are the largest cities on the Merced and San Joaquin rivers.

Mensinger said the state plan contains “very sloppy assumptions,” including the idea that if San Francisco, which relies on the Tuolumne, runs low on drinking water in a dry year, the city could buy more from MID and TID. How is that possible, Mensinger asked, if the districts get zero river water during drought?

“It makes no sense. It’s crazy,” he said.

Noting that MID and TID have invested \$25 million studying the Tuolumne and its fish, Salyer said, “we think we have better science and better solutions.” Before decimating farms, the state should try controlling nonnative fish that prey on native salmon and steelhead, or improve gravel beds for spawning, the districts say.

Modesto City Hall also relies on treated river water bought from MID, which is mixed with groundwater before it’s delivered to taps in Modesto and some other outlying communities. The plan could ruin that system, and threaten groundwater tables by forcing people and agencies to pump more to meet needs, local officials say.

MID board chairman Larry Byrd said, “There’s no fight like a water fight, so let’s get at it.”

# # #

## **Bay Area Water Supply in the Crosshairs of New River Plan**

KQED Science | September 16, 2016 | Lauren Sommer

State water officials have released a proposal to boost the flow of California's second-longest river, the San Joaquin. The river plays a huge role in the state's water supply, which means even San Francisco and other Bay Area cities could be facing cutbacks.

The State Water Resources Control Board says restoring water to the river is necessary to bring back endangered salmon and protect water quality.

In an unprecedented move, the water board will likely take that water from districts with "senior" rights, like the San Francisco Public Utilities Commission. Their water rights have long been considered untouchable because they're some of the oldest in the state.

### Reviving a Dry River

The San Joaquin River isn't considered a "river" by some. It goes completely dry in places because farms and cities pump so much water out of it.

"All of this unsustainable diversion of water has led to a collapse of salmon populations that used to be the most abundant salmon populations in California," says Jon Rosenfield, a biologist with the Bay Institute.

As required by federal law, the state water board must review water quality on the San Joaquin River, but hasn't substantially updated its plan for the river in 20 years.

Taking recent salmon declines into account, the board is proposing that 40 percent of the river's flow be restored, including the water flowing down the river's three tributaries.

### Bay Area Supply

The SFPUC and its Hetch Hetchy Water System gets the majority of its water from one of those tributaries, the Tuolumne River. It supplies more than two million people in San Francisco and on the Peninsula.

"It's a big deal," says Steven Ritchie, SFPUC's Assistant General Manager. "It's not whether or not, but how much of an impact an action like this would have on us."

The cutbacks could also affect the agricultural water districts on the river.

"This is an all-out assault on the people in these affected communities," says Jake Wenger of Modesto Irrigation District.

'It's going to be huge because it's going to set a precedent for every water rights holder in the state of California.'

— Jake Wenger, Modesto Irrigation District

Wenger expects to see fallowed farmland and job losses in his district. State officials estimate \$64 million dollars in economic losses statewide, though agricultural areas estimate it to be higher.

The SFPUC's water supply would be cut before supplies for agricultural areas like Turlock Irrigation District and Modesto Irrigation District, because its water rights are junior to theirs. The state water board will hold lengthy hearings determining where the water cuts should come from.

If cutbacks are implemented, the SFPUC would have to ramp up conservation or look for new water supplies.

"By using water more efficiently, we can continue to have a strong economy while restoring our rivers and the Bay-Delta," says Peter Drekmeier of the Tuolumne River Trust.

"Urban people tend to have more resources than agricultural people, so urbans have more flexibility," says Ritchie. "But when the requirements get extreme, you're pushing that to the extreme and the water rate implications of dealing with this are probably significant."

#### Untouchable Water Rights

The water board's plan marks the first time that many "senior" water districts will contend with cuts for endangered wildlife, which is common for many districts with junior rights.

"It's going to be huge because it's going to set a precedent for every water rights holder in the state of California," says Wenger.

Conservationists are equally unhappy about the proposal, but for the opposite reason. They say it's not enough water in the river.

"The flows called for are very unlikely to make the San Joaquin into a functioning, viable river again," says Rosenfield.

The state is trying to strike a balance between people and wildlife on the San Joaquin River, but no one is happy. The proposal could be approved early next year. Lawsuits will probably follow soon after.

# # #



## **Water Treatment, Reuse: an \$11 Billion Opportunity for Water Tech Companies**

Environmental Leader | October 6, 2016 | Jessica Lyons Hardcastle

Water technology companies received good news — an a likely boost in business — from a recent California report that concludes it is feasible to develop uniform water recycling regulations for direct potable reuse in the state.

