

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY
BOARD OF DIRECTORS MEETING**

July 11, 2014

Correspondence and media coverage of interest between June 2, 2014 and July 8, 2014

Correspondence

Date: May 14, 2014
To: Mr. Al Mendall
From: Marc Hannigan, VP, Adams Pool Solutions
Subject: Oppose Regulation Concerning Filling Swimming Pools and Spas

Media Coverage

Water Supply:

Date: July 9, 2014
Source: Press Democrat
Article: Water bond is unfinished business

Date: July 8, 2014
Source: Modesto Bee
Article: Valley irrigation leaders warn against state's river flow proposal

Date: July 8, 2014
Source: KFSN – Fresno
Article: Federal Meteorologist: California 2 years away from running out of water

Date: July 2, 2014
Source: The Daily Journal
Article: Millions of gallons of water leaking into Bay: San Francisco Public Utilities Commission leaves broken pipe for years, system upgrades nearing completion

Date: June 15, 2014
Source: KQED Science
Article: A Fourth Drought Year for California: What are the odds

Drought News – Local

Date: July 8, 2014
Source: KTVU
Article: Drought impacts Bay Area food prices

Date: July 9, 2014
Source: Los Altos Town Crier
Article: Council approves water conservation resolution

Date: June 27, 2014
Source: San Mateo Daily Journal
Article: Let's all get brown

Date: June 25, 2014
Source: Palo Alto Daily News
Article: No mandatory water rationing this summer, PUC says

Date: June 25, 2014
Source: San Mateo Daily Journal
Article: Lack of conservation could mean mandatory rationing

Date: June 23, 2014
Source: SF Examiner
Article: Bay Area water users finally meeting SFPUC's voluntary reduction goal

Date: June 23, 2014
Source: SF Gate
Article: Make it a quickie' – SF's sexy water campaign

Date: June 21, 2014
Source: San Jose Mercury News
Article: California drought: Snowmelt's path shows impact from Sierra to Pacific

Drought News - State

Date: July 9, 2014
Source: San Jose Mercury News
Article: California poised to crack down on water wasters - \$500 fines possible

Date: July 9, 2014
Source: AgAlert
Article: Board adopts curtailment rule; exempts "seniors"

Date: July 8, 2014
Source: Calaveras Enterprise
Article: State water cops scramble to cope

Date: June 7, 2014
Source: Modesto Bee
Article: Water rights may be limited for century-old irrigation districts

Date: July 7, 2014
Source: Modesto Bee
Article: Almond grower weary of farmers being called water-wasters

Date: July 7, 2014
Source: Vacaville Reporter
Article: Water situation affects fresh fruits, vegetable availability for those in need

Date: July 7, 2014
Source: KCRA
Article: Food boxes distributed to drought-impacted families

Date: July 6, 2014
Source: Sacramento Bee
Article: Putting some myths about California's drought to rest

###



RECEIVED JUN 6 8 2014

May 14, 2014

Bay Area Water Supply & Conservation
Mr. Al Mendall
155 Bovet Road, Ste 650
San Mateo, CA 94402

RE: Oppose Regulation Concerning Filling Swimming Pools and Spas

To Whom It May Concern:

I am writing to strongly oppose recent proposals to ban the filling of new and remodeled pools. As a small business owner, these regulations threaten to put our company and others like us out of business and will do little to save water in our region.

In fact, this regulation is purely symbolic. If you look at the numbers, replacing a grass lawn with a pool will save a homeowner more than 10,000 gallons of water in that first year. Once a pool is constructed, it takes very little water to maintain. In fact, a well-maintained pool only needs about 14,000 gallons of water each year and far less if the pool is covered. When you compare that with the 44,000 gallons needed to maintain a lawn, you can see just how much water pools and spas save. If pools can't be filled or fixed this year, next year's potential water savings will be minimal.

Pool owners are part of the drought solution, and have been for decades. Each year, a single pool owner saves our region more than 40,000 gallons of water. That's enough water to fill at least two new or remodeled pools *every year*, and since pool builders and pool owners have saved the region so much water, it is unfair and draconian to single them out during this drought.

If a resident's lawn dies, do they have the right to replace it? Lawns are much more water dependent than pools, yet pool owners who have made an investment to improve their water usage are singled out and penalized.

Only time will tell what future rainfall totals will be and the impact to the district's water supply will only magnify each year. Water Districts should be focused on creating policies that will actually make a difference and not just arbitrarily going after pool builders and homeowners because they are easy targets.

For example, consider that the projected total water use for the greater Santa Clara Valley that surrounds San Jose is approximately 362,000 acre/feet of water. That equates to more than 118 billion gallons of water. The projected number of new construction and remodeled pools for 2014 is approximately 840. If the average pool contains approximately 20,000 gallons of water, the total projected water use by the swimming pool industry is approximately 16,800,000 gallons of water. This amounts to .00014 percent of the total water consumption or the equivalent of 4 drops of water in a five gallon bucket.

Now consider the economic impact. The swimming pool industry in the SF Bay Area employs thousands of people and generates more than \$50 million dollars in economic stimulus. This money trickles down to things such as millions of dollars in permit fees and jobs and payroll taxes not to mention the improvement in property values and the associated taxes. The economic impact of such a decision is SIGNIFICANT!

This concept is perhaps most easily grasped when you look at the dollars of Gross State Product that various economic sectors produce per acre/foot of water. There is not a single industry in the state that makes a more productive use of an acre/foot of water than the swimming pool industry.

<u>Economic Sector</u>	<u>Dollars (GSP2001) per Acre-Foot</u>
Rice	58
Alfalfa	65
Cotton	252
Total Agriculture:	893
Orchards	927
Vineyard	1,510
Fruits/Veggies	3,585
Schools	36,378
Food Processing	88,784
Paper and Mills	124,045
Petroleum Refining	162,274
Total Commercial:	547,153
Total Industrial	574,923
High Technology	949,614
Swimming Pool Industry	1,009,700

One more thing to consider – the water that is used to fill a swimming pool is not wasted, it is simply contained. It is being used for recreation, exercise and therapy. This water is still there regardless of how long the drought continues. It is sanitized (it can easily be made potable) and ready for emergency use should the need arise.

Pools and spas are not part of the problem; they are part of the solution.

There is always more everyone can do, including our industry. That's why we're working with the California Pool and Spa Association on a statewide education campaign. They are providing bill inserts, door hangers and displaying posters with tips for pool and spa owners. An interactive website, www.letspooltogether.com, has been launched that provides tips on saving water in and outside the house and the industry has partnered with the Association of California Water Agencies to complement the Save Our Water campaign.

Incidentally, the swimming pool industry is already undergoing involuntary, self-regulating water rationing by virtue of the publicity surrounding the drought. Requests for proposals are off by 30 to 40 percent so this is a clear indication that the public is listening. As an industry, we accept this as an inherent consequence of the current drought condition. We ask only that a measured, thought out approach be considered.

I understand that this drought is unprecedented, but this regulation is not the answer.

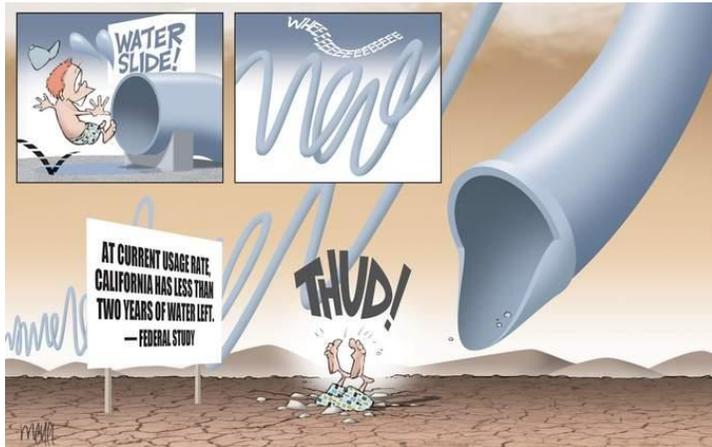
Sincerely,

A handwritten signature in cursive script that reads "Marc Hannigan". The signature is written in black ink and includes a long horizontal flourish at the end.

Marc Hannigan
Vice President
Adams Pool Solutions

(This page intentionally left blank.)

Editorial: Water bond is unfinished business Press Democrat, July 9, 2014



California legislators left for a month-long vacation with one of this year's most pressing issues unfinished: scaling a “Big Gulp” water bond down to a more manageable size.

The \$11.1 billion bond was cobbled together during a late-night legislative session in 2009, with, at the time, “earmarks added like ornaments.” Since then, the bond measure has been removed from the ballot twice because it seemed destined to fail.

As of now, however, it's scheduled to be Proposition 43 when voters go to the polls on Nov. 4. Unless legislators hack away a hefty amount of pork, its prospects for approval won't be any better than they were in 2010 and 2012.

Despite 18 months of trying, lawmakers have been unable to agree on a more responsible proposal.

Three years of drought have underscored the need for California to address its water storage and delivery system, much of which was constructed in the 1960s and '70s when the Golden State had about half as many residents as it does today.

The impacts of the drought are all around us: dead and dying lawns, dirty cars, fields left fallow. In much of the state, water agencies are urging people to use 20 percent less than last year. In some places, it's worse, with mandatory rationing limiting people to about 70 gallons a day.

With the likelihood that more frequent and more severe droughts will accompany climate change, California needs to invest in conservation and environmental restoration – the least expensive methods of protecting our water supplies.

But bonds aren't free money – even in an era of low interest rates. They must be repaid, and those payments come from the state's general fund before anything goes to education and other public services.

The bond act drafted in 2009 includes including \$3 billion for water storage, \$2.25 billion for Delta restoration, \$1.25 billion for water recycling projects and \$1 billion for groundwater restoration and protection. It also includes millions for pet projects, such as local parks, watershed education programs, dam removal and trails.

In a break with past practice, the beneficiaries of new storage, i.e. dams and reservoirs, aren't expected to repay the full cost of the project. Unlike Warm Springs Dam in Sonoma County, which is financed through local property taxes, these expansions would be paid from the state's general fund. And, as an independent analysis by the Pacific Institute pointed out, funding is less targeted than in past bonds based on economic need.

Clearly, there's room for improvement. But there isn't much time left. The deadline to place measures on the statewide ballot was June 28, but the Legislature has waived it in the past, and they'll do so again if a deal can be reached.

The state Senate considered, and rejected, a bill to reduce the bond to \$10.5 billion, before floating a \$7.5 billion plan. Several other proposals are circulating. Gov. Jerry Brown called on legislators to cut the bond down to \$6 billion, which would be easier to swallow.

None of the plans addresses Brown's \$25 billion proposal to dig two 35-mile-long tunnels beneath the Delta to deliver more water to the California aqueduct. It won't be missing from the debate this fall. Neither will the price tag on whatever bond reaches the ballot, where it could wilt like a drought-stricken lawn if legislators can't control their taste for pork.

Valley irrigation leaders warn against state's river flow proposal

MODESTO BEE, BY JOHN HOLLAND

jholland@modbee.com July 8, 2014

Irrigation districts pledged to keep up their fight against a state proposal to boost flows in the lower Stanislaus, Tuolumne and Merced rivers.

They said the proposal, aimed at improving conditions for salmon and other fish, would hit hard at the region's agriculture and lead to an increase in well pumping.

"That's water that's lost," said Herb Smart, water resources analyst for the Turlock Irrigation District. "It doesn't go onto farms. It doesn't go into storage."

The discussion came at Monday's monthly meeting of the Stanislaus County Agricultural Advisory Board, which makes recommendations on farm-related issues to the Board of Supervisors.

The State Water Resources Control Board has proposed that February-through-June flows on all three rivers increase to 35 percent of the natural conditions before they were diverted. The idea is to help young salmon get out to sea, part of the effort to rebuild fish numbers that have been reduced by dams and other changes to the rivers.

The proposal, which came out in late 2012, could go to the board for final approval by year's end, Smart said. The board could choose an amount other than 35 percent.

The February-June period is when the watersheds are getting much of their rain and snow, followed by the runoff that supplies farms and cities and generates cheap hydropower.

Critics said the change would be especially tough in a year such as 2014, one of the driest on record. TID and the Modesto Irrigation District, which draw from the Tuolumne, have cut deliveries to roughly 40 percent of the accustomed amount. The Merced Irrigation District is providing far less because of the dire state of Lake McClure. The Oakdale and South San Joaquin irrigation districts are doing relatively well this year with their Stanislaus River supply, but they could have trouble if 2015 is dry, too.

OID General Manager Steve Knell noted an estimate by the state board that the loss of surface water would mean a 25 percent increase in well pumping.

