BAY AREA WATER SUPPLY AND CONSERVATION AGENCY
BOARD OF DIRECTORS MEETING

September 12, 2014

Correspondence and media coverage of interest between August 9, 2014 and September 11, 2014

Correspondence

Date: August 29, 2014
To: The Hon. Vince Courtney, SFPUC President
From: Nicole Sandkulla, BAWSCA CEO/GM
Subject: BAWSCA Lawn Be Gone! Rebate Program

Media Coverage

Conservation:

Date: September 9, 2014
Source: San Jose Mercury News
Article California Drought: Statewide water use drops

Date: September 2, 2014
Source: San Jose Mercury News
Article: California Drought: Irrigation irritation running rampant over water wasters

Date: September 1, 2014
Source: New York Times
Article: Seeing Discolored Lawns, California Businesses Apply Dab of Green

Date: September 1, 2014
Source: The Press Enterprise
Article: Drought: For businesses, it's lawns out, conservation in

Date: August 31, 2014
Source: Sacramento Bee
Article: Conservation conundrum: Water use varies greatly across California

Date: August 20, 2014
Source: San Mateo Daily Journal
Article: Conservation plans vary: Patchwork of mandates aim to curb water use in an Mateo County

Date: August 9, 2014
Source: SF Chronicle
Article: Water districts offering rebates for getting rid of lawn

Water Supply:

Date: September 11, 2014
Source: Lake County News Reports
Article: Garamendi introduces bill prohibiting federal funds for BDCP with Reps. McNerney and Bera

Water Supply, cont'd:

Date: September 10, 2014
Source: House Committee on Natural Resources
Press Release: Hastings' Water Storage Legislation Needed to Combat Western Water Supply Issues by Facilitating More Surface Water Storage

Date: September 10, 2014
Source: BB&K Attorneys At Law
Article: New legislation defines water for purposes of proposition 218 include water from any sources

Date: September 10, 2014
Source: Fierce Energy
Article: Water utilities provide billions in economic impact

Date: September 8, 2014
Source: ACWA News
Article: Regional Cooperation and Water Transfers Provide Drought Relief for Bay Area Water Agencies

Date: September 6, 2014
Source: Sacramento Bee
Article: Hetch Hetchy lawsuit a reminder on species law

Date: September 3, 2014
Source: Maven's Notebook
Article: Dr. Peter Gleick on the Untapped Potential of California's Water Supply
Attachment: Issue Brief: The Untapped Potential of California's Water Supply

Date: August 13, 2014
Source: SF Chronicle
Article: Hetch Hetchy water tunnel in danger of "catastrophic collapse"

Groundwater:

Date: September 10, 2014
Source: Sierra Sun Times
Article: Opponents Ask California Governor Jerry Brown to Veto Groundwater Bills

Date: August 29, 2014
Source: Sacramento Bee
Article: Historic California groundwater regulations head to Gov. Jerry Brown

Proposition 1

Date: September 8, 2014
Source: Capital Press
Article: Water bond opponents attach money for dams

Date: August 22, 2014
Source: ACWA News
Press Release: ACWA Board of Directors Formally Endorses 2014 Water Bond

BAWSCA
Bay Area Water Supply & Conservation Agency

August 29, 2014

The Hon. Vince Courtney, President
San Francisco Public Utilities Commission
525 Golden Gate Ave., 13th Floor
San Francisco, CA 94102

Subject: BAWSCA Lawn Be Gone! Rebate Program

Dear President Courtney,

Thank you for your interest in the Bay Area Water Supply and Conservation Agency (BAWSCA) Lawn Be Gone! Program, and in resources available to Bay Area residents on water-efficient landscaping.

In response to your request of me during last Tuesday's Commission meeting, below is a list of some resources that we recommend to our customers:

- **Water-Wise Gardening in the Bay Area** - This interactive web tool, designed specifically for this region, provides information on how to garden beautifully while saving water. This site includes garden tours as well as garden planning resources, such as a tool for selecting plants by type, size, sun exposure, and other factors. http://www.bawsca.watersavingplants.com/bawsca.php
- **Bay Friendly Gardening** - This website includes numerous resources on sustainable gardening practices, including an instructional video on converting a sprinkler system to drip irrigation, sheet mulching guidelines, and more. https://www.stopwaste.org/home/index.asp?page=8
- **Bay Area Certified Green Gardeners Program** – Provides information about the Green Gardeners program and links to a list of landscape gardeners who have received certification in green gardening techniques. http://www.redwoodcity.org/verde
- **California Native Plant Professionals List** - A partial list of local professionals who are dedicated to working with native plants and providing landscape services in an environmentally responsible manner. The list includes landscape design and consultation professionals, installation and maintenance professionals, and arborists and specialty tree pruning.

  http://www.landscapestandards.com./index.php?title=California_Native_Plant_Professionals_List

Lawn Be Gone! Program information, schedule and registration for BAWSCA's free landscape education classes, and additional water efficient landscaping resources are available on our website at http://www.bawsca.org/conservation.

BAWSCA continues to work with our member agencies, local landscaping professionals, nurseries, and customers to improve the resources available to residents seeking water-efficiency landscaping options.

If you have any questions, please feel free to contact me at (650) 349-3000 or nsandkulla@bawsca.org.

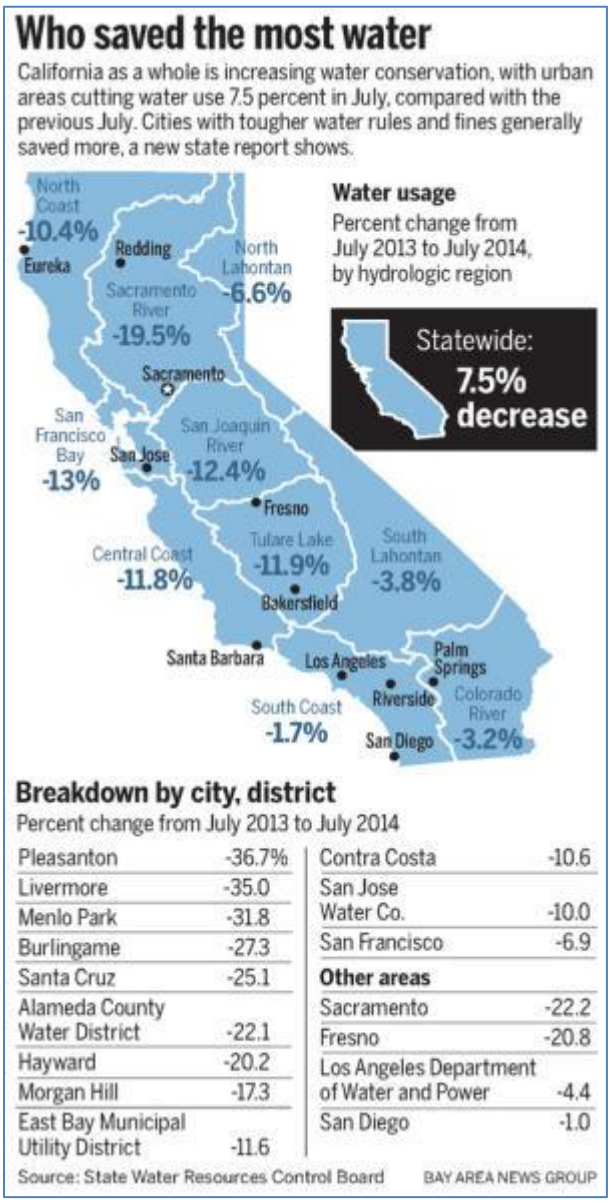
Sincerely,

Nicole Sandkulla
CEO/General Manager

NMS/le

cc: Harlan Kelly, SFPUC General Manager
Irene O'Connell, BAWSCA Chair

California drought: Statewide water use drops
San Jose Mercury News, By Paul Rogers
September 9, 2014



Deep into the third year of a historic drought, Californians are finally starting to take water conservation seriously.