This means the drought-stricken state can move forward with its plans to use recycled water, or treated sewage, for drinking water. Currently it's only used for non-potable purposes such as agriculture and irrigation.

It also means that the demand for advanced water treatment technologies such as micro filtration, reverse osmosis and UV disinfection systems will grow.

On Sept. 8, the California State Water Resource Control Board released its draft report in response to a 2014 bill signed by California Gov. Jerry Brown that required state health and water officials to study the feasibility of developing uniform standards for recycling wastewater for direct potable reuse.

While the study said there are some areas where more research is needed, the State Division of Drinking Water determined that research can continue simultaneous to the development of criteria for California's first advanced treated water facility for direct potable reuse.

El Paso and other cities in Texas — another state with limited water supplies — already treat wastewater to produce drinking water.

And California's Orange County operates the world's largest sewage purification system, which produces 100 million gallons of potable water per day, and has been operating for almost a decade.

The fact that California is moving forward with statewide recycled water standards will not only boost the market for advanced water treatment technologies, but also serve as a model for other areas with limited water supplies, says Erin Bonney Casey, senior analyst for Bluefield Research.

"The progress made in California to pass uniform water recycling criteria for direct potable reuse provides a major boost for future water reuse projects," Bonney Casey said in an email. "Specifically, when passed, it is going to provide the opportunity for a greatly accelerated timeline for potable reuse project development. Additionally, other states in the country look to California, and other first movers on direct potable reuse like Texas, as leaders in the space and are able to base their future reuse standards on the experience of California. California's progress on reuse standards provides a mechanisms for growth in its own market and in other markets facing water scarcity."

Bluefield Research recently published a report that forecast US water reuse capacity to increase 58 percent in the next 10 years, led by California and Florida, which account for 36 percent and 26 percent of currently planned reuse capacity additions, respectively. The report said CAPEX investment in reuse is expected to total \$11 billion between 2016 and 2026.

California, alone is forecast to spend about \$4.3 billion on new treatment facilities, upgrades and expansions to existing reuse treatment plants, and additional networks to distribute reclaimed water to end users. This means new business for water companies, Bonney Casey says.

“Direct potable reuse opens a new market for suppliers of advanced treatment technology such as micro filtration, reverse osmosis, and UV disinfection systems,” she said. “These types of technologies have not typically been used at wastewater treatment facilities but the growth of potable reuse projects will make them more relevant to municipal wastewater treatment plant operators.”

Some companies that make water treatment technologies are already seeing a boost in profits.

“Communities and companies are increasingly realizing the economic value of clean water — and that’s driving growth in Dow’s water business at two times [the rate of] the global GDP,” Dow chairman and CEO Andrew Liveris told Bloomberg News.

And despite the “ick” factor of drinking purified sewage water, most Californians are overwhelmingly OK with it, according to a statewide survey released earlier this year by water technology provider Xylem.

The survey, which defined recycled water as former wastewater that has been treated and purified so that it can be reused for drinking purposes, found 76 percent of respondents believe recycled water should be used as a long-term water solution, regardless of whether or not a water shortage continues.

In addition to conserving resources, this, of course, would benefit Xylem’s water technology business as well. At the time the California survey was released, Joseph Vesey, Xylem senior vice president who leads the company’s North American commercial business, said: “The state has the opportunity to champion a flexible framework that recognizes the unique needs of local communities as they work to establish water resource strategies that include sustainable solutions, such as recycled water.”

As water shortages continue to affect a growing number of global communities, we expect to see more jurisdictions follow suit, and more water companies finding business opportunities in recycled water technologies and services.

# # #

## **How California Is Learning to Love Drinking Recycled Water**

*It wasn't too long ago that the so-called "yuck factor" associated with recycled water was a deal breaker for many communities. But new research shows that Californians are warming to the concept.*

Water Deeply | October 6, 2016 | Tara Lohan

Would you rather drink a cup of recycled wastewater or advanced purified water?

Actually, that's a trick question – both terms are often used to talk about the same thing. But when it comes to public acceptance of the practice, the language you use makes a big difference. And so does education about how the process works.

Those are some of the things that have helped shift attitudes in California around potable reuse (drinking wastewater that has been purified for drinking). But it's been a long road to get there and a few bumps remain.