"We're talking about declining groundwater," he said. "Now we're going to pump 25 percent more groundwater?"

Smart said the board needs to consider measures that could help fish without increasing river flows. He noted a project, partially funded by OID, that restored salmon spawning habitat in the Honolulu Bar stretch of the Stanislaus, east of Oakdale. He also said nonnative striped bass are preying on juvenile salmon.

SSJID General Manager Jeff Shields said the increased Stanislaus flows would leave New Melones Reservoir too low for recreation in some years, which would harm the Sonora-area economy.

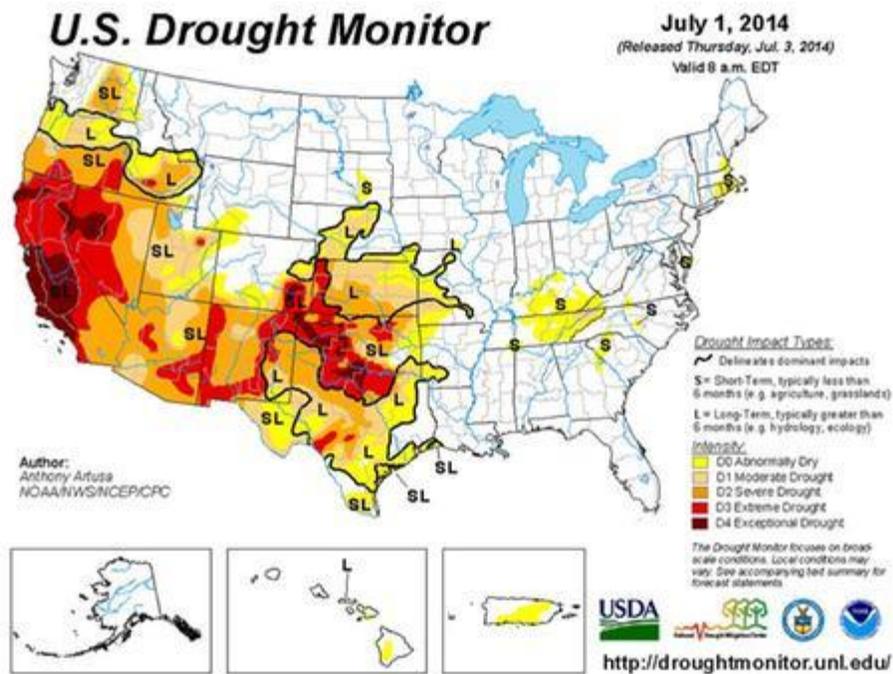
The proposed flows would somewhat mimic how the rivers functioned under natural conditions, with heavy runoff in late winter and spring and less water in other months.

"None of us lives in a natural environment anymore," Knell said. "Everything is manipulated, so let's quit kidding ourselves."

(This page intentionally left blank.)

FEDERAL METEOROLOGIST:

CALIFORNIA 2 YEARS AWAY FROM RUNNING OUT OF WATER



See full image credit below. (Map courtesy of NDMC-UNL.)

KFSN-Fresno, Tuesday, July 08, 2014

FRESNO, Calif. (KFSN) -- A U.S. Department of Agriculture meteorologist believes California is only two years away from completely running out of water.

In a recent interview with [24/7 Wall St.](#), federal meteorologist Brad Rippey said the drought has dragged on for three-and-a-half years in many parts of the country and is possibly worst in California.

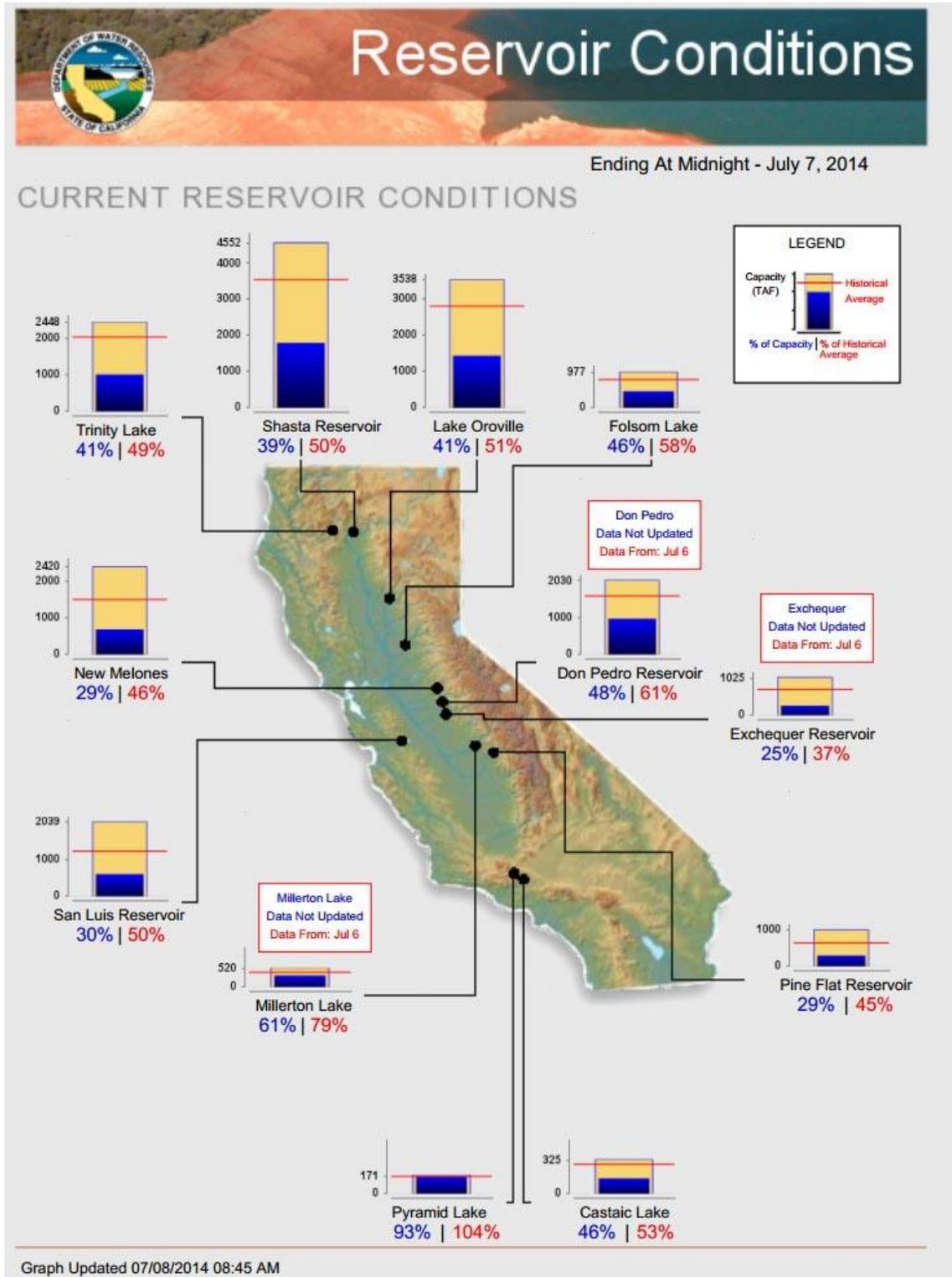
"Reservoirs which are generally fed by the Sierra Nevada's and the southern Cascades [are] where we see the real problems," Rippey told [24/7 Wall St.](#), "At [the current] usage rate, California has less than two years of water remaining."

In a February 2014 U.S.D.A. report prepared by Rippey, he placed California as the top trouble spot for this year's growing season with the rest of the Southwest as the second highest trouble spot nationwide. The same report also showed a trend, between 2011 and 2013, in which the California reservoir recharge rate has been between 70 and 79 percent of average, while the withdrawal rate has been between 136 and 140 percent of average.

Currently, according to the [United States Drought Monitor](#), the entire state of California is experiencing a "Severe Drought," 79 percent of the state is in an "Extreme Drought," and 36 percent is in an "Exceptional Drought." An "Exceptional Drought" is defined as "Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies."

CREDIT FOR THE MAP AT TOP OF PAGE: The U.S. Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC-UNL.

Current California Reservoir Conditions



Millions of gallons of water leaking into Bay: San Francisco Public Utilities Commission leaves broken pipe for years, system upgrades nearing completion

The Daily Journal July 02, 2014, By Samantha Weigel

A failed San Francisco Public Utilities Commission pipe has been pouring millions of gallons of fresh water in the Bay and will continue to do so while the water provider finishes a multi-million system upgrade slated to be completed this year.

The pipe, located just south of the Dumbarton Bridge just offshore from East Palo Alto, has been leaking an average of 25 gallons of fresh water per minute for the last four to five years. Based on the SFPUC's estimates, between nearly 52.5 million gallons and 65.7 million gallons of fresh water have been wasted since it first became aware of the leak.

Although the pipe has been leaking for years, it will soon be abandoned when the SFPUC completes its Bay Tunnel Project as part of a total \$4.6 billion regional system upgrade, said David Briggs, local and regional water manager for the SFPUC.

The SFPUC determined fixing the leak would cost millions of dollars and could be hazardous to workers who would need to be barged underneath the pipe that's approximately 15 to 20 feet above the water near a wooden pier, Briggs said.

"We've done everything we feasibly could under the circumstances. ... We're effectuating a repair as fast as we possibly can," Briggs said. "We've put all of our energy into that [Bay Tunnel Project] and it should come online in early October. In short, conducting that repair on the end of a wooden pier would not be simple, safe or cheap. And the overall leakage, I know it sounds bad, but in a regional water system that conveys 250 million gallons a day, this amount of water loss, although it's noticeable for some, it's extremely small."

The entire SFPUC regional water transmission system uses about 260 miles of pipes to carry approximately 250 million gallons of water each day from the Hetch Hetchy Reservoir to Bay Area customers, Briggs said.

The leak is coming from at least one of two approximately 60-inch-diameter pipes that span from Fremont to Redwood City and carry about 100 million gallons of water each day, Briggs said.

The pipes were built in the 1920s or 1930s and an expansion joint that's affected by the climate is causing the leak, Briggs said.

Briggs said the SFPUC checks the leak and tightens the bolts regularly and, although these pipes are a major arteries in the system, replacing them with the tunnel will help prevent future leaks.

Some are surprised and frustrated that while the government and providers push for conservation during the severe drought, a powerful utility isn't doing all it can to save the limited resource.

"I do so much to try and conserve water, and my family does too. To see that the water district is itself wasting so much water, that isn't being used, that was kind of disheartening," said Robert Snedden, a Mountain View resident who noticed the leak while on a hike along the Bay Trail with his father Scott and contacted the SFPUC. "I know it's a drought and the government puts restrictions on people using water ... it's kind of weird to see the [SFPUC] saying every drop counts but not living up to their motto."

Scott Snedden said the SFPUC has been complacent with the waste and wonders why over a four-year period the large utility couldn't have at least found a temporary fix.

"We were surprised that this leak couldn't be patched. ... Isn't that their business? They have elevated pipelines going over the Bay; you'd think they'd have equipment to maintain it. But I guess they just made the decision that somehow it's more cost effective to let it leak than to fix it," Scott Snedden said. "It's all about the money, otherwise they'd be fixing it. So I guess the money's more important than the conservation."

The SFPUC has undertaken a multi-billion dollar capital improvement project and the leaking pipes will be abandoned after the Bay Tunnel Project is completed in the coming months, Briggs said.

"We're aware that in the drought situation that we're in, of course every drop matters and we're doing everything that we can on a variety of fronts to save water and reduce demand through conservation," Briggs said.

With the new distribution system as a long-term solution, the SFPUC determined repairing the leak wasn't worth the cost or risk, said SFPUC spokeswoman Amy Sinclair.

"Because these pipes are going to be completely taken out of service, we've made that decision not to make these repairs. We also have an exemption from the State Water Resources Board for an exemption for this leak," Sinclair said.

The SFPUC recognized its infrastructure was nearing the end of its lifetime and no longer seismically safe, Sinclair said. In 2002, San Francisco voters passed Proposition A, which approved the \$4.6 billion bond to fund upgrades that include the \$288 million five-mile-long Bay Tunnel Project.

The 15-foot-diameter tunnel was dug at depths up to 100 feet and will house a 9-foot-diameter steel pipeline that will run under the Bay from Newark to East Palo Alto, according to the SFPUC. After exiting the Bay, it becomes a normal pipeline buried about 5 feet underground and terminates near northwestern Redwood City. The project assists in creating a seismically safe backbone for the conveyance system that stretches from Sunol Valley up to San Francisco, Briggs said.

The project started in 2010 and will be finished earlier than expected.