Statewide, urban residents cut water use 7.5 percent in July, compared with July of last year, according to new figures released Tuesday afternoon.

Those savings show progress from June, when overall water use was down 4.4 percent from the previous year, and from May -- when it was up 1 percent.

"People are stepping up," said Felicia Marcus, chairwoman of the State Water Resources Control Board. "It's not enough yet, but we are heading in the right direction."

The board's survey of 362 cities, private water companies and water districts -- the most extensive so far during California's drought -- continues to show Northern Californians are cutting water use more than Southern Californians.

Bay Area residents slashed water use 13 percent in July compared with July 2013, while residents in the Los Angeles and San Diego areas cut use only 1.7 percent.

The region with the most savings was the Sacramento area, which saw a 19.5 percent water reduction.

Some of that difference is because of weather patterns, water officials said.

Another reason is that Los Angeles and San Diego already use less water per capita than other parts of the state -- 152 gallons a day in L.A. and 166 in San Diego -- compared with 279 gallons a day in Sacramento and 313 in Fresno.

"In Southern California we have been doing conservation since 1991. As demand hardens, it becomes harder for the consumer to know what they can do to save water," said Ken Weinberg, water resources director with the San Diego County Water Authority.

One thing was clear from the new numbers: Cities with mandatory water rationing, water cops and fines for using more than an allotted amount showed the most savings.

The city with the most savings was tiny Cambria, a coastal community in San Luis Obispo County whose perennial water shortages have been exacerbated by the drought.

With strict rationing and a limit on new home construction because of water shortages, Cambria reduced water use 49 percent in July compared with the previous year.

Most California cities have asked residents for voluntary conservation, have banned wasting water -- such as washing cars without hose nozzles -- and have passed rules limiting lawn watering to certain days of the week.

STRICT RULES HELP

But cities with strict monthly water allotments saw massive savings.

Pleasanton and Livermore, with mandatory 25 percent cutbacks and fines for not reaching that percentage, cut use by 36.7 percent and 35 percent, respectively.

Santa Cruz, which limits all homes to 10 units of water a month and issues penalties of $50 per unit above that, saw a 25.1 percent reduction.

"Fines do make a big difference," Marcus said. "Over time, we may find that there are areas that need to up their enforcement."

Some cities actually showed increases in water use. Wasco, near Bakersfield, saw a 29.8 percent increase. San Clemente was up 11.8 percent, Lodi 8.6 percent.

Experts said the reasons why some cities increased their water consumption varied widely.

"We've got different geography, different climate, different housing patterns. There's a lot of complexity," said David Bolland with the Association of California Water Agencies.

In the Bay Area, the largest water providers showed savings comparable to each other. The San Jose Water Co., a private company that has 1 million customers in Silicon Valley, cut water use 10.5 percent in July compared with July 2013.

San Francisco cut water use 6.9 percent. The Contra Costa Water District reduced water consumption 10.6 percent. And the East Bay Municipal Utility District cut consumption by 11.6 percent.

California is in its worst drought since 1977. By some measures it's the worst in a century.

Major reservoirs are only about a third full. Rainfall totals in most major cities last winter were about 40 percent of normal. Farmers are desperately pumping groundwater to keep crops alive. Wildfire risk is at extreme levels. And wildlife is suffering as creeks run dry.

Hopes for a soaking El Niño winter this year have faded. Last week, the National Oceanic and Atmospheric Administration reported ï»¿there is a 65 percent chance of El Niño ï»¿conditions starting later this year.

But ocean temperatures are only slightly warmer than normal, leading most researchers to predict a mild El Niño, ï»¿the type that historically has meant a wetter-than-normal winter in California only about half the time, instead of a strong El Niño -- ï»¿which has resulted in wet winters much more often.

In July, Marcus' agency passed rules requiring all cities, private companies and other urban water providers in California with more than 3,000 customers to report their water use to the state every month.

"We felt the need to do this because water agencies were resting on their laurels," Marcus said. "And that is playing Russian roulette with Mother Nature, which is a bad idea. In Australia, they just had a drought that lasted a decade. They had to take drastic measures that they wouldn't have needed if they had begun conserving earlier."

FINES ALLOWED

In addition to the new reporting rules, the state water board also voted in July to require water providers to limit the days when people could water lawns and to ban wasteful watering practices.

The new rules permitted fines of up to $500, although most cities and water agencies have chosen not to issue monetary penalties for violations.

Marcus said Tuesday that because of the positive trend the state water board will not issue tougher rules over the next few months.

But, she added, that could happen if water use increases or the drought worsens because of a dry winter.

Paul Rogers covers resources and environmental issues. Contact him at 408-920-5045. Follow him at

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California Drought: Irrigation irritation running rampant over water wasters

San Jose Mercury, September 2, 2014

By Thomas Peele and Andie Waterman, Staff writers

Call it irrigation irritation.

Bay Area water watchers have a bad case of it. The expanse of verdant lawn ringing a large vacant construction site in Santa Clara sets off Brian Johns.

For Vickie Chang, it's the city of Albany's sprinklers that spray her when they go off each night along her street. And Dave Pearce is peeved by the water he sees gushing straight into San Francisco Bay from the leaky Hetch Hetchy Aqueduct pipeline while he kayaks along the Peninsula.

As California contends with a protracted drought, folks who are dutifully practicing the new mantra of "brown is the new green" are seething at the sight of freshly irrigated sidewalks and lush green lawns.

"That just torques my jaw," Herb Gomes says of the emerald baseball and softball fields at Ohlone College in Fremont, where he often walks his dog. "I'm doing my part -- my lawn has turned brown!"

But those ballfields will be irrigated and stay green until sometime next year, when they are scheduled to be replaced with artificial turf, a college spokeswoman said.

Despite calls from Gov. Jerry Brown for 20 percent cutbacks in water use and the first-ever state mandate to restrict outdoor watering, there is no consensus on how green is too green. Rules on watering are different from community to community, and so is compliance.

But irrigation irritation is rampant -- and on the rise. The Santa Clara Valley Water District received almost 240 reports of water waste -- mostly sprinklers spraying pavement or running off into the street -- in August alone, four times the number of complaints earlier in the year. Calls to the East Bay Municipal Utility District soared in July, when it received 211 complaints. The new state outdoor water rules, which took effect in August, have empowered water conservers to speak out "now that their concerns are being backed by the state," said Nelsy Rodriguez, a spokeswoman for EBMUD.

This newspaper tapped into readers' rage when we asked them to send tips about where they saw water being wasted or misused. Scores wrote in to rant about everything from leaky faucets in public restrooms to liberally watered golf courses, cemeteries, athletic fields and parks. Others are outraged over water companies slow to fix leaks and neighbors intent on keeping their lawns fit enough for a fertilizer commercial.