Decades ago, the idea of treating wastewater to drinking water standards was met with resistance and it earned the unfortunate moniker of "toilet to tap" in 1995, which became widely touted in defeating proposals to purify recycled water for drinking in Southern California in the 1990s.

But Orange County paved a different way forward for California by using indirect potable reuse – treating wastewater to drinking water standards and then putting it back underground to mingle with water in the aquifer before being pumped back out for drinking.

Add to the equation another multi-year drought (just entering year six) and increased pressure on water sources from climate change and competing interests, and many Californians now seem ready to welcome recycled water into their homes. San Diego and Silicon Valley are both on their way.

In January, the water technology company Xylem conducted a survey of 3,000 Californians to gauge their support of water recycling. Water recycling can mean water treated for non-potable purposes, such as industrial uses and irrigation, but in this survey it was defined to mean wastewater that had been treated and purified for drinking.

Of those surveyed, 42 percent were very willing to use recycled water in their everyday lives and 41 percent were somewhat willing. The numbers increase with more information. The survey found that 89 percent of people were willing to use recycled water after receiving information about how the treatment process works.

The findings are similar to what Santa Clara Valley Water District has found as they have tested their customers on the concept as well. The water district has a facility, the Silicon Valley Advanced Water Purification Center, that can treat wastewater to drinking water standards, but currently the water is only used to supplement recycled water for non-potable uses such as irrigation. In the near future (likely the next two to three years), the agency may be using the water for indirect potable reuse to supplement groundwater for drinking.

A survey the agency conducted in Santa Clara County in 2010 found that initially people were pretty opposed to the idea of one day drinking recycled water – only 31 percent were in favor of it. But after being read information about how the treatment and purification process works, 53 percent were supportive. And then after being given additional information about why it's good for the environment and helps support groundwater supplies, support rose to 69 percent.

“What we learned from that is with enough information and education you can change people's understanding and perception,” said Marta Lugo, a public information representative of Santa Clara Valley Water District. Since education is key, in 2014 when the water district opened their water purification center, they immediately kicked off a public tour program.

The results show that seeing is believing. Visitors are asked to take surveys before and after the tour. When asked how they feel about using advanced purified water to replenish groundwater to augment drinking water supplies, only 42 percent are strongly in favor of it before the tour. But that number jumps to more than 98 percent after the tour.

Similarly, before the tour only 52 percent feel the purified water is safe to drink, but after the tour 97 percent of respondents feel it's safe. And the hardest thing to get people on board with — direct potable reuse (pumping treated water directly to their homes) — goes from only 36 percent strongly supporting before the tour to more than 98 percent after the tour.

If seeing is believing, then tasting usually seals the deal. Lugo said an open-house event last October drew 900 people from the community, and more than 90 percent took a taste test. “Many were surprised when they saw, smelled and tasted it,” said Lugo. “If people see their neighbors taking a taste, or their friends and peers, they get over a psychological barrier – it becomes normalized.”

The facility doesn't offer taste tests on all their tours now, however, because it isn't regularly treating the water all the way to drinking standards since it's currently just used for non-potable purposes.

But the water agency is proactively taking their message out into the community since the majority of the county's 2 million residents won't be able to visit the purification center. Lugo said they set up tables at events like Earth Day and have launched a speakers bureau to pitch their recycled water to neighborhood, rotary and professional associations. And a bill written by area assembly member Rich Gordon was recently signed into law that would allow facilities like Santa Clara Valley Water District's to bottle their purified drinking water and give it away for free for educational purposes.

“It's great, we are very supportive of that,” said Lugo, but added, “It's tricky because for us, we haven't explored the idea of bottling water, we have a policy of not promoting bottled water for environmental reasons.”

She says that acceptance has also grown during California's drought, and being in Silicon Valley they are aided by having many tech-minded residents. But, a 2014 survey found that the biggest reason driving public acceptance of drinking recycled water is actually concern for the

environment and the fact that recycled water is good for rivers, streams, fish, plants and wildlife, she said.

The language is also important, said Lugo. People are more accepting when it is referred to as “highly” or “advanced purified water.” It’s not just semantics but an important distinction. Many Californians are already familiar with recycled water that is transported in purple pipes for irrigation and industrial uses. They are also repeatedly cautioned not to drink purple pipe water. “We had to find a way to disassociate from that, because even though we are recycling water it is not the same water in the purple pipes, it’s a step ahead of that recycled water.”