Still, as the current pipe will remain in use and continue to leak until the Bay Tunnel Project is complete, another million gallons of water could be wasted over the next month alone.

Last week, the SFPUC released its mid-year supply update announcing the Hetch Hetchy storage system stands at just 64.5 percent of its 117 billion capacity. It also announced conservation efforts were at a slow start and the SFPUC had only saved 17 percent of its 8 billion gallon year-end savings goal.

Having consumers boost conservation efforts and completing the new system upgrades is what will effectively help the Bay Area manage the drought in the long run, Sinclair said.

“We are obviously very conscious of the drought situation. But when you look at the amount of water going through our system, it’s a very small amount,” Sinclair said. “This leak is going to be short term. [The Bay Tunnel Project] is long term. ... But what people can do is really long term and that’s developing (conservation) habits.”

(This page intentionally left blank.)

A Fourth Drought Year for California: What Are the Odds?

KQED Science – June 15, 2014, Craig Miller



Low water levels at San Luis Reservoir in February, 2014. (Josh Cassidy/KQED)

Vegas has nothing on Davis.

As talk turns to whether California's drought will [stretch into a fourth year](#), two co-founders of the Center for Watershed Sciences at U.C. Davis decided to handicap it. Their conclusion: don't bet on wet.

Jay Lund, who specializes in the engineering side of water and geologist Jeff Mount, now a senior fellow at the Public Policy Institute of California, looked at more than a hundred years of precipitation records and drought patterns in the Sacramento Valley, and calculate that the chances of another winter with below-average precipitation to be nearly three in four. Lund and Mount figure there's about a one-in-four chance of a "critically dry" year, using the five-category nomenclature of state water managers. "There's a good chance that if you're in a dry year this year, you'll be in a dry year next year," says Lund. They write on the center's [California Water Blog](#):

"In all, there's a 71 percent chance that next [water] year will be Below Normal or drier and only a 29 percent chance of experiencing an Above Normal or Wet year.

Based on 106 years of record, only 13 percent of years have been Critically Dry. But the odds facing California for next year aren't as good. In the Sacramento Valley — the state's largest source of water supply — there's a 29 percent chance that the 2014-15 water year will also be Critically Dry, and a 64 percent chance that it will be Dry or Critically Dry — not favorable conditions for water management."

Given the changing climate, I asked Lund if history is a reliable gauge anymore.

“Well if history is no gauge, then maybe it’s a 50-50 chance,” says Lund. “But I think history is probably a better gauge than we’d like to think.”

Year Types	Sacramento Valley		San Joaquin Valley	
	Historical frequency (%)*	Likelihood following a critically dry year (%)	Historical frequency (%)	Likelihood following a critically dry year (%)
Critically Dry	13	29	18	55
Dry	21	35	14	0
Below Normal	18	7	16	15
Above Normal or Wet	48	29	52	30

*Source: Precipitation indices for Sacramento and San Joaquin valleys, 1906-2013
(Center for Watershed Sciences, U. C. Davis)

Clearly as things stand, anything on the dry side would be bad news. “Even if we have a wet year next year, we’re not out of the drought,” warns Mount, a specialist in river hydrology. “We’ve drawn down so much on our groundwater, we have such low reserves within our reservoirs, and our soils are very, very dry.” The two say that the likelihood of a longer drought isn’t merely statistical. For instance, after an extended dry spell, soils tend to soak up more of the rain that does fall, and that reduces runoff into reservoirs. The current 2014 “water year” (ending September 30) is on track to be the third driest on record.

Lund and Mount agree that betting on El Niño to bring rain and snow is [a chump’s game](#). In fact, says Mount, he and Lund were motivated to make their calculations in part because of all the “media froth” over the [prospects for a rainmaking El Niño](#) condition in the Pacific.

“You could actually hear the response of people saying, ‘We’re going to have an El Niño next year, so everything’s going to be fine.’”

Not necessarily, says Mount, noting that Central and Northern California lie “at the swing point,” where effects from the legendary oscillation are less predictable than in far Southern California or the Pacific Northwest. As for the Las Vegas metaphor, “Only a fool would make book on the weather,” cautions Mount. “Our predictive capacity for year-to-year weather is very, very low.”

Drought impacts Bay Area food prices

KTVU.com, By [Tom Vacar](#), July 8, 2014

ALAMEDA, Calif. — Even here in food rich California, the drought looks to be taking a bite out of Bay Area food budgets.

On Tuesday there are new projections from the government, and what that means to your shrinking food dollar. Like gasoline, we tend to notice food price increases when they climb quickly.

The Hausmans, retired and on a fixed income, did a little food shopping at Alameda's Encinal Market Tuesday.

"You have to pay attention because you tend to shop the way you've always shopped and you don't recognize that this has gone up a little bit or the packaging has changed and you're not getting quite as much," said Audrey Lord Hausman.

"Right behind me are rosemary chicken legs. We used to pay \$2 or \$3. I think they're now \$5," said husband Richard.

Scalise's Butcher Shop says meat prices have climbed steady for months. "They usually go up around this time because of the holiday, but they normally come back down right after the holiday. But, it looks like it's going to stay or continue to rise," said shop manager John Tse, whose store is in the Encinal Market.

The U.S. Department of Agriculture now predicts that beef will rise 5.5 to 6.5 percent this year. Eggs will rise 5 to 6 percent. Poultry, dairy, fruits and vegetables will go up 3 to 4 percent.

There are some meaningful exceptions. "We're seeing lettuce crops up in price 30 percent over normal price," said Steve Del Masso at San Leandro-based wholesaler, Bay Cities Produce. But, Del Masso is not sure how drought-related all this is.

Now that could be the water, but it also could be temperature. It also could be heat," he said.

Del Masso adds that prices of root crops such as celery, radishes and carrots and row crops such as chards and kales have not been hit. But melons are in short supply and tree fruits appear to be.

"You're going to see right now, July, August, September, if an effect of the drought is going to be had, now is it, How this plays out for the rest of the year we don't know," said Del Masso.

The Chipotle chain is raising chicken entrees by 4 percent and steaks by more than 10 percent. In-N-Out Burger is raising burger prices 15 cents.

(This page intentionally left blank.)

Council approves water conservation resolution

Los Altos Town Crier, Wednesday, 09 July 2014 01:04
Written by Diego Abeloos - Staff Writer/diegoa@latc.com

The Los Altos City Council June 24 unanimously approved a resolution that calls on the city to follow more stringent water conservation measures.

The council's 5-0 vote came after the Santa Clara Valley Water District reported in May that several of its reservoirs stood at less than 40 percent of its average storage over the past 20 years. In January, Gov. Jerry Brown declared a state of emergency, requesting that Californians reduce their water consumption by 20 percent to help offset demand during the current severe drought conditions. Los Altos adopted a water conservation resolution in 2009 that called for a 15 percent reduction, compared with the city's 2004 water use.

Los Altos Public Works Director Jim Gustafson told the council that the ordinance is modeled after one passed by Morgan Hill that included some "very prescriptive measures to help" residents conserve water.

Prior to the vote, Councilwoman Jeannie Bruins recommended that the city proactively educate residents on ways to conserve water during drought conditions.

"You see a lot in the news about other cities that have been proactive, and in some ways I feel like we're a little late to the game," she said. "I would like to see a big push out there so that we, as residents, know what we can do – not just acknowledging that there's a drought."

Los Altos Environmental Commission Chairman Gary Hedden told the council that "a solid majority of Los Altos residents are taking water conservation seriously."

He noted that data he recently obtained from California Water Service Co. reveals that the company's local service territory, which includes Los Altos and portions of other nearby cities, has already reduced its water use by 15 percent over the previous year.

The resolution calls on the city to reduce its water consumption by 20 percent over last year and lists several actions, which the staff report termed "voluntary," that Los Altos residents and business owners should take to reduce their water use, such as fixing existing water leaks in buildings, pools, fountains and irrigation systems; not washing hard surfaces with water; using water nozzles with a positive shutoff device; altering home landscaping with drought-tolerant plants; and refraining from watering between 9 a.m. and 5 p.m. daily.

Other recommendations ask restaurants to serve water only upon request from customers and residents to avoid filling or refilling empty swimming pools. Topping off currently filled pools to a minimum operational level because of evaporation loss is acceptable, Gustafson noted.

GreenTown Los Altos member Mike McTighe – who also serves on the city's Planning and Transportation Commission – told the council that many of the recommendations should be practiced daily by residents, regardless of the drought.

"We need to start thinking about (water) as a precious resource, because if we don't enact these measures, we're just washing it down the drain – so to speak," he said.

Mayor Megan Satterlee asked city staff to return to the council with a future agenda item to discuss implementing a moratorium on building permits for pools during a drought.

(This page intentionally left blank.)

Let's all get brown
Daily Journal , By Jon Mays
June 27, 2014,

I hate the fact that my lawn is dead. Brown, barren, now not even weeds will grow. That tends to happen when you stop watering it.

When we first moved into the house, the front lawn was basically dirt and I grew the lawn from seed. Even a sewer line break and a subsequent required 3-foot ditch did not dissuade me from returning it to green. I took a lot of care in keeping it alive and green.

But the last time I watered it was January because the usual winter rain did not come that month. I thought February would be better and I should keep it alive until the rains came. They did, a little, but not very much. And it hasn't really rained since, because, well, we are in a drought. I know this not because the governor declared it, I know this because it hasn't rained. And while I like having a green lawn, I get it, we need to conserve water.

Along with other conservation measures, I've seen my water bill drop by about a third. That may be nice, but it's not the point. I would gladly pay that extra money for a green lawn but am doing it because we are in a three-year dry spell with 2013 being the driest year on record. In February, the San Francisco Public Utilities Commission issued a 10 percent voluntary rationing request. It seems others might be like-minded and also do their part.

Alas, no. In going to different areas of California, it seems as if others have not gotten the message. Even in Folsom, the poster child for drought with its reservoir reported to be at 17 percent of capacity in January, lawns are green all over. Other cities, including those in San Mateo County, also have plentiful stretches of green expanse dotting neighborhoods.

A recent USC/Los Angeles Times poll indicated that nine out of 10 people see the drought as a "crisis or major problem," however, it does not appear that concern translates into anyone doing anything about it as evidenced by how many green lawns there are.

I'm not saying I'm a prince among men because I'm conserving water. I'm just trying to do my part. And I get the urge to continue using water because brown lawns look bad and this is America, where we can do what we want, right? But it is also an American characteristic to make sacrifices for the greater good.

We receive our water from the Hetch Hetchy Reservoir, which still has supply, but the storage system is at 64.5 percent of its 117 billion gallon maximum capacity — nowhere near ideal.

So what's next? Both the SFPUC and the Bay Area Water Supply and Conservation Agency, which represents cities and water districts on the Peninsula, have decided to evaluate water usage every month to determine if we will be required to conserve or pay penalties. What those penalties

might be has yet to be determined, but it will likely mean higher rates unless we reduce our usage. Herein lies a possibility for injustice — if we all must lower our water usage or face penalties, does that mean that those who are already conserving must lower usage even more? And does it mean that those who aren't conserving at all will have to lower their usage just a bit to avoid penalties?

It's something to keep in mind for those in a decision-making position about penalties. After all, my lawn can't get any browner.

So how about it green lawn people, can you get with the system?

Jon Mays is the editor in chief of the Daily Journal. He can be reached at jon@smdailyjournal.com. Follow Jon on Twitter [@jonmays](https://twitter.com/jonmays).

No mandatory water rationing this summer, PUC says

\Bay Area's largest water district says conservation goals are met — even though users didn't help much

BY PAUL ROGERS, Palo Alto Daily News/Bay Area News Group

June 25, 2014

The Bay Area's largest water provider announced Monday that because residents have been doing a better job of conserving water, it has decided not to impose mandatory rationing this summer. But a closer look shows that the agency's customers have saved almost no water compared to last year.

"There's no doubt that we had a slow start, but I'm happy to report water use in the past several weeks has declined, and we are making up for lost time," said Harlan Kelly, general manager of the San Francisco Public Utilities Commission, which provides water to 2.6 million people from San Francisco to Fremont through its Hetch Hetchy system.

The agency says it has met its goal of 10 percent voluntary conservation, but when total water use from January through May is compared with the same period last year, Hetch Hetchy customers are saving less than 1 percent. The agency's larger number is based on a 10 percent savings from the increased amount of water it initially projected customers would use this year.

Around the Bay Area, other water districts are also showing underwhelming results.

Despite the third year of serious drought, almost no communities have imposed mandatory rationing—meaning water budgets, fines for overuse and water cops writing tickets for people overwatering lawns or hosing down driveways.