Johns frequently passes that vacant lot in Santa Clara that's ringed with grass. "A multi-acre lawn around the site of a building that hasn't even been built yet takes the cake," he wrote.

A spokesman for the lot's owner, the Sobrato Organization, didn't want to discuss the grass or why it's irrigated. The head of the city water department said he'd send an inspector to check it out.

Pearce was aghast when he spotted the Hetch Hetchy leaks pouring from a trestle that carries the giant pipes across the bay. "One of the state's most iconic water systems should be setting a better example for conservation," he said. "This is more than just a public-image black eye."

Those leaks cost the region's largest water provider, the San Francisco Public Utilities Commission, more than a quarter-million gallons a week, its spokesman said -- enough to supply water for about 360 people in San Francisco for seven days. But they won't be fixed -- or even patched, the spokesman said, before a new water tunnel under the bay opens later this year, taking the old pipes out of service.

Chang just wants to stay dry and not see water dumped in the street. "My car gets pretty wet and so do I," she said, complaining about the city sprinklers that soaked her street, Key Route Boulevard, "profusely at night."

The spray recently hit the windshield of a reporter's parked car so strongly it was like being in a carwash. The pavement got saturated, too -- the kind of waste the state's watering restrictions are designed to combat. A city spokeswoman said the sprinklers were adjusted after the newspaper first called, but the center median would continue to be watered.

A green median is the kind of extravagance that June Boudreau just doesn't understand.

She got so fed up with her Almaden Valley neighbors' ill-pointed sprinklers "watering the gutter," as she put it, that she began stuffing notes in their mailboxes, urging them to stop.

"They are in denial," she said of people ignoring the state's water crisis. "They don't want to be bothered. I don't think anyone is taking the drought seriously."

Robb Willer, a Stanford sociology professor who studies public attitude about climate change, isn't surprised by the growing sense of injustice among water conservers.

Still, some will refuse to curtail their own water use no matter whose jaws get torqued, he said. "Those who do take more than their share, they're very likely telling themselves that something about their situation is special and different."

But, you know, there's this drought. So what should people, even the special ones, be thinking?

That "we have a real problem," answered John Coleman, president of the Association of California Water Agencies and an EBMUD director. "They need to fix their sprinklers. They need to conserve."

And there's good news for those who are willing to do just that. And there's good news for those who are willing to do just that. Water agencies offer rebates -- Santa Clara Valley is even doubling several of its offers -- for residents who upgrade their irrigation systems to save water.

Clayton Watkins knows a few places that need to take advantage. On his morning drive for coffee in the affluent Contra Costa town of Moraga, he spotted the wayward sprinklers at the local Jack in the Box restaurant soaking Moraga Way at 6 a.m. -- just to keep green a tiny strip of grass between the street and sidewalk.

"They should put in a rock garden. I don't think anybody cares if there's a strip of grass when they're going in for a burger and fries."

Contact Thomas Peele at tpeele@bayareanewsgroup.com on Twitter at @thomas_peele.
Contact Andie Waterman at awaterman@mercurynews.com and on Twitter at @WaterAndie.

NEW STATE WATERING RULES

Statewide restrictions for potable water use went into effect Aug. 1. Some communities have tougher laws in place. Violations could result in up to $500 a day in fines, but few local water providers are enforcing the penalties:
Sprinklers: No irrigating landscapes so that water runs onto the sidewalk, street, parking lots or any other "nonirrigated" areas.
Carwash: No washing a motor vehicle without a shut-off nozzle
Pavement: No washing sidewalks and driveways
Fountains: No using potable water in a non-recirculating fountain or other non-recirculating "decorative water feature"
Source: State Water Resources Control Board

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Seeing Discolored Lawns, California Businesses Apply Dab of Green

New York Times, By JENNIFER MEDINA
SEPT. 1, 2014

LONG BEACH, Calif. — The spray-paint nozzle was aimed carefully at the edge as the painter stood back a few inches from the flat metal shovel meant to protect other surfaces. After laying down a couple of thin coats, he stepped back to admire his work.

The patch of grass had gone from a flat, yellowing green to a Wizard of Oz shade of emerald.

There are few people who see an upside to the record-setting drought in California, but Drew McClellan sees a path to business. Earlier this summer, when a friend began complaining about his browning front lawn, Mr. McClellan thought back to his childhood in Florida, where he often spotted golf courses using sprays to dye their greens. When a brief Internet search failed to show any local business offering a similar service, Mr. McClellan decided it was a prime opportunity.

And since he opened up shop in July, Mr. McClellan has been taking requests faster than he can keep up.

“No matter how weird people might think it is, everyone is getting to the point of considering something drastic,” Mr. McClellan said, taking a break from his other job working as a hair stylist at a retro-style barbershop. As he and his wife sprayed down the lawn of Tony Felipe, who has lived in Long Beach for nearly 20 years, Mr. Felipe looked on with nods of approval. For less than $400 — not much more than a regular water bill these days — he could see his lawn instantly turn green.

Mr. McClellan said he got the idea for his business from seeing golf courses using dyes in Florida, where he grew up. Credit David Walter Banks for The New York Times

Mr. Felipe hardly considers himself an environmentalist. Apart from slightly shorter showers, he said, his behavior has hardly changed amid the drought. But as he watched his water bill climb well into the triple digits, he started looking for any way to cut back on water without losing his lawn.

“We started with the front lawn, and everyone who drove or walked by gave us strange looks,” Mr. Felipe said. “But two weeks later, it looks so good, of course we want to do the backyard.”

He did not mind at all when his small, white dog trampled through the still-wet lawn, giving his paws a tinge of green. Mr. McClellan promised the dye would come off the dog within days.

Throughout California, hundreds of thousands of homeowners have transformed once-grassy lawns into intricate landscapes of rocks and planters. Several cities have taken to running public service announcements declaring that “brown is the new green” and showing dormant grass alongside a lush lawn. Most water districts have by now put in place rationing, limiting the number of days and times that residents are permitted to water their lawns or wash their cars, with a $500 fine for violators.

But even as browning grass or drought-resistant plants are popping up in front of ever more houses, few things are as alluring as a California green lawn, long a symbol of wealth and vitality.

The state is experiencing the worst drought in its history. Find out just how bad the situation is getting and what it means for you.

Video Credit By Carrie Halperin and Sean Patrick Farrell on Publish Date July 5, 2014. Image CreditStuart Palley/European Pressphoto Agency

In California, much of the use of lawn paint began during the housing crash, said Shawn Sahbari, a Bay Area technology entrepreneur who began manufacturing and applying his paint formula when he was helping a property management company with foreclosed homes several years ago.

"Letting it go dead and brown might be an option for some people, but let's face it, nobody really thinks brown is the new green," Mr. Sahbari said. "This lets you cut down on watering and still have a lawn that looks great."

According to most manufacturers of lawn paint, the pigment also contains fertilizers, which can help cut down on weekly watering while keeping the grass from dying completely. Mr. Sahbari said he now has many repeat customers who paint their lawn four times a year. "It's an integral part of their landscape management system now," he said.

But there is little doubt that there is a kind of psychological hurdle involved.