Water from the Silicon Valley Advanced Water Purification Center goes through three main processes – microfiltration, reverse osmosis and ultraviolet light. If it was to be used for drinking water, it would also receive advanced oxidation.

Next year, the California legislature is likely to begin addressing regulations for direct potable reuse, which will give another boost to the idea of wastewater as part of the water supply. But it will likely be many more years before direct potable use is widespread.

Water agencies like Santa Clara Valley Water District are moving slowly. “It’s not an overnight process, it’s taken years of education,” said Lugo. “It has only been in the last year and a half that we have moved to aggressively talking about recycled water for drinking water supplies – either for groundwater replenishment or for direct use. It’s a process, but for the most part, the community has been very supportive.”

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## **Growing Evidence Highlights Cracks in California Delta Tunnels Plan**

*An unpublished analysis shows that Gov. Jerry Brown's plan to build twin tunnels won't benefit either farmers or citizens, writes Barbara Barrigan-Parrilla, executive director of Restore the Delta.*

Water Deeply | October 4, 2016 | Barbara Barrigan-Parrilla

As Water Deeply readers already know, the Peripheral Canal was rejected by California voters in 1982 when Jerry Brown was governor. But the proposal was reborn in 2015 as the California WaterFix, often referred to as the Delta tunnels.

Recently, advocates for the Delta tunnels have been experiencing severe heartache over revelations that undermine their proposal. Using the California Public Records Act, Restore the Delta found that the state commissioned an economic analysis of the proposed tunnels, but it was never published. The Associated Press picked up the story and put it on their international wire.

“Giant tunnels that Gov. Jerry Brown wants to build to haul water across California are economically feasible only if the federal government bears a third of the nearly \$16 billion cost because local water districts may not benefit as expected, according to an analysis that the state commissioned last year but never released,” the AP reported. “The findings run counter to longstanding state pledges that the districts that would get water from the tunnels would pay the full cost.”

In the economic analysis, Dr. Jeffrey Michael, director of the Center for Business and Policy Research at the University of the Pacific, found confirmation of problems he had long suspected.

“Because costs exceed benefits for agricultural users, the report actually finds that the tunnels are not economically feasible as this requires benefits to exceed allocated costs for all users,” Michael wrote. “Thus, much of the rest of the report attempts to rationalize public subsidies to lower the costs for agricultural contractors.”

Even more troubling is the report's assumption that water yields (the difference in export water delivery with and without the tunnels) are four times higher than actually outlined in the petition to the State Water Resources Control Board.

Meanwhile, none of the agencies or water districts who promised to pay for the Delta tunnels have committed to paying for the new proposed project.

If peripheral tunnels are Moby Dick, Jerry Brown has become Captain Ahab.

As the economic and water delivery arguments for the Delta tunnels falter, tunnel boosters have launched a PR war. Corporate farms like the Wonderful Company, along with the Metropolitan Water District of Southern California, are running a PR campaign through the astroturf group

“Californians for Water Security.” Westlands and San Luis and Mendota Water Authority are funding a fake Latino group called “El Agua es Asunto De Todos.”

As the New York Times explains, “El Agua is bankrolled by more than \$1.1 million from the Westlands Water District, the nation’s largest agricultural irrigation contractor, a state entity created at the behest of – and largely controlled by – some of California’s wealthiest and most politically influential farmers.”

In a recent Water Deeply op-ed, tunnel proponent Gerald Meral serves up the same talking points he used since the Bay Delta Conservation Plan, which did not meet environmental standards and could not get federal permits. Meral’s claims remain unsubstantiated by modeling or science.

For example, Meral argues that, “... a big infrastructure project could ease the sharing of the Delta’s resources for both fish and people.” But there is little proof for that claim.

The Revised Draft EIR/EIS show that all fisheries do worse with operation of the tunnels. Taking 50 percent or more of the Sacramento River before it ever flows across the estuary is a terrible idea. The project would create new reverse flows around the new intakes that are problematic for juvenile salmon. The Revised Draft EIR/EIS shows that even smelt do worse with the Delta tunnels. Why? Fisheries do best with reduced water exports from the Delta.

The tunnels would also degrade water quality for all other beneficial uses, including drinking water for the 4 million people of the Delta.

The 2009 Delta Reform Act is quite clear: The state must reuse to reduce dependence on exported Delta water. The 2010 hearings on Delta flows at the State Water Resources Control Board found that restoration of the estuary and improved water quality begins with more freshwater flowing through the Delta and out to the Golden Gate.