"Most of them have fairly ample water supplies; it's not dire for them yet," said Jay Lund, director of the Center for Watershed Sciences at UC-Davis. "They also make money by selling water."

The results in the South Bay are only slightly better than on the Peninsula and in San Francisco.

"People need to redouble their efforts," said Marty Grimes, a spokesman for the Santa Clara Valley Water District in San Jose, which provides water to 1.8 million people in Silicon Valley. They need to look at their landscaping and everything else to reduce use." From Jan. 1 to May 31, the Santa Clara Valley Water District's customers have shown a 4.3 percent reduction in water use, compared to the same period last year. The agency's board asked for 20 percent in February. If January is taken out of the data, before the conservation request, the savings is 13 percent, Grimes said.

Most large Bay Area agencies generally are in better shape than other parts of the state because they have built more storage, all homes have water meters, they've put in wastewater recycling programs and they've spent years offering rebates for people to replace lawns and put in low-flush toilets.

The 26 cities and private companies that buy Hetch Hetchy water have decreased water use 17 percent over the past 10 years, even though population in the area has gone up 4 percent.

"We see that as a model for other water districts to emulate," said Nicole Sandkulla, CEO of the Bay Area Water Supply & Conservation Agency, which represents the purchasers of Hetch Hetchy water.

(This page intentionally left blank.)

Lack of conservation could mean mandatory rationing: Mid-year supply update shows public far from 8B gallon water savings goal

June 25, 2014, 05:00 AM,

By Samantha Weigel, SM Daily Journal

After announcing Bay Area consumers hadn't conserved enough water to make much of a dent in an 8 billion gallon year-end savings goal, officials urge the public to increase efforts over the summer or potentially face mandatory rationing.

Based on a mid-year supply update released Monday, the San Francisco Public Utilities Commission and the Bay Area Water Supply and Conservation Agency have decided to evaluate monthly whether consumers will be required to conserve or possibly pay penalties.

In response to a three-year dry spell and the state reeling from 2013 being the driest year on record, the SFPUC issued a 10 percent voluntary rationing request in February. Conservation proved to be minimal until a few weeks ago and if the efforts don't stay consistent, consumers could see a spike in their water bills, said BAWSCA CEO Nicole Sandkulla. Specifics on any increase have yet to be determined, she said.

"If we don't continue to see the trend we've seen in the last couple weeks [the SFPUC] could make that decision and I would support them making that decision as early as the middle of July. It's that critical that we need to keep these savings happening," Sandkulla said.

BAWSCA represents the interests of 24 cities and water districts as well as two public utility companies along the Peninsula that purchase wholesale water from the SFPUC. Nearly 2.6 million Bay Area residents receive water from the SFPUC, which sources its supplies from the Hetch Hetchy Reservoir.

As part of its mid-year review, the SFPUC announced the Hetch Hetchy storage system stands at just 64.5 percent of its 117 billion gallon maximum capacity and any available snowpack that would have contributed has already melted.

Nearly halfway through the year, customers have only saved 1.4 billion gallons of water or just 17 percent of the supplier's year-end goal, according to the SFPUC.

"We are not out of the woods yet. Mandatory rationing is still on the table," SFPUC General Manager Harlan Kelly said in a press release. "Every customer needs to redouble their conservation efforts so we can stretch water supplies into 2015 and beyond."

In previous years, once the SFPUC decides to make rationing mandatory, BAWSCA and its distributors would agree to comply and ultimately enforce its customers to as well by either charging penalties or restricting water flow, Sandkulla said.

Officials are hopeful that after increasing the message to the public highlighting the severity of the drought and offering incentives for conserving, the SFPUC will be able to succeed its goals, Sandkulla said.

“As we look at the numbers, we’re on track with where we should be for right now, but that’s assuming that we can get the largest amount of savings in the summer which is really where we’re targeting right now,” Sandkulla said.

As summer can be the most difficult and yet critical seasons for the public to increase conservation efforts, the SFPUC and BAWSCA have decided to enhance incentives, Sandkulla said.

BAWSCA has removed restrictions on the amount a consumer can collect through rebate offers and has started a new Lawn Be Gone! program, Sandkulla said.

“The biggest conservation savings is reducing outdoor water use,” Sandkulla said. “As of July 1, we’ll provide someone a dollar a square foot to remove their turf and replace it with water-efficient landscaping. So we’re really trying to recognize, we don’t want concrete-scape ... we really want communities that look beautiful but are just more water efficient.”

The same indoor conservation strategies such as turning off the water when lathering, only washing full loads, meticulously checking for and repairing any leaks and installing water-efficient devices is still critical, Sandkulla said. The SFPUC also recommends the public minimize using water to clean outdoor surfaces, avoid washing one’s car at home by using a commercial car wash instead and restaurants have also been advised to only serve water when requested.

At a certain point, there’s only so many behavioral changes an individual can do short of not showering, that’s why focusing on outdoor water consumption is critical during the summer, Sandkulla said. People should only water their plants, trees and lawns just enough to keep it alive, Sandkulla said. Although it may not be as aesthetically appealing to see a brown lawn, ensuring there’s enough supply for critical human uses is worth eyesore, Sandkulla said.

“This is a serious drought unfortunately, which means we’re going to have to take some serious actions. ... And while it’s visually hard to look at sometimes, it doesn’t affect your lifestyle as much,” Sandkulla said. “If it means to continue to have drinking water and you have a brown lawn, to me that’s an easy thing to do.”

Individuals should check with their local water supplier for various rebate offers. For more information about BAWSCA and to learn more about the Lawn Be Gone! Program visit www.bawasca.org. For more information about the SFPUC visit www.sfwater.org/conservation.

Bay Area water users finally meeting SFPUC's voluntary reduction goal

SF Examiner/June 23, 2014/By Chris Roberts @cbloggy

After a free-flowing spring, some Bay Area water users have saved themselves from a long, hot summer of mandatory cutbacks and higher bills.

But there's still a long way to go — and a lot of lawns that need to die — before the Bay Area saves enough precious fluid to weather the current drought.

The San Francisco Public Utilities Commission's 2.6 million water customers — in San Francisco, San Jose, on the Peninsula and in the East Bay — were put on notice in January to reduce water usage by 10 percent. That was an easier goal than Gov. Jerry Brown's call for a statewide 20 percent reduction.

But the 10 percent cut did not happen at first. Instead, [SFPUC customers responded to "voluntary conservation" by using more water](#), prompting warnings that mandatory 20 percent cuts could be imposed.

However, four straight weeks of on-target water savings mean that mandatory cutbacks will not happen for now.

Despite cutting water use by the 10 percent target only once since February, SFPUC customers met the savings goal in late May and exceeded it in mid-June, according to weekly tabulations of water use.

"People are changing their behavior," said Harlan Kelly, the SFPUC's general manager, adding that he believes consistent messaging — and an end to spring rains, which might have given people the impression that they could use water as normal — has finally taken hold.

But if water use spikes again, the SFPUC could "reconsider at any time" a mandatory reduction in use, Kelly warned.

To date, users have reduced water consumption by 1.4 billion gallons, according to SFPUC data.

But to finish 2014 at 10 percent under the prior year, some 8 billion total gallons will need to be saved. That could prove difficult now that it is summer, when water use is at its highest.

This means watering the garden less, keeping the swimming pool empty and taking shorter showers, among other cutbacks, officials said.

"It is as simple as everyone doing their bit," said Steven Ritchie, the SFPUC's general manager for water.

To drive that message home, the SFPUC is launching an ad campaign. Muni buses and billboards will carry messages to remind users to change their daily habits.

Along with San Francisco, SFPUC delivers water to homes and businesses in other parts of the Bay Area. Daily demand ranges from as low as 170 million gallons a day in the winter to 270 million gallons a day in the summer.

A 10 percent savings would mean reducing usage to an average of 209 million gallons a day.

In The City, total water use has stayed steady at about 69 million gallons a day, down from 75 million at this time last year, according to recent SFPUC data.

Not every water agency in the state has taken measures to address the drought.

Only 53 percent of agencies have “formally invoked their drought or water shortage plan,” according to the California Water Resources Control Board.

Bay Area water users are already far stingier than their counterparts elsewhere in the state. Sacramento-area water users were recently lauded for cutting use. But on average, a customer there uses 160 to 170 gallons a day, whereas the average San Francisco customer uses about 49 gallons a day.

That’s mostly due to the fact that there aren’t as many lawns to water or pools to fill in The City, where the biggest water users by volume are businesses like hotels.

In the Bay Area suburbs, meeting savings goals will require homeowners “to let their lawns go brown,” said Nicole Sandkulla, CEO of the Bay Area Water Supply and Conservation Agency.

That’s good news to some commercial property owners in San Francisco who say they already implemented water-saving measures before the drought.

The Embarcadero Center, for example, put in low-flow toilets and urinals, said Danny Murtagh, the complex’s director of operations.

“We’re misers with water,” he said, adding that the complex’s four buildings recycle the water used in their cooling towers and hand-water landscaping.

“The low-hanging fruit has already been picked off the tree,” he added.

Make it a quickie' - S.F.'s sexy water campaign

SFGate, Kurtis Alexander

Updated 7:23 pm, Monday, June 23, 2014

Saving water is sexy.

At least that's what San Francisco's water department wants you to think with its new provocative ad campaign urging conservation during the drought.

A series of newspaper ads and billboards launching this week encourages customers to "Make it a quickie" (in the shower) and "Get paid for doing it" (replacing an old toilet). Similarly suggestive television commercials, featuring smooth jazz and a woman fondling a toilet handle, are scheduled to begin airing next week.

"It's somewhat provocative, and it's intended to be provocative," said [Vince Courtney](#), president of the [San Francisco Public Utilities Commission](#).

The ad blitz comes as the agency, which provides water to about 2.6 million people in San Francisco and some suburban areas, reels from a record three-year dry spell. Utility officials said Monday that supplies from the High Sierra are at just two-thirds of capacity when they should be flush with spring snowmelt.

"What you see is what you get," said [Steve Ritchie](#), assistant general manager for water system operations. "We're not going to get any more rain until at least October."

The goal of the \$300,000 campaign is to get customers to reduce water use 10 percent under the utility's initial projections for the year. It announced the target in January, but savings have been slow to come.

Customers averaged 5 percent savings through May, but conservation efforts in June improved to the desired level, water managers said. If the trend continues during the high-use summer months, they said, the supply should remain in good shape for this year and next.

If conservation efforts falter, however, managers are prepared to consider rationing.

The Public Utilities Commission is among many water agencies in the state pressing conservation during one of the worst droughts in decades. Some communities have put in mandatory cutbacks, with heavy fines and caps on use.

In January, Gov. [Jerry Brown](#) asked Californians to voluntarily reduce water use by 20 percent but left it up to local water agencies to do what they needed to get by. Every community, depending on its water source, is in a different situation.

Racy ads aren't exactly new for San Francisco's utilities agency, the largest in the Bay Area. The department's sewer division recently pushed a publicity campaign with the message, "Your #2 is my #1."

Kurtis Alexander is a San Francisco Chronicle staff writer. E-mail: kalexander@sfchronicle.com Twitter: [@kurtisalexander](https://twitter.com/kurtisalexander)

California drought: Snowmelt's path shows impact from Sierra to Pacific

By Lisa Krieger

lkrieger@mercurynews.com

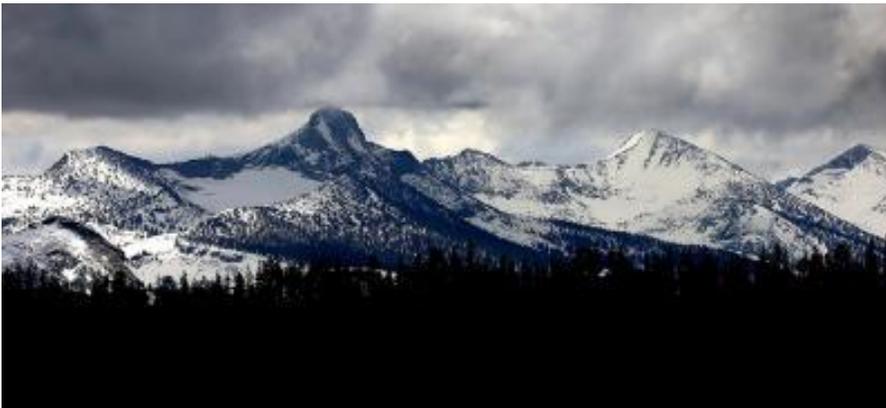
POSTED: 06/21/2014 03:56:24 PM PDT [46 COMMENTS](#) | UPDATED: 15 DAYS AGO



When a single snowflake falls peacefully atop a Sierra peak, it begins a turbulent journey to help quench the thirst of a drought-stricken state.