"I see it as a cultural paradigm shift that we are just starting to make," said Jim Power, a manager for LawnLift, a San Diego lawn paint manufacturer whose business has tripled in the last year. "It's very hard to find a yard that doesn't have a problem — this is a quick fix, instant gratification that does not make you feel guilty."

Few in the industry see it as a limited market; they point to the proliferation of lawn mowers and even artificial turf as a potential model.

Already, there are dozens of lawn paint options available, from longer-lasting formulas typically used on high-traffic turf such as ballparks and golf courses, to naturally derived products that rely on a highly concentrated pigment. Some formulas tend to have a blue-tinged hue, a telltale sign of the unnatural that most homeowners avoid.

"Beauty, though, really is in the eye of the beholder," said James Baird, a botany and plant sciences professor at the University of California, Riverside, who has done extensive research on lawn paints, including trying several of them on his own backyard. "What I call the fake Christmas tree look, that is by far the most popular hue in our research. When you put it on turf that is already brown, it can come out a lot more blue than green, but some people love it."

Still, Mr. Baird said, aside from skeptical looks from neighbors, there is little to lose from trying. Spray-painting the lawn of an average-size home in Southern California costs less than $300 — and if the owner hates it, the paint will fade and be gradually mowed off within three months.

For many lawn owners, the love affair with paint started off with a heavy dose of skepticism and the simple desire to not be embarrassed by brown spots. Some homeowner associations have been known to fine up to $500 if a resident's front yard is deemed insufficiently tended.

After Cy Bodden and his wife had a baby last year, they opted to paint their lawn to make it look nicer to relatives coming to visit.

“When you’ve spent all this money on something over the years and you look and it’s yellow, it’s really kind of depressing,” said Mr. Bodden, who lives in San Diego.

And at first, none of Mr. Bodden’s relatives raised an eyebrow at the forest-green grass. Then one of his nephews stepped on it and was dismayed to find that the green grass felt rough and crunchy beneath his feet. But Mr. Bodden was hardly chagrined. “The only people who really think it’s weird are people who aren’t from California,” he said.

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DROUGHT: For businesses, it's lawns out, conservation in

Applications have almost tripled as financial incentives entice more companies to ditch grass and recycle water

BY JANET ZIMMERMAN / STAFF WRITER / The Press Enterprise

Published: Sept. 1, 2014.

Water that seeps from irrigated pots of red roses, pink geraniums and acres of other plants at a western Riverside County nursery adds up to more than 100 million gallons a year.

With drought gripping California, the owners of Altman Plants near Lake Mathews jumped at the chance when water providers offered to pick up half the $900,000 cost of a recycling system at the nursery. Runoff is captured in plastic-lined ditches and reservoirs then pumped to nursery stock grown for Home Depot, Lowe's and other retailers across the country.

The project, which goes into full operation this week, is an example of what businesses are doing to comply with a state mandate to reduce water use by 20 percent. They are getting help from water districts, which have boosted rebates and loans for tearing out turf, re-using runoff and switching to recycled water for irrigation.

In response, a Jurupa Valley container plant excavated almost 400 acres of grass in favor of water-wise plants, a Menifee park switched from potable water to reclaimed wastewater for irrigating turf, and the city of Riverside is targeting more than 1,000 acres of grass in medians.

The Altman project has been one of the biggest for Metropolitan, the wholesaler of imported water for the nursery's provider, Western Municipal Water District in Riverside. Metropolitan pitched in $350,000 and Western contributed $100,000; the Natural Resources Conservation Service gave $89,000 toward the project.

"It would have been very difficult for us to undertake something like this without the rebate," said Jim Hessler, Altman's general manager. "It's still less expensive (for water providers) than going out and funding a new source of water."

In the first seven months of this year, commercial rebates issued through Metropolitan's SoCal Water$mart program were at $13 million, up from $4.6 million in the same period last year, officials said.

The Altman system will cut water use by one-third and save enough water to supply about 780 families in Southern California. It was pricey, but Hessler said the savings on future water bills will pay for the investment in three years.

“We’ve been concerned for some time about long-term water availability and long-term water costs,” he said. “We made sure when we built the nursery eight years ago that it was set up for something like this.”

The concept is simple. The colorful plants, some outdoors and others in shaded tents, are positioned on black plastic in gently sloping rows. They are watered with overhead spray or drip irrigation.

Whatever trickles out the bottom of the pots – it adds up quickly – feeds into 3-foot ditches, then into pipes positioned around each section of the 670-acre nursery.

The runoff is carried to a larger channel and a holding pond at the lowest point of the property, located in Gavilan Hills. Two pumps move 3,600 gallons per minute to a larger, upper reservoir where it is held until needed.

From the reservoir, the water is pumped down, filtered and disinfected, and put back into the system instead of percolating into the ground. The almost 9 million gallons from the upper pond is used in less than a week, Hessler said.

The system was built to capture runoff from a 25-year flood event and make use of drainage from surrounding properties during major storm events, like the recent monsoons that soaked the area, Hessler said.

It also ensures an emergency supply because even a two- or three-day interruption in service would be devastating for the plants, he said. Altman has seven nurseries in five states.

“The timing did turn out to be pretty fortuitous, because it’s going to save us all this water at a time when we really need it,” Hessler said.

GIVING GRASS THE HEAVE-HO

At Metropolitan, the biggest portion of rebates has been for taking out the greatest outdoor guzzler: grass. Each square foot removed saves 40 to 50 gallons of water per year, according to efficiency experts.

Conservation conundrum: Water use varies greatly across California

By Matt Weiser
mweiser@sacbee.com

Published: Sunday, Aug. 31, 2014 - 12:00 am

Drive across city limits in virtually any part of California, and you will also cross another kind of frontier, one gaining more attention during the worst drought in a generation: The borders between cities also define different ideas about water. One city may have gutters coursing with wasted water, while its neighbor lives by the highest conservation standards.

The differences can be glaring, according to a Bee review of data submitted by water agencies, and they highlight some of the challenges in achieving broad conservation goals during the ongoing drought. In a hypothetical tour of the state, according to the data, the well-informed traveler would encounter the following disparities:

• In the tony hillside mansions of Los Altos, residents in 2012 consumed an average of 197 gallons of water per person each day. Step across the city limits into Mountain View, and consumption drops to 139 gallons per day.

• In Anaheim, the home of Disneyland, per capita consumption is 163 gallons per day. Next door in Garden Grove, the average is only 128 gallons each per day.

• In the state capital's metro region, Folsom residents consume 329 gallons each per day. Their neighbors in adjacent Orangevale consume significantly less, 225 gallons per day.

Water consumption varies enormously across California, and the reasons are not easy to pin down. But it is an issue of growing importance as the state struggles to contain water demand.

In the most recent report to the State Water Resources Control Board, a survey of water agencies showed that Californians in May failed to achieve the 20 percent conservation goal sought by Gov. Jerry Brown in his emergency drought proclamation. They failed to get even close: Consumption actually increased by 1 percent compared with the prior year.

"Most people haven't been cutting back," said Dale Creasey, 81, a resident of Orangevale. He reduced his most recent water bill by 43 percent, despite growing more than 1,300 pounds of zucchini that he donated to charity. His personal goal is 50 percent. "I believe in God, I attend church, and I feel that you're supposed to help take care of your fellow man. When there's a water shortage, you cut back so everybody can have some."