The way to accomplish this is with a sustainable export regime based on sound science. Removing more water from the estuary is not being warmly received by permitting agencies – like the U.S. Environmental Protection Agency, which gave the most recent draft a failing grade.

Federal fishery agencies are also on record as being skeptical that the Delta tunnels would protect fish species suffering from the lack of adequate freshwater flows through the Delta. Their approval is still required before the project can happen.

To keep pretending the Delta tunnels, as proposed, would protect the Bay-Delta estuary and the profits of Metropolitan Water District and Westlands almond growers is like hunting obsessively for a whale while driven by a thirst for revenge.

The views expressed in this article belong to the author and do not necessarily reflect the editorial policy of Water Deeply.

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## **Twin tunnels, Delta and Tuolumne are all connected**

Modesto Bee | September 27, 2016 | Rob Santos and Paul Cambell

California WaterFix is Gov. Jerry Brown's plan to build twin tunnels under the Delta to move water directly from the Sacramento River to the California Aqueduct, which serves the urban and agricultural interests of Southern California.

These twin tunnels are supposed to prevent damage to the Delta ecosystem caused by direct pumping of water from the south side of the Delta.

The governor says that no one will get more water and no one will get less water with the tunnels project.

So why would water users in Southern California come up with hundreds of millions of dollars to construct these twin tunnels when there is no new water for them?

Their answer is that they need reliability and consistency.

The amount of water Southern California receives from Northern California varies each year. The amount is dictated by federal and state agencies and is based on the amount of rainfall and snowfall and how much water is stored each year in Northern California reservoirs. Environmental concerns also factor into the equation, and threats to the Delta ecosystem can temporarily halt the pumping of water from the Delta.

For example, in 2007, a federal agency ordered the Delta pumps be turned off to help a species of smelt found only in the Delta. So, no water flowed to Southern California.

That begs the question, if the twin tunnels provide Southern California with consistent and reliable water by pulling water directly from the Sacramento River – before it ever gets to the Delta – who makes up for the reduced amount of water that flows into the Delta?

Gov. Brown's solution? Take it from the east-side tributaries – the Tuolumne, Merced, and Stanislaus rivers.

For the governor, the State Water Resources Control Board and many of the special interest groups that profit from our state and federal water systems, this is a no-brainer.

For them, water from our rivers is new water – which can be used to offset their own, over-obligated water sources.

And they get it for free.

That is why the state water board is so insistent on an enormous increase in flows from the Merced, Stanislaus and Tuolumne rivers.

The governor would have us believe the tunnels are not related to flows. His agencies claim survival of salmon is the reason for sending water down the river. They ignore the science and demand more water.

Without the new water, approval of the tunnels becomes more problematic. The tunnels guarantee water goes south before it reaches the Delta. With less freshwater flowing in from the Sacramento River, the Delta becomes saltier. And the state water board cannot have the Delta get saltier. Hence, the need for greater San Joaquin River flows.

We become the sacrificial lambs.

The state water board wants us to release over 1 million acre feet down our Tuolumne River and into the Delta in some water years. Historically, this is the water we use to fill Lake Don Pedro – the largest reservoir in California constructed without federal or state help. This will create another “permanent regulatory drought” that will decimate one of the most productive agricultural regions in the world. The state knows this; its plan says the damage is “significant and unavoidable.”

How can the state water board ask anyone for that kind of sacrifice?

Water board officials refused to discuss the impacts of this flow project on drinking water, groundwater and irrigation water with our local governments and education officials, let alone our water and agricultural industries. The failure of the water board to discuss the assumptions and data behind the flows proposal with the people most impacted – before determining their recommendations – suggests they already had their minds made up.

They forfeit any confidence we might have had, or would like to have, in our state administration.

What can you do?

First, go to [worthyournight.org](http://worthyournight.org) to read the facts and sign our petition. Second, write to Gov. Brown and tell him what you think of his plan to take our water. Also let Felicia Marcus, state water board chairwoman, know. Then tell all of your friends and relatives across the United States that our food source is being threatened by the Delta tunnels and Gov. Brown. Attend the meetings and rallies and voice your opinion.

If they don't listen, prepare for the new Dust Bowl (not the beer) right here – in one of the most productive agricultural economies in the world.

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Dr. Rob Santos is a Turlock veterinarian and Turlock Irrigation District board member; Paul Campbell is U.S. Air Force veteran, Modesto businessman and member of the Modesto Irrigation District board.