In most years, Sierra snow provides a third of California's water supply. But it is by far the least reliable portion — and now, after three years of historically low snowfall, tensions are soaring over how we share the shrinking bounty of this great frozen reservoir.

Today, on the cusp of a long, dry summer, we follow the melting snow — and meet its dependents — along one of its many routes from remote peaks to thriving communities around the Golden State.



Snow-covered mountains of the Tuolumne River watershed are photographed on Wednesday, May 7, 2014, in Yosemite National Park, Calif. After three years of low snowfall, tensions are soaring over the use and rights to California's limited water supply. Like almost every river in California, the Tuolumne is oversubscribed: fishermen, kayakers, farmers, and electric plants lay claim to the water before it flows into our faucets. (Aric Crabb/Bay Area News Group)

As our snowmelt travels the 300-mile path from Yosemite's Mount Dana to the sea, it meanders through the Tuolumne River watershed, past hydropower plants and nurseries, wildlife refuges and chemical plants, vineyards and the San Francisco Bay Area, where it provides water for millions of people.

Each of these water users, linked by a reliance on this fragile resource, has a legal right to some of the flow — and a growing need to insist on those claims.

The trouble is, in an average year, five times more water is committed than flows through all the state's rivers and streams combined, according to new research by University of California scientists. ([Chart: Overdrawing California's rivers.](#)) The state's population growth will further boost this demand. And climate change predictions suggest our water supply will only continue to diminish.

The Tuolumne's story is typical of so many other stressed rivers in the spacious and sunburned state, where a century-old system of water rights divvies up a precious resource for California's vibrant 21st century economy and 38 million residents.

“We've created a false sense that there is sufficient water to meet everyone's needs,” said Theodore Grantham, a UC Davis watershed researcher who co-wrote the new analysis on the state's water demands.

“Now, there's a crisis. But it is also an opportunity. Crisis breeds innovation.”

Trickling into the Tuolumne, our journey begins

Yosemite National Park, birthplace of Tuolumne River (Mile 0)

Drifting down from pewter skies, our snowflake lands here: the volcanic shoulder of Yosemite's 13,061-foot-high Mount Dana, one of the highest peaks in the Tuolumne River watershed.

Stationed on the mountain, a tiny sensor gathers snowfall data for Frank Gehrke, the don of Sierra snowpack. Several times a year, the Department of Water Resources engineer drives to Tioga Pass, straps on his cross-country skis and trudges in the thin air to check the accumulation.

The season's most important tally, taken April 1, revealed dismaying news, despite late March snow: only 16.8 inches of snowpack, about 40 percent of the historic annual average of 42 inches. Overall, the Sierra snowpack was 32 percent of average — the lowest level on April 1 since 1988. Gehrke, 66, uses his measurements as the basis for models and forecasts that help allocate the year's water supplies — a report that he says “drives the whole economy.”

Miles downstream, in a pine-scented forest, Yosemite hydrologist Jim Roche tests the cold snowmelt after it has trickled down granite, drained into a magnificent canyon and emptied into the pristine Tuolumne.

One day last month, he measured temperature and clarity as he crouched over a small stream above Hetch Hetchy Reservoir, then descended 3 miles to a lush wetland, where he measured the water's velocity. He found the water flowing at 81 cubic feet per second, compared with typical late-May flows of 300 to 1,000 cubic feet per second. A colleague's measurements also worry him: The ice pack on Yosemite's nearby Lyell Glacier has decreased by 60 percent since 1900.

Here in the deep wilderness, the findings of these scientists influence many urban decisions: Does our water need to be filtered? What will it cost? Is there enough so we can water our lawns and wash our cars?

Following the meandering Tuolumne River shows the answer is complicated. When there is not enough water to supply everyone's needs, a generations-old pecking order of claims determines who gets the most. But this year, almost everyone will get less than they want.

At Hetch Hetchy, signs of an alarming shortage

Hetch Hetchy Reservoir (Mile 35)

Moccasin Power Station (Mile 80)

The wild river, clear as chilled gin, is trapped at Hetch Hetchy Reservoir, built in the 1920s to provide water security to fire- and earthquake-ravaged San Francisco.

In a normal year, so much water flows from the snowpack that the reservoir is filled, and emptied, three times. This year, the reservoir is unlikely to fill even once.

That's a big problem at this critical junction, where three different groups have rights to the water.

Some belongs to two farm irrigation districts downstream. Other water is devoted to wildlife.

But Hetch Hetchy's central purpose is collecting water for 2.6 million residents of the San Francisco Bay Area. From here, the water passes unseen through granite into the Canyon Power Tunnel, before it is delivered 167 miles — in and out of reservoirs, beneath rolling foothills and under the San Joaquin Valley floor — to an increasingly congested and thirsty Bay Area.

“We have enough water for another two years as long as we conserve,” said Steve Ritchie, an assistant general manager with San Francisco's PUC. “The thing is, what if there's a three-year, or four, or biblical drought? You have to be prepared to deal with that.”

Even though it's first along the river, the San Francisco Public Utilities Commission, which manages Hetch Hetchy, can't just take all the water it wants. It is required to release water downstream so irrigation districts in Modesto and Turlock with older claims on the river get the water they are guaranteed.

The water here plays yet another important urban role: energy generation.

Thirty miles from Hetch Hetchy, it plunges down a 1,000-foot ridge at the tiny town of Moccasin, an old stagecoach stop, where it is funneled into turbines to generate 1.6 billion kilowatt hours of power a year.

As a low-cost, no-pollution energy generator, hydroelectricity is a coveted power source. The Moccasin turbines generate so much energy, with such regularity, that they power much of San Francisco — from Muni buses and schools to the airport and port. Electricity is also sold to irrigation districts and on the open market.

This year's low flow, however, means less electricity, Ritchie said. Normally, these turbines produce \$7.7 million worth of energy to sell to irrigation districts and another \$8.3 million on the open energy market. This year, there's enough to power the city, but the commission expects to sell only \$1 million to \$2 million to irrigation districts — and nothing else.

Uncharted territory for region's tourism industry

Don Pedro Marina (Mile 95)

Where rugged mountains give way to ruddy cliffs, the springtime pulse of the river downstream from Hetch Hetchy is a joy to those who raft, paddle kayaks or float in houseboats.

The sporadic bursts of water mean that three Tuolumne County kayak companies can continue to earn a living here, amid blue oaks and bald eagles — part of a bustling tourism business that also includes camping, fishing and visits to Gold Rush towns.

But the overall flow is too weak to fill Don Pedro Lake — the main holding tank for several hundred square miles of productive Central Valley farmland and Modesto's drinking water. What enters the reservoir is going out even faster.

Water levels are plummeting 6 to 8 inches every day; by fall, the 830-foot water level is expected to drop to 678 feet.

To protect his valuable houseboats, with their Jacuzzis, wet bars, dishwashers and TVs, the reservoir's resort manager is consolidating three marinas to the one on the deepest parts of

Don Pedro, spending \$30,000 on electric cable and thousands more for extra buoys, longer lines, boat slips and anchors.

Campers are rethinking plans, with reservations lower than they have been in the last six years, said Jim Smith, the marina's general manager.

“This is totally uncharted territory for me,” said Smith, 56, his face creased and weary from working 10-hour days, seven days a week. “You adapt, because Mother Nature is not going to adapt to us.”

Falling water levels do offer new adventures, such as exploring the now-exposed remnants of the historic Eagle-Shawmut gold mine. Hikers are finding specks of gold in dry creek beds, as well as lost cell phones and sunglasses. However, the lure of those activities might not pay Smith's bills.

Downriver, thirsty farms claim historic rights

Hickman (Mile 120)

The water in Don Pedro Lake was promised long ago to entrepreneurial farmers who built the dam and created the Turlock and Modesto irrigation districts. About half of the 1.7 million acre feet of water captured by the Tuolumne River watershed goes to their farms. San Francisco's PUC gets about 12 percent, and the rest goes downriver.

These mighty districts — whose canals extend for more than 400 miles — sit atop the Tuolumne River's human pecking order because they made their claim in 1887, under a water rights system that emerged with the early settlement of California known as “first in time, first in right.” Their access to water trumps San Francisco's. But they rank below the rights of wildlife, which are protected by federal law — a major source of conflict in the region's age-old fight for water.

Successful use of water has increased the productivity of the farms. At Frantz Nursery, which has 150 employees and has grown from 5 to 40 acres, millions of plants are shipped to places ranging from Costco warehouse stores to Larry Ellison's Woodside estate.

“Were it not for the Tuolumne River, our business would not exist today as it is,” said Michael Frantz, 37, a second-generation nurseryman and board member of the Turlock Irrigation District. “It is the economic driver that enables us to be here. This entire region relies on the surface water diverted from the Tuolumne.”

But the drought dries up even this long-held guarantee of water — a fact that worries Frantz, who will get only half of his normal allotment of water this summer, as the irrigation district tries to conserve.

“I love this river,” said Frantz, who as a boy built campfires, dug up clams and fished along its banks, then learned how to shovel, replot seedlings and fix irrigation pipes. Now, he has invested \$1 million in a system that traps, treats and reapplies irrigation water to the vast rows of plant containers.

“We're nervous,” about reductions, he said. “We've done the math and we think we are going to be fine. But it's going to be close. We're not applying any more water than we have to.”

WHO HAS WATER RIGHTS?

In California, we don't own water. Rather, we just have the right to use it.

Who has water rights? How much water is allotted to each user? To find, go to this interactive map, produced by the New California Water Atlas: <http://projects-ca.statewater.org/water-rights>.

There is a pecking order to these rights, regulated by the State Water Board, which determines who can take water when there's not enough to go around.

Riparian rights: The oldest and most senior of rights, dating back to English common law, given to owners of waterfront property, who must share water with other waterfront owners.

Appropriative “senior” rights: Next in line, these are given to users who aren't connected to waterfront property but who made a claim on a river, stream or lake before 1914 under a long-held Western tradition of “first in time, first in right.” Not subject to permit or license.

Appropriative “junior” rights: Given to users who aren't connected to waterfront property and filed after 1914. Must obtain permit and license from state.

Slowly, nature recovering from human intrusion

San Joaquin River National Wildlife Refuge (Mile 175)

Where the clean and graceful Tuolumne merges with the muddy San Joaquin River, creating a vast Delta floodplain, wildlife biologist Eric Hopson is helping reclaim a damaged landscape.

About 95 percent of the San Joaquin Valley's riverfront wetlands have been lost to farming and urban development in the past century. Gone are the vast flocks of migrating birds that once darkened their skies.

But this precious confluence west of Modesto, surrendered by farmers who tired of constant flooding, is beginning to return to the wild.

“It’s like a small museum — a relic habitat,” said Hopson, who lives on the refuge with his wife.

He strides through hip-high brambles in the 7,000-acre San Joaquin River National Wildlife Refuge, looking for signs of the riparian brush rabbit and listening for the “cheedle-cheedle-chee” call of the least Bell’s vireo.

Both species — absent for more than 40 years — again have been sighted along the river banks.

Here, the water is carving new channels through old fields, where volunteers have planted thousands of native trees.

“The river is reclaiming itself,” said Hopson, the refuge’s assistant manager.

But suburban sprawl casts a long shadow over its future. The refuge is an isolated island of wilderness surrounded by an encroaching sea of Central Valley development.

And while nature can rebound after a drought, Hopson worries that our efforts to manage the extreme flows of the river could threaten this biological success story.

“Lack of water is hard on vegetation and wildlife. But it can adapt, over millennia,” he said.

“But if the cycles go from raging floods one year, to droughts like we’ve had over the past three years, that’s hard,” he said.

“Boom and bust, flood to drought — that does not bode well for wildlife.”

Closer to the bay, industry frets over unstable supply

Pittsburg (Mile 205)*

** — Water delivered from federal Central Valley Project*

There’s something special about the Pittsburg location of giant manufacturer Dow AgroSciences: Unfettered access to water. As a waterfront property owner, Dow has the right to pump water directly from the Tuolumne-fed San Joaquin River.

But for decades, the chemical plant — located along the New York Slough, near the broad, slack mouth of Suisun Bay — has relied on a less expensive strategy: Buying water from the local provider, the Contra Costa Water District, which gets its supply from the federal government’s Central Valley Project. It’s shipped via aqueduct from the Tuolumne-fed Delta.

This year's drought, however, has forced some rethinking about this longtime relationship.

Dow worries about its future, because the federal government is curbing supplies. A company that had its start as the 40-acre Great Western Electrochemical Co. now needs at least 300 million gallons a year — 500 to 600 gallons a minute — to fill a global hunger for fumigants, antimicrobials and pesticides.