Tracy Quinn, a policy analyst at the Natural Resources Defense Council who specializes in California water issues, said residents can save more. "We live in a state that's susceptible to epic drought," Quinn said. "It's up to all of us to do our part to save in good times and in bad."

Where water runs high

Expecting every resident of the state to use the same amount of water, or even adopt the same conservation measures, seems like a reasonable expectation on the surface. But California's geographic and socio-economic diversity make this difficult, if not unreasonable, said Gregory Weber, executive director of the California Urban Water Conservation Council. The council collects consumption data from many water agencies as part of an agreement with the state.

“It’s hard to tell a single story about why people across the state have such differences,” said Weber. “Every water agency out there is going to claim they have unique circumstances, and to a large extent it’s true.”

Weber and other water experts say California’s many unique microclimates are one explanation for the wide differences in water consumption. For example, residential properties in Sacramento and Berkeley, all else being equal, will consume very different amounts of water simply because the former experiences hotter temperatures much of the year.

“Everything we do in Sacramento to try and survive the hot summers uses more water than some parts of the state,” said John Woodling, executive director of the Sacramento Regional Water Authority.

But beyond climate, other factors come into play, especially when comparing neighboring communities that experience similar weather. Household size, property size and income level also have a role.

For example, Los Altos consists of 84 percent owner-occupied homes, vs. 64 percent in neighboring Mountain View, according to U.S. census data. Also, median household income in Los Altos, at $140,000 per year, is 53 percent greater than in Mountain View.

“If you don’t mind paying a large water bill – if that’s a small proportion of your income – there really is less of an incentive to save,” said Quinn.

That would seem to be the case in places like Rancho Santa Fe. The community near San Diego is considered one of the wealthiest in America, with a median household income of $173,000 annually. It also has one of the highest rates of water consumption in the state: Within the Santa Fe Irrigation District, which serves Rancho Santa Fe and several nearby communities, per capita water consumption in 2012 was 485 gallons per day.

In comparison, consumption in neighboring San Diego was just 128 gallons per person per day.

Rancho Santa Fe was also one of the communities that caused California as a whole to miss the 20 percent water conservation target in May: Water use in Rancho Santa Fe actually increased 23 percent in May compared with the prior three years. The area gets about 65 percent of its water from imported supplies, including the Sacramento-San Joaquin Delta.

Jessica Parks, a spokeswoman for the district, said most residential properties in the area are large – 1 to 3 acres in size – and have small orchards of lemon, orange or avocado trees that demand water.

“We are an irrigation district,” Parks said. “However, it’s pretty much transformed over time to being an urban water provider now. We have large lots that need irrigation. So when one person is living on a 3-acre lot, it does look like they’re using a lot of water.”

The district has had conservation programs in place for many years, including rebates on some water-saving technologies that are not offered in the Sacramento area, such as weather-sensitive irrigation timers, soil-moisture sensors and rain-collection barrels.

But until recently, it had only voluntary watering restrictions in place, despite the governor’s emergency drought proclamation in January. On Aug. 21, the district’s board of directors adopted mandatory watering restrictions that limit outdoor irrigation to certain days of the week based on address, and only in the morning and evening hours.

Unlike many other areas of the state, there will be no “water cops” roaming the avenues of Rancho Santa Fe to look for violations.

“We don’t have the staff resources for that,” said Parks. “We can’t be everywhere, so we’re hoping our customers can also help us in finding that water waste.”

Where water runs low

Far to the north in Sonoma County, the culture of conservation is very different. In Santa Rosa, the region’s largest city and the county seat, residents consume an average of just 106 gallons per person each day, one of the lowest rates in the state.

Santa Rosa depends on the Russian River for more than 90 percent of its water supply. It’s a a tempestuous source: The river can cause floods in winter, then dry up the following year. It is also home to imperiled salmon and steelhead runs, a reality that many residents connect with their own water consumption.

“We have a lot of really concerned and active and engaged citizens in Santa Rosa,” said Kimberly Zunino, the city’s water resources sustainability manager. “We find, in Santa Rosa, it’s not always about money. They want to do their part.”

The city is rolling out a new program to replace older water-saving toilets with even more miserly ultra-high efficiency toilets that use only 0.8 gallons per flush. It is not a rebate program, but rather a package deal in which customers pay $375 for a toilet and the services of a contractor to install it. The package also includes a water-saving showerhead and faucet aerators for kitchen and bathroom.

Customers can pay for the toilet-replacement package with a $7 monthly charge on their water bills. In the long run, Zunino estimates, many customers will end up saving money on their water bills because the new toilets are so efficient.

The city has also hired consultants to find water savings in the commercial sector, a conservation opportunity that is largely untapped in many communities. For example, it paid a consultant $14,000 to help city staffers understand the food industry to work more effectively with Amy’s Kitchen. The organic food processor has a packaging plant in Santa Rosa and is one of the city’s largest water users.

The resulting water savings will save the company money, and Zunino said the city also expects to recover the consultant’s cost through savings in city operations.

She said other communities should make a similar effort.

“There are things, I think, that every agency and municipality can do,” Zunino said. “If we can teach all of our residents and customers to actually change their behavior, we can reduce water use everywhere. It’s getting out there and talking to those customers and trying to get people to realize that water is not an endless supply.”

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Conservation plans vary: Patchwork of mandates aim to curb water use in San Mateo County
Daily Journal, August 20, 2014
By Samantha Weigel

As San Mateo County water distributors are navigating state-ordered water conservation rules, residents may find that irrigation restrictions vary widely depending upon where they call home.

The State Water Resources Control Board approved an emergency regulation in July, which requires water providers with 3,000 or more connections to activate their individual Water Shortage Contingency Plans to a level where outdoor irrigation restrictions are mandatory. As San Mateo County's cities are served by a number of utility companies, each with different conservation plans, it's lead to a patchwork of mandates aimed to curb water use.

Because the control board's order is nuanced and each water distributor has varying conservation plans, it could take time for the public to have firm direction, said Yvonne Kingman, California Water Service Company's corporate communications manager.

"Its intent is vague, I believe, because it's leaving a lot of room for local agencies and law enforcement and water providers to figure out how they're going to handle it," Kingman said. "So it gives us some leeway to make it work instead of the state trying to micromanage it. And at the same time, there's resources there in order to enforce it."

Contingency plans could include more stringent restrictions, such as limiting irrigation to certain times and prohibiting new landscape from being planted. Providers must now decide how to implement and enforce the new regulations, said Nicole Sandkulla, CEO of the Bay Area Water Supply and Conservation Agency.

"The state ordered [water providers] to look at the level in their individual drought plan and look at what action level requires mandatory restrictions on landscape," Sandkulla said. "So there'll be differences among agencies on how they meet that requirement, but it will have some level of mandatory restriction."

The state's order also prohibits four outdoor water uses making it now illegal for urban residents to water landscape to the point of flooding or where runoff flows into streets, wash cars without using a shutoff nozzle, use water to wash any hard surfaces like driveways and use decorative fountains without recirculation devices. Water suppliers are also authorized to charge fines for prohibited uses up to $500 per day and distributors that don't abide by the Control Board's orders could face penalties up to $10,000 a day.