## **Californians getting more protection from lead**

Central Valley Business Times | September 28, 2016

- New law strengthens lead exposure protection efforts
- “Will help to inform Californians about where lead pipes still remain”

Sacramento - California now has a new law that requires public water systems to gather inventories of lead pipes in use and then to provide the State Water Resources Control Board a timeline for their replacement.

Lead is a neurotoxin that is extremely harmful to the human body. Even very low levels of exposure in children can cause brain and nervous system damage, slow growth and development, speech and hearing impairment and cause behavioral and learning problems. In adults, lead exposure can cause kidney damage, fertility problems, nerve disorders and other health ailments. The U.S. Centers for Disease Control and Prevention (CDC) has determined that there is no safe blood lead level.

“SB 1398 will help to inform Californians about where lead pipes still remain and make sure that public water systems develop a plan to completely remove them from use,” says state Sen. Connie Leyva, D-Chino, the author of the law.

“California has always been at forefront in reducing lead exposure in drinking water and SB 1398 is the next step in continuing that commitment that will help to keep our state’s residents and communities safe,” she says. “The dangers from lead exposure are very real, as we have heard in communities throughout the country, such as Flint. Even here in California, almost 100 public water systems have noted high lead levels since 2012.”

California has remained a leader in reducing lead exposure in drinking water in recent decades. In 1986, the use of lead pipes and solder were banned. By 2010, all plumbing parts and water fixtures sold in California were required to be “lead-free.”

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## **Watershed too important to risk unmanaged public access**

Half Moon Bay Review | September 26, 2016 | Lennie Roberts

On Sept. 27, the San Francisco Board of Supervisors will consider a nonbinding resolution by supervisors John Avalos, Scott Wiener and David Campos that urges the San Francisco Public Utilities Commission to allow unmanaged public access into the remote areas of the 23,000-acre San Francisco Peninsula watershed, generally north of Highway 92 and west of the Crystal Springs Lakes.

The Avalos-Wiener-Campos resolution is in response to recreational advocates who have been pushing to “open up” currently protected areas of the watershed to mountain bikers, hikers and equestrians. Proponents are touting “responsible” access, but, unfortunately, not everyone behaves responsibly.

The SFPUC’s Peninsula Watershed Management Plan, which governs all activities in the watershed, weighed the risks and benefits and concluded that “access to the interior parts of the watershed to unescorted individuals poses an extreme risk of fires as well as a higher risk of degradation of water quality and ecological resources.”

The risk of catastrophic wildfire is real. According to Cal Fire, 95 percent of California’s wildland fires are caused by humans. The devastating Big Sur Soberanes fire, which has become the state’s costliest fire to fight, and the 2013 Yosemite Rim fire, which burned the largest area (257,000 acres) in the Sierra, were both started by illegal campfires in out-of-bounds areas. It would take only one match to turn the Peninsula watershed into a disaster zone.

The Peninsula watershed is not a park; it is our water supply. For more than 150 years, it has been managed to ensure its protection. Customers of Coastside County Water District would be particularly hard hit by a devastating wildfire in the watershed, as 72 percent of CCWD’s water comes from Pilarcitos and Crystal Springs reservoirs.

The watershed also has the highest concentration of rare, threatened and endangered species in the nine-county Bay Area. As a state-designated Fish and Game Refuge, it is home to mountain lions, bald eagles and threatened marbled murrelets.

There are hundreds of miles of trails already accessible to residents of the coast, the north Peninsula and San Francisco in nearby county, state and national parks, as well as in Midpeninsula Regional Open Space District preserves.

Two chapters of Sierra Club, three chapters of Audubon, two chapters of the California Native Plant Society and the Committee for Green Foothills strongly support expanding the upgrading the existing docent program in the watershed to provide additional opportunities for increased, managed access while protecting our water supply and wildlife habitats.

An expanded docent program and new partnerships with local schools, youth groups and other community organizations such as Latino Outdoors and Sierra Club’s Connections Outdoors would provide additional educational opportunities and programs for underserved communities, while still protecting the watershed’s natural habitats, endangered species, and minimizing risks.

Public surveys and polls over the years have overwhelmingly supported protection of our drinking water supply and quality over increased access and recreational uses.

The SFPUC should maintain existing controls over public access in these remote areas and improve the docent program. The increased risks of fire, vandalism, and other possible acts of destruction, are simply too great when you consider what's at stake.

# # #

Lennie Roberts is legislative advocate for Committee for Green Foothills.