It's one of several major industrial manufacturers in the area that rely on massive amounts of water, such as the steel-finishing plant USS-POSCO, owned by U.S. Steel and Korea, and refinery Tesoro Corp., which markets Shell, Arco and other fuels.

The largest chemical plant west of the Mississippi, with 350 employees, Dow uses Delta water to fill five-story-tall cooling towers and the “scrubbers” used to clean gas emissions before they are vented from smokestacks. It also needs super-clean water for direct use in its products.

“Water, like energy, is a large part of successful manufacturing,” said Randy Fischback, Dow's spokesman.

So Dow is studying how to extract and purify water directly from the slough — a possibility thanks to the company's rights to the river water. Environmentalists are bound to raise concerns. But so-called “riparian rights” are among the most protected water rights in the state, said Timothy Moran of the State Water Board. Although Dow would be required to file its intentions with the state, it would not need a permit.

“It helps us control our own destiny,” Fischback said.

In Livermore, making wine from ever-dwindling water

Livermore Valley (Mile 230)*

** — Water delivered from State Water Project*

Like so much of Northern California's surface water, the snowmelt joins the giant junction of the San Joaquin-Sacramento River Delta, the largest estuary on the West Coast and a vital water supply for 25 million people and more than 3 million acres of farmland.

But Californians have been fighting over that water, much of it diverted by state and federal canal systems, since the 1930s.

When there isn't enough fresh runoff into the Delta, it turns salty and polluted. The perilous future of the Delta is pitting farmers against fish and turning this critical intersection into one of California's biggest environmental conflicts.

Gov. Jerry Brown backs a contentious \$25 billion plan to re-engineer the estuary by diverting water south around the Delta through two massive tunnels.

The impasse frustrates fourth-generation Livermore winemaker Phil Wentz, who is entrusted with the survival of a vineyard that has been in his family since 1883 and has watched the Delta debate rage for years.

Since its founding, Wentz Vineyards has grown from 47 to 3,000 acres, adding a restaurant, concert performances and championship golf course. It attracts tourists and boosts local real estate values.

But the unreliability of water puts all that at risk. Wentz, along with other Valley vineyards, has been told to expect only three-quarters of his usual water allotment this year. It could be far worse: For the first time in its 54-year history, the State Water Project is providing no water to urban residents or farmers this year. But Wentz's water provider, the Zone 7 Water Agency, is filling the gap by pumping groundwater and tapping reserves. Wentz uses drip irrigation and other conservation measures to stretch his supply.

Still, he's worried about the future. The upstream diversion of Tuolumne water to urban areas is starving the Delta, he said.

“My concern is that if we're never going to fix the Delta, & we should move on and find another way to create a reliable water system” he said.

A diminishing catch, and a disappearing way of life

Berkeley Marina (Mile 290)

Out to sea beyond his berth at Berkeley Marina, where stinging winds whip the Pacific into a froth of whitecaps, fisherman Mike Hudson has seen large sharks and battled treacherous 16-foot seas.

But what really scares him is the shrinking king salmon population — and the loss of the fresh-flowing water needed to support his ancient way of life. Three decades ago, California had 4,000 licensed salmon boats; now, the number has fallen to 1,200, only half of which go out every year.

The salmon he seeks take a journey much like the snowflake, hatching in cold waters and then migrating to the ocean. But as the Tuolumne and other rivers dwindle, there is less water to flush the young fish out to the Delta, which already is a tough neighborhood for baby salmon to navigate. Moreover, adults have a hard time returning up the river to spawn — due to all the dammed reservoirs.

Once, millions of salmon swam off California's coast. This year's population is estimated at 630,000. The drought has triggered emergency measures to save them from extinction, with the state shipping baby salmon, by truck, because there's not enough water for them to swim.

And fishers like Hudson are disappearing with the diminishing catch. Three years ago, when populations dropped so low that fishing was banned, "some guys threw in the towel," he said. "You cry a lot."

"The rivers are just shadows of what they used to be," said Hudson, who fishes 75 miles offshore between Monterey and Bodega bays and sells his catch at the Berkeley, El Cerrito and Kensington farmers' markets.

"Spring runoff is a conveyor belt of precious cargo — baby salmon — to the ocean. Now we don't have the same type of runoff," he said.

"All fish need is water," said Hudson, shaking his head. "Just add water."

Reliable water? Residents 'absolutely take it for granted'

San Carlos (Mile 210)*

** — Water delivered through Hetch Hetchy Aqueduct*

The snowmelt simmers in San Carlos, on a cooktop in Suzanne Emerson's kitchen, where it melts paraffin for daughters Jessica and Katie's Girl Scout project.

This Tuolumne River water didn't make its way here by meandering past the houseboats at Don Pedro Lake, the nursery in Hickman or the willows in the San Joaquin River National Wildlife Refuge. It came directly from Hetch Hetchy, 160 miles east, through a network of pipes and tunnels to the Crystal Springs Reservoir west of San Mateo.

It's the water that rinses the Emerson girls' freshly brushed teeth, quenches their thirst and waters the small yard, where they climb into a tent to celebrate summer with friends during a backyard slumber party.

"I am glad we have a good source of water here that we don't need to worry about," said Emerson, 46, an environmental consultant and co-founder of the volunteer group San Carlos Green.

"There's no fear of contamination, or an 'off' flavor," she said. "And it gets here through pipes that go all over the place."

Still, in this third year of drought, like most municipal water providers, the San Francisco PUC has been asking for voluntary reductions but is now considering mandatory restrictions. San Carlos, for instance, has asked its residents to cut water use by 20 percent.

To conserve, the Emerson family has swapped out 1940s-era toilets, shower heads and faucets with new, more efficient ones. Water use bumped up slightly when preteens Jessica and Katie started daily showers. Then it fell a notch after the yard was relandscaped.

The Emerson family of four uses 125 to 175 gallons of water a day — far above the 5 gallons of water used by the average African family, but far below California's per-person average of 196 gallons a day.

If they lived, instead, in a developing country, Emerson might walk an average of 4 miles a day to collect water — balancing on her head a bucket weighing about 40 pounds.

At a kitchen table with neighbor Christine Meeks, the women's conversation turns to the role that pristine Sierra snow plays in their comfortable Bay Area lives — and the engineering marvel that delivers it, almost invisibly, to their faucets.

“We absolutely take it for granted,” said Meeks.

In this historic drought, however, with so little water to share, nothing is guaranteed anymore.

(This page intentionally left blank.)

California poised to crack down on water wasters -- \$500 fines possible

San Jose Mercury News, By Jessica Calefati

07/09/2014

SACRAMENTO -- Few Californians listened earlier this year when Gov. Jerry Brown begged them to conserve water. So now, with no end to the extreme dry weather in sight, state officials are poised to slap water wasters with unprecedented fines of up to \$500 a day.

Drenching your lawn or washing your car without a nozzle on the hose would be among the violations that trigger penalties under emergency conservation rules the state Water Resources Control Board is set to consider next week. If approved, the new regulations -- which would represent the first time the state has imposed mandatory statewide restrictions and fines on residential outdoor water use -- would take effect Aug. 1.

"Having a dirty car and a brown lawn should be a badge of honor because it shows you care about your community," Felicia Marcus, the board's chairwoman, told reporters in a teleconference Wednesday. "We don't know when it will rain again. It's prudent to act as if it won't."

Marcus warned Californians to prepare for further restrictions. "What we're proposing here as an opening salvo is the bare minimum," she said. "If it doesn't rain later this fall, we certainly will consider more stringent measures."

Mandatory and voluntary restrictions at a local level has so far resulted in a statewide water use reduction of 5 percent through May -- short of the 20 percent sought by Brown.

Water regulators are hopeful the state's residents will respond as well as they did in the last severe drought in 1976 and 1977, when Brown -- who was also governor then -- called for statewide conservation measures and Californians responded by reducing water consumption about 20 percent.

Although the overwhelming majority of California's water is used to irrigate Central Valley farms, the new regulations would target urban water users. In some cities and towns, Marcus said, more than half of the water is used on landscaping.

In addition to prohibiting excessive lawn-watering and irresponsible car-washing, the new rules would block water users from power-washing hard surfaces and using potable water in decorative fountains if the water isn't recycled. Indoor water usage for laundry, dishwashing and showering, however, will remain unrestricted.

The proposed rules also apply to urban water suppliers, who must implement plans to restrict customers' outdoor water use if they haven't done so already.

Agencies that fail to comply could face fines of up to \$10,000 a day, but while public water utilities will be bound by the new rules if they're adopted, private water providers like the San Jose Water Co. will be encouraged but not required to participate in the conservation plan. The reason is the water board has no authority to regulate private water usage.

"We're not saying 'They shall.' We're saying 'They should,'" Marcus said.

Officials of San Jose Water, which has about a million customers, did not return repeated phone calls Wednesday for comment.

Public water suppliers in the Bay Area on Wednesday generally characterized the state's plan as a modest way to get Californians to conserve water amid a seemingly endless drought. But some questioned how the rules will be enforced, especially in areas like San Jose that are largely served by private water companies.

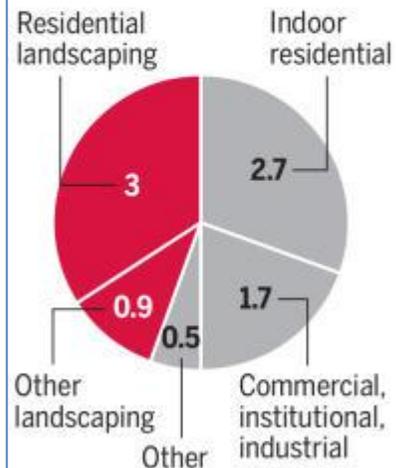
State water officials said communities will have broad discretion to decide how aggressively to enforce the proposed rules, should they be adopted, and decide whether local water department employees or police should be writing tickets for violators.

The five members of the water board are appointed by the governor. They are acting under Brown's emergency drought proclamation in January and a related executive order in April, in addition to drought legislation he signed in March.

Urban water use

A breakdown of urban water use by sector from 1998 to 2005 shows that outdoor irrigation (residential and other landscaping) accounted for 3.9 million acre-feet, or 44 percent of total urban water use.

In millions of acre-feet



Note: One acre-foot is roughly a one-year supply for two families of four.

Source: Department of Water Resources

BAY AREA NEWS GROUP

"I think what they're calling for are common sense measures that people should be doing anyway -- perhaps in all years," said Bert Michalczyk, general manager of the Dublin San Ramon Services District. "I generally have reservations about mandatory measures from the state because of the wide diversity of water situations in California, but this seems like a reasonable minimum."

Marty Grimes, a spokesman for the Santa Clara Valley Water District, a water wholesaler, said the district is encouraged by the state's interest in greater water conservation. Having state mandates will "make it easier in many ways" for the water district's customers to restrict water usage, he said.

The reaction of water customers, too, seemed generally positive.

"Brilliant," said San Jose resident Amanda Stoner. "I believe that only a proper fine will get people to make them understand that we are in a drought."

Eighty percent of California is currently experiencing extreme drought. More than 400,000 acres of farmland are expected to be fallowed, thousands of people may be out of work, fish and wildlife species are threatened, and some small communities are at risk of running out of water.

Earlier this year, meteorologists predicted a drenching El Niño might break the stubborn drought, but those predictions have since been downgraded, leaving Californians wondering if and when the dry weather will ever let up.

The Dublin San Ramon agency has already imposed more stringent water use restrictions on its customers than what the state has proposed. So far, the district has fined 45 violators and sent out warning letters to roughly 500 first-time offenders.

The Contra Costa Water District has no plans to ask police for help enforcing its mandatory water use restrictions this year because water wasters typically shape up when contacted by the district, spokeswoman Jennifer Allen said.

So far this year, the district scolded 200 customers, mostly for watering lawns during the day, and only four of them needed a second call from a water district official before stopping, Allen said.

In Berkeley, peer pressure has become a powerful tool to stop people from wasting water, said Andy Katz, the East Bay Municipal Utility District's board president. "It's pretty obvious when people aren't doing their part," he said.

Despite not facing mandatory water use restrictions, the 1.3 million people in the public East Bay water district have reduced their water use this year by more than 10 percent compared with last year.

Elsewhere in California, however, Brown's calls to reduce water use voluntarily haven't gone over smoothly. Some Bay Area water districts have seen reductions of as little as a single percentage point.