Regardless of the new requirements, most cities and agencies are struggling with enforcement and said they will focus on educating customers before levying penalties.

Benefits of reducing outdoor use

The state is focusing on irrigation because it accounts for the majority of consumption and one can only cut back so much on indoor use without broader health affects, said Tim Moran, spokesman with the State Water Resources Control Board.

“In terms of residential water use, outdoor use is greater than indoor use and can be somewhat less critical than indoor use. In terms of indoors, you have to flush toilets and have drinking and cooking water. And outdoor use is probably a place you can cut back without endangering health and safety,” Moran said.

Burlingame, Daly City, Foster City, Hillsborough, San Bruno, Cal Water and the Coastside County Water District have activated their Water Shortage Contingency Plans.

Redwood City, Menlo Park, Millbrae, Menlo Park and the Mid Peninsula Water District will meet to discuss the next steps in restricting residential irrigation use.

Many San Mateo County cities have begun to contribute to the statewide efforts by reducing their outdoor uses, particularly within Parks and Recreation Departments.

Data provided by cities and districts show all have agreed to make the state’s four outdoor uses mandatory and some are enacting more stringent restrictions based on their individual Contingency Plans.

Going further than the state

Many cities are encouraging consumers to conserve by not watering landscape during the day, when evaporation is more likely.

Burlingame is encouraging its residents not to irrigate between 8 a.m. and 6 p.m. Foster City is prohibiting irrigation between 10 a.m. and 6 p.m. The Coastside County Water District; which serves Half Moon Bay, El Granada and Princeton; is also limiting use between 8 a.m. and 5 p.m.

Hillsborough is prohibiting irrigation one hour after sunrise through an hour before sunset.

Daly City is prohibiting landscape watering between 11 a.m. and 6 p.m. and limiting it to two days per week.

San Bruno is asking residents not to water between 9 a.m. and 4 p.m., as well as deterring residents from planting new landscape that isn’t drought tolerant.

Cal Water; which serves most of San Mateo, South San Francisco, San Carlos as well as other San Mateo County communities; is following the California Public Utilities Commission direction, Kingman said.

Cal Water is implementing the Control Board’s requirements and will continue to request its customers adhere to other outdoor restrictions such as repairing broken irrigation’s systems after being notified.

Still working

Millbrae has not enacted any stage of its contingency plan, but the council will meet Sept. 9 to discuss implementing the state’s requirements.

The Menlo Park City Council will meet Tuesday to discuss implementing stage three of its contingency plan, which is more restrictive than the state as it prohibits any new or expanded irrigation systems.

The Mid-Peninsula Water District, which primarily services Belmont and a portion of San Carlos, has not enacted any stage of its contingency plan either. However, the board will be meeting Aug. 28 and could approve additional restrictions, such as prohibiting new non-drought tolerant landscape from being planted if it finds users aren't conserving enough.

Restricting outdoor use is timely, said Sindy Mulyono-Danre, Public Works water resource management supervisor. The Redwood City Council meets Aug. 25 to discuss implementing its contingency plan and restricting outdoor irrigation to twice a week.

"We only have a few months left to get as much savings as we can because the greatest savings can be achieved during the summer months. Because as we go through winter, the demand for outdoor use will be less," Mulyono-Danre said.

Enforcement

The state's orders make certain uses illegal however, most San Mateo County distributors said they will focus on education before enforcing penalties. For districts with limited resources and no policing power, there is a question of who will be responsible for issuing fines or identifying offenders.

Currently, San Bruno and Cal Water have received complaints from residents who have noticed violations and are investigating the complaints.

Kingman said because Cal Water has a broad coverage area, it might turn to individual cities for enforcement. Cal Water will begin with education, but multiple offenders could face the installation of flow restrictive devices, have their service cut off or be issued fines, Kingman said.

Moran said the control board needed to implement mandates because statewide conservation rates were far from adhering to Gov. Jerry Brown's 20 percent water reduction request.

"We are in an extremely serious drought situation. We had done a survey of what urban water districts had conserved in the past year and overall water use I believe had gone up," Moran said. "The restrictions didn't happen voluntarily."

samantha@smdailyjournal.com

(650) 344-5200 ext. 106

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Water districts offering rebates for getting rid of lawn

Kathleen Pender

Published 3:25 pm, Saturday, August 9, 2014

Alan and Fran Bennett took out their lawn and had water-tolerant bushes, plants and trees put in at their home in Palo Alto. Photo: Michael Macor, The Chronicle | Buy this photo

Fran and Alan Bennett were spurred to action on their landscaping by the city of Palo Alto's rebate offer of $4 per square foot. Photo: Michael Macor, The Chronicle

Alan and Fran Bennett took out their lawn and had water-tolerant bushes, plants and trees put in at their home in Palo Alto.

Fran and Alan Bennett were spurred to action on their landscaping by the city of Palo Alto's rebate offer of $4 per square foot.

In many parts of the Bay Area, homeowners can get rebates ranging from 50 cents to $4 per square foot for replacing their lawns with drought-tolerant landscaping.

Alan Bennett of Palo Alto had wanted to replace his lawn for some time, but his city's rebate offer of $4 per square foot spurred him to action. "The incentive program is enough to get you over the barrier," he says.

Bennett and wife Fran got a landscape designer and contractor to replace their lawn and sprinkler system with drought-tolerant plants and drip irrigation for about $6 per square foot. The rebate, he says, covered almost two-thirds of the cost, although he was told the rebate is taxable. He was also told that their water bill might not drop much until the new plantings get established.

City of Palo Alto Utilities gets water from the Santa Clara Valley Water District, a wholesaler that serves almost all of the water retailers in Santa Clara County. This year, the district doubled the Landscape Conversion Rebate it offers all customers in its service area to $2 per square foot through Sept. 30. It also removed a cap that had limited rebates to $2,000 for homes and $20,000 for commercial customers.

A few of the district's customers, including San Jose Municipal Water and the City of Morgan Hill, provided their customers with additional rebates. But none was as generous as Palo Alto.

People in Palo Alto "could put Brazilian mahogany in their yards and save money," joked Marty Grimes, a spokesman for the Santa Clara Valley Water District.

Grimes says the number of people requesting applications has increased by 500 percent in the first half of this year compared to the same period last year. The number of rebates issued has climbed to 222 from 139.

The East Bay Municipal Utility District offers much smaller rebates but has also seen a big increase in interest in its lawn-conversion program. Applications "have increased fivefold in the past four months when compared to the previous six months," says Abby Figueroa, a spokeswoman for East Bay MUD.

San Francisco does not offer a lawn rebate program because there's not much grass in the city. Neither does the Marin Municipal Water District, which covers southern Marin County. A patchwork of programs covers much of the Bay Area.

The rules

The rules vary, but in general, to qualify for a rebate homeowners must replace a water-intensive landscape - such as grass with automatic sprinklers or a functioning swimming pool - with a low-water landscape.

Most require that the lawn being replaced is green, but will waive that rule if the homeowner stopped watering it recently.

In most cases, at least half of the new landscape, when mature, must be covered with drought-tolerant plants from an approved list. Some will allow artificial turf, some won't.

Most programs require customers to get a plan approved, have an on-site inspection before and after the project and complete it within a certain number of months.

Most water utilities issue the rebate in the form of a check, but they warn that it "may be taxable." If the rebate is more than $600, it is usually reported to the Internal Revenue Service.

One exception: East Bay MUD issues the rebate as a credit on the customer's water bill, "so it's not taxable," Figueroa says.

Asked if such rebates are taxable, IRS spokesman Raphael Tulino said, "All income is taxable unless there is a specific exception or exclusion for it under the law."

A bill in the Legislature, AB2434, would exempt turf-removal rebates from state income tax.

Not cheap

Replacing a lawn is not the most cost-effective way to save water. Most utilities offer free or heavily subsidized low-flow shower heads and toilets that deliver far more bang for the buck.

San Francisco pays $112 toward a $117 kit that lets you reuse water from a washing machine on your yard.

Garamendi introduces bill prohibiting federal funds for BDCP with Reps. McNerney and Bera
LAKE COUNTY NEWS REPORTS , THURSDAY, 11 SEPTEMBER 2014

Congressman John Garamendi (CA-03) this week joined Congressmen Jerry McNerney (CA-09) and Ami Bera (CA-07) in introducing legislation that would prohibit FY 2015 federal funds from being used for California's Bay Delta Conservation Plan (BDCP).

The BDCP includes the twin tunnels plan, which Garamendi – who represents part of Lake County – has termed a "boondoggle."

The state administration has requested $4 billion to help implement the BDCP.

"California's woefully inadequate water infrastructure definitely needs more federal investment, but the twin tunnels are a boondoggle and poor use of taxpayer dollars. Investments in water conservation, recycling, and storage are needed across the state. Instead of reigniting the California water war, let's build consensus and invest in the priorities that create more reliable water for the entire state. We can increase supply without destroying the Delta or undermining water rights," said Congressman Garamendi, former deputy secretary of the U.S. Department of the Interior.

The BDCP includes a proposal for two 33 foot-wide, 35 mile-long tunnels that would divert 112,207 gallons of water per second from the Delta and send it south.

Just two weeks ago, the state delayed the plan's implementation due to concerns from the federal government about the environmental and economic impact of the tunnels, including the potential for salt water intrusion.

Both the Army Corps of Engineers and the EPA raised objections to the BDCP's assumptions and called for major changes to the plan.

The BDCP is estimated to cost $25 billion, but analyses by independent groups show that the final expense could be more than $64 billion.

Water from Clear Lakes its way to the Bay Delta through Cache Creek and the Yolo Bypass.

Congressman Garamendi is the author of "A Water Plan for All California," a comprehensive water strategy that invests in water conservation, recycling, and storage, makes needed levee improvements, protects senior water rights, preserves the Delta, and relies on a science-driven process.

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Hastings' Water Storage Legislation Needed to Combat Western Water Supply Issues by Facilitating More Surface Water Storage
Press Release: September 10, 2014 – House Natural Resources SubCommittee on Water and Power
Contact: Committee Press Office 202-226-9019

Witnesses Agree that this Legislation is Needed

WASHINGTON, D.C., September 10, 2014 - Today, the House Natural Resources Subcommittee on Water and Power held a legislative hearing on H.R. 5412, the Bureau of Reclamation Surface Water Storage Streamlining Act. The legislation, introduced by House Natural Resources Committee Chairman Doc Hastings (WA 04), streamlines the Bureau of Reclamation's environmental planning and study process for new surface water storage projects in order to help facilitate the construction of new or expanded dams and reservoirs. The bill mirrors the process that was applied to the Corps of Engineers in the recently enacted Water Resources Development Act by setting the same standards and expectations for the Bureau of Reclamation to become more transparent and accountable in how it operates.

Multi-purpose dams and reservoirs can generate affordable emission-free electricity; store water suppliers for farmers, ranchers and municipalities; tame ravaging floods; provide recreational opportunities; and provide year-round cold water flows for fisheries. The Bureau of Reclamation Surface Water Storage Streamlining Act will facilitate the construction of new dams and reservoirs throughout the Western United States and will add much needed water storage, reform the cumbersome and lengthy permitting process, and create renewable energy.

"It is painfully clear, given the Bureau of Reclamation's inaction on storage in California, that the agency's feasibility study process needs to be modernized in a productive way," said Chairman Doc Hastings. "For this reason, I've introduced the Bureau of Reclamation Surface Water Storage Streamlining Act. It's a common sense bill based on the precedent of the newly enacted Water Resources Reform and Development Act, or WRDA, that only four Members of this House opposed."

"Water conservation is critically important in managing a temporary shortage – but it does nothing to add supply. What we are now discovering is that by exhausting conservation measures in wet years, we have no latitude to manage a drought when it comes. If this current crisis teaches us anything, it must be that there is no substitute for adding supply, and this bill – and others recently heard by the subcommittee -- begin to restore this process for a new generation that is now paying dearly for the mistakes of their predecessors.," said Subcommittee on Water and Power Chairman Tom McClintock (CA-04).

Witnesses at the hearing testified on the need for a legislative solution and impacts of the proposed Obama Administration regulations, including higher food, water, and electricity costs, undermining of states' rights; and current and future water supply infrastructure.

Mr. Dan Keppen, Executive Director, Family Farm Alliance, Klamath Falls Oregon, testified that new or expanded water storage is necessary and conservation alone cannot solve the water supply problems currently crippling the west. "As you are all aware, actually developing new storage projects is much easier said than

done. For many reasons – political, economic, and social – the construction of traditional surface storage projects is undertaken on a much more limited basis than in decades past. Even if authorization and funding is secured for a new storage project, the existing procedures for developing additional water supplies can make project approval incredibly burdensome… Clearly, the existing procedures for developing additional water supplies need to be revised to make project approval less burdensome."

Mr. Bennett Raley, Attorney for the Northern Colorado Water Conservancy District and representing the National Water Resources Association, Denver, Colorado, testified on the need for storage projects in Colorado and the benefits of legislation to encourage and promote new and existing water storage. "Northern Water is not alone in working to develop water supply opportunities that are sensitive to environmental needs without triggering the complex, costly and time-consuming process for federal water supply projects. Water providers throughout the West are seeking similar non-federal solutions. However, given the importance and prominence of Reclamation facilities in many regions, a non-federal project approach is not always available, and meeting the needs of the future will likely require that existing federal reclamation projects throughout the West be optimized to allow additional storage or that unused capacity in existing Reclamation projects be made available to provide to better manage available non-federal water resources."

Mr. Jeffrey Sutton, General Manager, Tehama-Colusa Canal Authority, Willows, California, testified on California's need for increased water storage projects. "The "Bureau of Reclamation Surface Water Storage Streamlining Act" consists of a number of common sense proposals directed at removing unnecessary bureaucratic impediments to new storage in a manner that would provide additional water supply certainty to the businesses, individuals and wildlife whose wellbeing and, in many cases, survival is inextricably linked to the importance of congressional action to mitigate the adverse impacts of future droughts."