PROPOSED WATER USE RULES

To promote water conservation statewide, the state Water Resources Control Board next week will consider temporary emergency water conservation rules with maximum \$500-a-day fines for violators. The proposed regulations would prohibit:

- Using water to wash down any hard surface, such as a driveway, patio or sidewalk.
- Landscape watering that runs off into adjacent property, non-irrigated areas, private and public walkways, roadways or parking lots.
- Washing an automobile with a hose unless it has a shut-off nozzle.
- Using potable water in a fountain or decorative water feature, unless the water is recirculated.

Board adopts curtailment rule; exempts 'seniors'

AgAlert, Issue Date: [July 9, 2014](#)

By Christine Souza

After making a change to exempt holders of senior and riparian water rights from its curtailment orders, the State Water Resources Control Board unanimously adopted emergency regulations to provide an expedited curtailment process for surface water diversions.

The action, taken at the end of a two-day hearing last week, provides the board executive director with the authority to issue immediately enforceable curtailment orders against holders of post-1914 water rights, otherwise known as junior water rights. Water rights from before 1914 and those on riparian land were left out of the emergency regulation. Senior or riparian rights may only be curtailed under existing, non-emergency procedures, after formal notifications and hearings.

The emergency regulations affecting junior water rights are due to take effect July 14 and are expected to remain in effect for 270 days.

"We appreciate the state board's recognition that their charge is to enforce the seniority system, and we think the board recognized that the pre-1914 and riparian water rights are not totally within their jurisdiction," said Chris Scheuring, environmental attorney for the California Farm Bureau Federation.

The draft proposal offered by water board staff would have given the board authority over curtailment of senior water right holders, and the threat of curtailment of senior water rights brought out enough farmers, ranchers and others to fill two meeting rooms.

CFBF President Paul Wenger, who attended the water board meeting, said he believes the public testimony was effective.

"The farmers who came to that meeting made a difference," Wenger said. "Their presence and their testimony validated the concerns about the draft regulation that Farm Bureau and others had raised. The farmers showed the board that the problems with the draft regulation were not theoretical, but real."

Many who commented on the draft proposal said it offered water rights holders no method of due process to challenge board findings.

"Due process is keenly important to our members," Scheuring said.

Alan Lilly, speaking on behalf of the Yuba County Water Agency, addressed the board's stated goal of protecting senior water right holders.

"The state board staff's agenda item repeatedly refers to protecting senior water rights and yet, no senior water right holder has come forward asking for protection, and that is very, very significant," Lilly said.

Sixth-generation walnut grower Bret Warner of Hickman, who brought his grandson to the hearing, told the board its decision on curtailments would have long-lasting implications.

"Walnuts are a 35-year investment. One year without water and that investment is gone. I've spent my whole life building this, and one notice and we're done," Warner said.

Fourth-generation farmer Dino Del Carlo, who farms in the south delta, also shared concerns about the future and his family's potential losses.

"The problem is the timing of these curtailments," Del Carlo told the board. "My life has been a terror for the last month ... because I'm constantly worried about what's going to happen. Our family farm, we have probably \$4 (million) or \$5 million invested in our crops. If I don't finish growing those crops, I'm basically going to go bankrupt after four generations."

Testifying in support of the draft regulation, Westlands Water District General Manager Thomas Birmingham said farmers in his western San Joaquin Valley district already face the crop losses that holders of more senior rights fear.

"The basic question is: Are we facing a circumstance—an emergency circumstance—that warrants deviation from normal procedures? From our perspective, the answer to that question is yes. We are facing water supply shortages that are unprecedented," Birmingham said.

State water board chair Felicia Marcus stated at times during the two-day meeting that the purpose for the emergency regulation was to provide the board with an effective approach to protect senior water right holders against unlawful diversion by junior right holders due to widespread surface-water shortages.

As adopted, the emergency regulation outlines conditions under which the board executive director may immediately enforce curtailment orders issued to junior water right holders. Violation of a curtailment order may be accompanied by substantial penalties.

Under the regulation, a junior water right holder who wishes to challenge a curtailment order may request reconsideration before the board, Scheuring said. Whether it is reconsidered or not, the diverter also retains the right to petition a judge for review of the action. Under previous regulations, the board would have had to hold an evidentiary hearing before issuing a curtailment order.

Although the emergency regulation excluded pre-1914 and riparian rights, it allows the board executive director to order those right holders to report on their diversions, and provide information on the basis of their rights.

A separate issue relates to unauthorized diversions, including diversions of previously stored water—as opposed to natural runoff from precipitation. The regulation provides for a complaint procedure to target enforcement actions, based on third-party allegations of interference with more senior rights as well as unauthorized diversions of releases of previously stored water.

"California farmers and ranchers know better than most that it's been an exceedingly dry year, and we hope that all Californians understand the need for additional surface storage supplies to be able to ride out future years like this," Scheuring said.

Information on the curtailment process has been collected on the California Farm Bureau website at www.cfbf.com; follow the link to the Water Crisis page and click on California Water Crisis: [Curtailments](#).

State water cops scramble to cope

Posted: Tuesday, July 8, 2014 6:00 am

Calaveras Enterprise, By Dana M. Nichols

Time to develop a dry sense of humor. We will need it.

It's become clear in the past few weeks that California does not have enough water to allow us all to continue business as usual. Consider a PowerPoint slide displayed last week during a State Water Resources Control Board hearing: The slide summarized water supply and demand this summer in the vast Sacramento and San Joaquin watersheds. July's supply: 204,000 acre feet. July's demand: 1,189,000 acre feet.

Demand is five times supply.

The Water Resources Board ended up approving emergency measures that make it possible for state water cops to begin immediate \$500 per day fines on holders of so-called "junior" water rights that fail to stop taking water beyond what is needed for human health and safety.

The board decided to leave alone, for the moment, holders of so-called "senior" water rights issued before 1914. Those folks will be able to continue using water, even if someone else downstream needs it for human health or safety.

If the drought goes on, however, no one will be spared. At some point a long enough drought would probably force changes in our entire system of water rights.

The system of rights is really more like the numbered tickets customers pull when they walk into a busy ice cream parlor. If your number is low enough, you will get help before the dark chocolate fudge runs out.

For the past century or so, water has been fairly plentiful here in California. Everyone in the front of the line always got it. And lots of people in the back of the line, including many who were not even thirsty enough to drink immediately, also got tickets. It made them feel rich. They knew they might someday want the water that the ticket promised.

This year, there's not even enough water for those at the front of the line. So the tickets at the back of the line are worthless.

State law does give authorities power to mandate that water be delivered to meet human health and safety needs. That's why the emergency measures were approved last week. Without them, forcing water rights holders to comply would have required months or even a year of legal proceedings.

But will the emergency measures be enough?

In the staff report to the Water Resources Control Board, staff admitted they were concerned about "possible widespread lack of compliance."

That was sugarcoating. In fact, 79 percent of the junior water rights holders who had been notified to curtail their use of water in May had not even responded by mid-June to the Water Resources Control Board.

The staff report also said, “In addition, if a large percentage of water right holders simply fail to respond to curtailment notices issued by the board, under its current authorities because of the lack of prompt and meaningful repercussions under the State Water Board’s existing authorities, identification of unauthorized diversions is difficult and slow.”

Translation: There are not enough water cops in the state to keep up with all the water users. And who could blame a desperate farmer who keeps pumping out of the river rather than see a 30-year-old orchard die? Except that the water that farmer pumps might be needed to keep a large city livable.

In the long run, even farms will suffer if we can’t provide enough water to flush toilets and charge fire hydrants in the cities. It would not take long for Oakland, San Francisco or Stockton to become unlivable if the pumps stop.

We perched here on the west slope of the Sierra Nevada are not immune from these troubles. Some of our agencies – Calaveras County Water District and Calaveras Public Utility District – have already received curtailment notices. Others such as Utica Water and Power Authority have not yet because they have senior water rights – those first tickets at the front of the line.

Whether even an adequately staffed state bureaucracy could handle this complex situation effectively is questionable. I think surprises are likely in the coming months and years, especially if the hoped-for El Nino rains don’t come this winter.

It is not as easy as sharing one of my front-of-the-line scoops of chocolate fudge with an orphan at the back of the line who didn’t get any.

Ice cream is a luxury. Water is not. California should not serve up water as though it were dark chocolate fudge. Somehow, we have to find a rational way to use this scarce resource to assure the prosperity, even the survival, of our state.

Water rights may be limited for century-old irrigation districts

MODESTO BEE, BY J.N. SBRANTI

jnsbranti@modbee.com June 7, 2014

Some folks simply don't trust state leaders when it comes to protecting their water rights.

The State Water Resources Control Board this month is expected to "curtail" river diversions for those who established their water rights more than 100 years ago.

That includes flows down the Stanislaus, Tuolumne and Merced rivers, which the Northern San Joaquin Valley's big irrigation districts depend on to supply farmers with water.

State officials insist they simply want to protect California's most senior water users from shortages caused by others who otherwise might take too much water.

"There's not enough water to satisfy all the demand," said Tim Moran, a spokesman for the water board. "We're following the rules everyone knew were there. ... Curtailment is a system to protect water rights based on seniority."

Managers of the Oakdale and South San Joaquin irrigation districts aren't convinced that protection is really what the state has in mind, and they're threatening to take legal action to protect their water supply.

"We don't think the state's authority extends to our pre-1914 water rights," said Steve Knell, Oakdale Irrigation District general manager. "We fully expect to take them on should they decide to go down that path."

He's not the only one.

"We will do whatever we have to do to protect our legacy water rights," agreed Jeff Shields, general manager of South San Joaquin Irrigation District. "The regulations they're proposing are illegal."

But those proposed regulations aren't even out yet, and state officials insist there's nothing to fear.

At its meeting June 18 in Sacramento, the water board will consider a "resolution regarding drought-related emergency regulations for curtailment of diversions to protect senior water rights."

What that resolution will say has not been made public, which has led to speculation that the state plans to tap into the water now stored in irrigation district reservoirs.

OID issued a statement last week expressing Knell's concern about the state reducing his district's rights to water stored behind New Melones Dam.

That won't happen, assured Moran.

Whatever water has been stored can be used, and the state isn't going to touch it, Moran promised. But once the curtailment order is issued, he said, some irrigation districts may not be able to divert any additional water out of the rivers.

Rights get muddied

Who gets cut off and who doesn't depends on how long ago water rights were established.

“First in time, first in right” is the rule, explained Aaron Miller, a senior engineer on the water board’s staff.

The Modesto Irrigation District, for example, was established in July 1887 and has some of California’s oldest water rights, and OID came along in 1909, according to their websites.

So even though MID gets its water from the Tuolumne River and OID gets its from the Stanislaus River, the Modesto district may be entitled to take its full share of water before Oakdale gets another drop.

That’s because both rivers are part of the San Joaquin River watershed, and everyone with senior water rights in that watershed will be ranked by seniority, Miller said.

But establishing seniority is a tricky business when it comes to century-old water rights.

The water board’s online water rights database, for instance, shows the oldest water rights for OID and SSJID date to 1913; the Modesto and Turlock irrigation districts have rights listed as far back as 1900. The Merced Irrigation District’s oldest rights have a 1911 date.

Those dates are wrong, according to Shields. He said OID and SSJID acquired five water rights dating from 1853 to 1914.

Shields doesn’t think it’s fair to limit the seniority ranking just to those in the San Joaquin River watershed.

“Stack up the Sacramento River’s water right holders and put them in the queue as well,” Shields suggested. “I’ve got no beef” if the entire state is included on the seniority list.

Miller said it wouldn’t make sense to mix the watersheds because water from the Sacramento River watershed cannot be naturally accessed by those in the San Joaquin River watershed.

There’s a lot of suspicion, however, that state officials plan to put more restrictions on those with San Joaquin water rights than on those with Sacramento water rights.

Both rivers flow into the Delta, and from there some of the water gets pumped through aqueducts to Southern California.

Moran acknowledged there are environmental and health concerns about the low freshwater flows to the Delta, particularly because of saltwater intrusion from the Pacific Ocean. He said that salty water negatively affects Delta farmers and municipal water supplies for the Bay Area and Southern California.

State officials have warned all those with water rights that it “may consider needs for limited diversion for public health and safety needs where there is no other water supply available for emergency human health, sanitation and safety needs.”

Mismanagement alleged

Knell accused the state of mismanaging California’s water supply during the drought, which is now in its third year. The state “has had since 1976 and 1977 - the last major drought - to get ready for this drought, and it did nothing,” Knell said in a written statement issued by OID. “Thirty-seven years of sitting on the bench and when it’s time to play, the state can’t dribble the ball.”

The Merced Irrigation District also has concerns about the state's water regulations.

Curtailment of water rights may cause Merced's growers "to lose tens of thousands of acre-feet of water to which they are legally entitled," said Mike Jensen, the Merced district's spokesman. "This will also impact our groundwater basin and our local environment. The loss will depend on when the curtailment is issued, when it is lifted and how much water is in the river during those times."

Jensen said his district "is extremely concerned" about what actions the state board may take.

"It makes absolutely no sense for Merced ID to be required by the state board to release even more water than it already does (into the Merced River)," Jensen said. "This is especially concerning because, aside from the severe impacts that the drought has had on our customers already, this has the potential to benefit junior water right holders downstream at the expense of Merced senior water right holders."

The Modesto and Turlock irrigation districts are taking more of a wait-and-see approach regarding the water board's curtailment plans.

"As of today, there has not been a curtailment order issued involving senior water rights on the Tuolumne River. If that order is issued, TID will examine it closely and determine an appropriate strategy at that time," TID spokesman Calvin Curtin said.

"It is difficult to determine specific impacts without having any details," MID spokeswoman Melissa Williams said. "MID will work diligently with other San Joaquin River watershed agencies to both inform the (water board) and protect our water rights."

Bee staff writer J.N. Sbranti can be reached at jnsbranti@modbee.com or (209) 578-2196.

Read more here: <http://www.modbee.com/2014/06/07/3379426/water-rights-may-be-limited-for.html#storylink=cpy>

(This page intentionally left blank.)

Dave Phippen: Almond grower weary of farmers being called water-wasters

MODESTO BEE, BY DAVE PHIPPEN

July 7, 2014

Imagine my surprise to wake up to yet another Sunday morning story in The Modesto Bee (“Rush to drill is uneven” Page A1, June 29) to learn how those pesky nut farmers have caused even more rural Stanislaus residents to experience the unpleasant experience of a dry well.

Having lived in the country my entire life, I’m no stranger to that helpless feeling when the tap yields no water. In the drought of ’77 our family experienced both dry domestic and irrigation wells. We were able to secure loans to drill new wells for both purposes. We realized that with the benefit of living in the country comes the responsibility of providing and maintaining our own water supply. I’ve fixed, cleaned, modified and replaced many domestic wells for houses on my ranches over my lifetime – it’s a fact of life when you live in the country.

It was revealing to learn that John Mendosa’s well, though drilled in 1980, was only drilled to a depth of 45 feet. By today’s standards, this is a very shallow well. Many domestic wells are now drilled to 150 feet or more. Is it reasonable to expect such shallow wells to produce reliable drinking water at any time, and particularly during a three-year drought?

While the operation of nearby agricultural wells doubtlessly have had some impact, is it fair to blame just the farmers? The drought seems to be the most relevant cause for shallow wells going dry. Also, the Stanislaus County population has nearly doubled from what it was 34 years ago. That certainly has an impact on the aquifer we all share. I also wonder why it will take the well driller so long to replace Mendosa’s well; I know a rural resident in Oakdale whose shallow domestic well went dry Saturday and had a new one drilled Monday.

Being a third-generation almond grower, my skin is becoming just a little thin learning that almond growers are to blame every Sunday morning for our lack of surface and groundwater supplies. And even more surprised that Mendosa suggests the Almond Board should fund his new well.

The Almond Board’s USDA grower-supported funds are not allowed to fund new wells for rural residents (per USDA rules), but I can share just what we do fund at the Almond Board. Over the past 30 to 50 years, we have spent millions on research projects that help almond growers use water more efficiently, along with other natural resources. Today’s almond grower produces three times as many almonds with a gallon of water as our fathers did a generation ago. Eighty percent of all growers use highly efficient pressurized water systems that yield applied water efficiency in the 90th percentile. And those same growers use specialized monitoring stations that tell them when, how much and to what depth to irrigate their orchards. This research has also taught us when our trees do *not* need water.

We will not stop with the present research proposals; we will continue to invest and learn how to do more with less water, and these results benefit all California residents.

But almond growers are a small group. What are the other 99 percent of Californians doing to help with the increasing demands of a growing state population with declining water sources? Have you supported the planning, funding and building of additional water-storage projects for our future residents? Northern California has done little in this regard since the 1970s.

We need additional water storage, not just for domestic needs, but to feed a growing population. We need to consider very difficult choices to offer a balance of environmental and basic human needs. It's well and good to save rivers for wild and scenic status, but do we still consider the multiple uses of hydroelectric dams, which yield not only additional water supplies, but recreation, new lake fisheries, clean energy and flood control? Remember, Dry Creek flooded Modesto as recently as 1997.

California's farmers and ranchers wake up each morning to face the challenge of producing more nutritious food with less water. Will you help them?

Read more here: <http://www.modbee.com/2014/07/07/3428876/dave-hippen-almond-grower-weary.html?sp=/99/1641/#storylink=cpy>

Water situation affects fresh fruits, vegetable availability for those in need

Vacaville Reporter, By Larry Sly

POSTED: 07/07/2014 10:31:36 PM PDT

The drought we are currently experiencing raises serious questions about how we use a finite resource.

The Mediterranean climate we enjoy means that we have long summers where no rain falls. In normal years, the snow that falls in the Sierra Nevada mountains has been our reservoir and provides the water we need in the summer. Much of the water is needed for agriculture because California has some of the most productive soil in the world. Our water system works well as long as snow falls in the mountains, but when a drought takes place, competition begins for the limited water available.

Residential consumers are urged to limit the amount of water they use. We may have green lawns and swimming pools, but many homes have drip irrigation, low-water landscaping, low-flow toilets and other technology to make effective use of the water they use. There are debates about how you compute the numbers, but urban water use is less than 20 percent of the total consumed in California. One third of the water used in the state goes for environmental purposes; making sure rivers have adequate fresh water to support a healthy environment. More than half the water the state consumes is used for agricultural purposes.

Residential consumers often wish that water could be saved in the agricultural and environmental areas.

Some people argue that using "environmental" water to preserve fish should take second place to water for agriculture. The looming battle over the bypass tunnels proposed to move fresh water from rivers above the San Joaquin/Sacramento delta raises concerns about the impact that action would have on the environment of our local area. If we decide that environmental and urban uses are most important, what does that mean for agriculture?

Agriculture is a major part of California's economy. California farms and ranches generate more than \$42 billion worth of revenue. Of that revenue, more than \$18 billion is food we export to other countries. More than 1 percent of the food produced in the United States comes from California, and more than half the fruits, nuts and vegetables consumed in the United States are grown in California. Our climate and our water make a major contribution to California's economy and the nation's food supply.

The work of the Food Bank of Contra Costa and Solano is possible to a certain extent because we are located in California. Because food grown in California sometimes does not meet marketing standards, the Food Bank can reclaim that food, allowing us to provide fresh produce to people in need in our community.

Because of the drought, some of the crops we received in past years are not available to us currently, plus everything we receive costs more. Fresh fruits and vegetable prices will go up an estimated 6 percent in the coming months according to the federal government.

In order to get the food we need, we depend on agriculture, and agriculture depends on water. Difficult decisions need to be made both by government and at home as we decide how we can best use the water on which we all depend, so people of all income levels have access to fresh fruits and vegetables.

The author is executive director of the Food Bank of Contra Costa and Solano, based in Concord. Email: info@foodbankccs.org

Food boxes distributed to drought-impacted families
20,000 boxes of food handed out in San Joaquin County
KCRA, UPDATED 8:53 PM PDT Jul 07, 2014

Help given to those impacted by drought in Stockton

STOCKTON, Calif. (KCRA) —The California Human Services Agency is in the process of distributing more than 20,000 boxes of food in San Joaquin County to those affected by the state's drought.

The boxes contain enough food to feed a family of four for a week.

People in San Joaquin County who spoke with KCRA 3 on Monday said the food is needed more than ever.

The county started to receive the food after Gov. Jerry Brown declared a drought emergency in California.

“It’s for community members impacted by unemployment related to the drought. It could be a seasonal worker or a truck driver not transporting goods,” said deputy director Dean Fujimoto.

There will be more donations handed out next Monday at the Taft Community Center, Boggs Tract Community Center, Garden Acres Community Center, Kennedy Community Center and the Lodi Community Center.

Read more: <http://www.kcra.com/news/food-boxes-distributed-to-droughtimpacted-families/26834892#ixzz36zV3ovmf>

(This page intentionally left blank.)

Viewpoints: Putting some myths about California's drought to rest

By Jay Lund, Jeffrey Mount and Ellen Hanak
Special to The Bee

Published: Sunday, Jul. 6, 2014 - 12:00 am

As the effects of the drought worsen, two persistent water myths are complicating the search for solutions. One is that environmental regulation is causing California's water scarcity. The other is that conservation alone can bring us into balance. Each myth has different advocates. But both hinder the development of effective policies to manage one of the state's most important natural resources.

Let's consider the first myth, that water shortages for farms are the result of too much water being left in streams for fish and wildlife. Claims are circulating that California's farms have lost 4 million acre-feet annually because of environmental policies, and some have even suggested that the severe, long-term declines in groundwater levels in the [San Joaquin Valley](#) are a result of environmental cutbacks.

Since the early 1990s, efforts to improve environmental conditions have indeed reduced water supply reliability, particularly for San Joaquin Valley farmers who rely on exports from the [Sacramento-San Joaquin Delta](#). But blaming these efforts for today's critical supply issues vastly overstates the role of environmental regulations.

By our calculations, restrictions on Delta exports, coupled with new restrictions on flows on the [San Joaquin River](#), have cost San Joaquin Valley farmers no more than 1.5 million acre-feet per year in reduced water deliveries – a sizable amount, but far less than 4 million acre-feet. During the current drought emergency, environmental restrictions have been significantly relaxed to make more water available for farms and cities, with most of the remaining Delta outflows dedicated to keeping water in the Delta fresh enough for local farmers.

And while reduced surface water has likely accelerated groundwater overdraft in the Valley – especially since new Delta pumping restrictions in the late 2000s – the notion that environmental restrictions are the origin of overdraft is unfounded.

According to the [U.S. Geological Survey](#), farmers in the Valley have been mining groundwater at an average annual rate of 1.5 million acre-feet per year since long before [Richard Nixon](#) signed the [Endangered Species Act](#) in 1972. Nothing seems to change this overall pattern, including construction of the State Water Project. Water demand in the

San Joaquin Valley simply exceeds available supply. What's more, the Valley's water demands are likely increasing with the shift to permanent orchards and vineyards – now more than 40 percent of total irrigated farm acreage.

What about the second myth? Can conservation really create abundant “new” water? Of course, new technology and changing water use habits have yielded long-term declines in per capita water consumption in California, and this drought is likely to spur more reductions. New irrigation techniques and better crop varieties, along with rising commodity prices, have helped California's agricultural industry steadily increase production and profits. Farmers have become more economically efficient in using their water.

Some claim that potential dramatic yields of more than 10 million acre-feet of new water – equivalent to 10 full Folsom Reservoirs – can be had from conservation measures that draw half from agricultural and half from urban users. But this is just not credible.

In fact, conservation does not always yield new water, because the water saved is often not wasted in the first place – it is already reused. This is especially true in agriculture.

Irrigation water that is not consumed by crops flows back into rivers or seeps into groundwater basins. Indeed, the single largest source of groundwater recharge in the [Central Valley](#) is irrigation. Studies from around the world consistently show that increased irrigation efficiency often does not decrease net water use. Indeed, these technologies often encourage farmers to plant more crops, worsening long-term declines in groundwater availability. The only way to generate reductions in water use on the scale imagined is to fallow several million acres of farmland.

In the urban environment, steady reductions in per capita water use since the early 1990s have allowed total urban use to remain steady at about 8.5 million acre-feet annually, despite the addition of 7 million new residents. Further savings – especially from more drought-tolerant landscapes – will be needed. But because about a third of urban water already gets reused – it also returns to rivers or groundwater basins – it's simply not possible to achieve the level of new water that some have imagined.

The reality is that conservation is a valuable and necessary part of a portfolio of approaches to water supply management, but it will not produce vast quantities of new water for California.

As the late Sen. Daniel Patrick Moynihan said, “Everyone is entitled to his own opinion, but not to his own facts.” Californians need to make continued progress in managing our scarce water resources to get through this drought – and future droughts – while protecting the state’s economy, society and environment. This requires a common understanding of the causes of water scarcity, and practical, reasoned solutions – not blame games and wishful thinking.

Jay Lund is director of the Center for Watershed Sciences at [UC Davis](#) and an adjunct fellow at the Public Policy Institute of California. Jeffrey Mount and Ellen Hanak are senior fellows at PPIC.

Read more here: <http://www.sacbee.com/2014/07/06/6527591/viewpoints-putting-some-myths.html#storylink=cpy>

(This page intentionally left blank.)