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Stormwater Management Services That Provide a Water Supply Source May Be Funded With Water Service
New Legislation Defines Water for Purposes of Proposition 218 to Include Water from Any Source
SEPTEMBER 10, 2014 – BB&K Attorneys At Law

Assembly Bill 2403 amends the definition of "water" contained in the Proposition 218 Omnibus Implementation Act to "include improvements for producing, storing, supplying, treating, or distributing water from *any source*." This legislation is intended to clarify that fees imposed to fund the capture (including recharge into a groundwater basin), treatment, production and distribution of stormwater as a water supply source are fees imposed for water services, and therefore are not subject to the more burdensome voter approval requirements of California Constitution article XIII D, section 6(c) (commonly referred to as Proposition 218). The legislation offers one alternative to address the evolving nature of California's stormwater management programs, especially the growing development of "stormwater recapture" programs for recharging groundwater aquifers — a valuable water supply source for public agencies throughout California.

In November 1996, California voters approved Proposition 218, which amended the state Constitution by adding articles XIII C and XIII D. Article XIII D established a new category of fees and charges referred to as "property-related fees and charges," and created new procedural requirements for their adoption. Under these requirements, water, sewer and solid waste service fees are subject to a public hearing, notice and majority protest procedure for their approval. All other property-related fees, however, must comply with these requirements and an additional voter approval process — majority approval by the affected property owners or a two-thirds registered voter approval.

In 2002, in *Howard Jarvis Taxpayers Association v. City of Salinas,* a court of appeal considered a challenge to fees imposed by the City of Salinas to fund a stormwater drainage and flood control program developed to address water quality challenges created by the stormwater runoff. The court held that stormwater captured and discharged into a stream, river or ocean is a "drainage" function, not a water or sewer service function. As such, the fees were subject to the additional voter approval requirement of article XIII D, section 6(c).

In 2013, in *Griffith v. Pajaro Valley Water Management Agency*, a court of appeal was asked to consider whether a groundwater augmentation charge imposed to fund a supplemental water supply program was a fee for water service. The supplemental water supply program included improvements to capture and treat stormwater for groundwater recharge. The court concluded that the Agency's groundwater augmentation charges are "water service fees" and therefore are within the express exemption of article XIII D, section 6(c)'s voter approval requirements. The court recognized that "water service" means more than just supplying water — it includes managing a groundwater basin and ensuring an ongoing, potable supply of groundwater to the entire basin.

In adopting AB 2403, the Legislature made specific findings that the legislation is declaratory of existing law, which would include the decisions in *Howard Jarvis Taxpayers Association* and *Griffith*. It further declared that the legislation is in furtherance of the policy contained in California Constitution article X, section 2, and the policy that the use of potable domestic water for nonpotable uses, including, but not limited to, cemeteries, golf courses, parks, highway landscaped areas and industrial and irrigation uses, is a waste or an unreasonable use of the water within the meaning of article X, section 2 if recycled water is available. AB 2403 was signed into law by Gov. Jerry Brown on June 28.

If you have any questions about this legislation or how it may impact your agency, please contact the attorney author of this legal alert listed at right in the firm's Public Finance practice group, or your BB&K attorney.

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Water utilities provide billions in economic impact
September 10, 2014 | Fierce Energy | By Barbara Vergetis Lundin

A new report based on the planned operating and capital investments of 30 public water utilities estimates that these water, wastewater and stormwater utilities will contribute approximately $524 billion to the U.S. economy and support roughly 289,000 permanent jobs over the next decade.

The Water Research Foundation (WRF) and the Water Environment Research Foundation (WERF) report results show that investments by utilities generate similar job impacts as compared to investments in clean energy, transportation and healthcare. In addition, these investments generate more jobs per $1 million than investments in military spending or personal income tax. The total annual employment impact of the water utility sector exceeds the total workforce of many major cities, including New Orleans, Miami and Pittsburgh, and the combined economic contribution by utilities exceeds the gross regional product of metropolitan areas Chattanooga, Tennessee, and Santa Barbara, California.

Throughout the coming decade, the 30 participating utilities will undertake projects to replace aging infrastructure, improve local water quality, expand services to accommodate increased demand and respond to a number of additional needs -- sustaining more than 131,000 jobs over the next 10 years.

In addition to the significant number of jobs sustained by the water utility sector, utilities in the study anticipate major workforce replacement hiring needs, with nearly one-third of their existing workforce currently eligible for retirement. The current workforce replacement needs of the water industry sector exceed the nationwide average.

"Investments made by our utility partners generate valuable, stable careers in communities across the nation," said Daniel Wolterling, WERF interim executive director. "Over the next decade, our sector will continue to make significant contributions to local economies and the nation's economy as a whole."

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Regional Cooperation and Water Transfers Provide Drought Relief for Bay Area Water Agencies
ACWA News, 09/08/2014,by Pamela Martineau

Bay Area water officials are utilizing a pilot project of water transfer agreements and regional cooperation to help endure ongoing drought conditions. The agreement between the Contra Costa Water District (CCWD) and the Alameda County Water District (ACWD) illustrates how regional cooperation and targeted water transfers can increase water supply reliability, officials from both agencies stated in a press release.

Under the pilot project approved early this year by both agencies, ACWD is allowed to purchase and store 5,000 acre-feet of water in CCWD's recently expanded 160,000 acre-foot Los Vaqueros Reservoir for delivery this summer. CCWD Board President Joseph L. Campbell said the agreement between the water districts demonstrates how local agencies can work cooperatively to meet the region's water needs during extended drought conditions.

"CCWD is pleased to see efforts aimed at testing Los Vaqueros for regional benefits," Campbell said. "Successful water-storage and cost-sharing agreements such as this one can provide benefits to CCWD customers and water customers throughout the region in reduced costs and increased water-supply reliability."

Under the agreement, 5,000 acre-feet of water has been delivered to ACWD this summer through transfer agreements approved by state and federal agencies. This represents approximately 15% of the water to be delivered to ACWD customers in 2014, and provides a cost-savings for ACWD ratepayers as the district avoids the need to purchase more costly sources of supply.

"During one of the worst droughts in California's history, the ACWD-CCWD regional partnership, combined with our customers' outstanding water conservation efforts, have truly made a difference in our community's water supply," said Paul Sethy, ACWD Board President. ACWD is reimbursing CCWD for supply, storage, and conveyance costs associated with the project. The agreement does not affect any of the benefits that Los Vaqueros provides to CCWD customers.

A continued ACWD-CCWD partnership to store water at Los Vaqueros could be a cost-effective way to increase water-supply reliability for ACWD, according to Sethy. "The use of Los Vaqueros could provide many benefits to ACWD customers and this pilot project has allowed our agencies to test this partnership on a limited scale," he said.

CCWD continues to explore additional agreements for short-term water storage with other Bay Area water agencies. This regional approach provides more flexibility for water agencies to navigate multiple dry years, regulatory restrictions, and emergencies.

To find out more about the Contra Costa Water District, visit www.ccwater.com. To find out more about the Alameda County Water District, visit www.acwd.org.

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Viewpoints: Hetch Hetchy lawsuit a reminder on species law

By Craig Manson
Special to the Bee
Published: Saturday, Sep. 6, 2014 - 12:00 am

No lasting solution to the decline of endangered species can be found until all the causes are fully understood and addressed. And no California water project, or water users, can be exempt from the sacrifices that protecting species sometimes requires.

That's why the Center for Environmental Science, Accuracy and Reliability was forced to sue the National Park Service, demanding that the Hetch Hetchy Project comply with the Endangered Species Act just as other California water projects do.

The act requires that all federal agencies, without exception, take steps to ensure that their actions do no harm to the at-risk species they're charged with protecting. In the case of Hetch Hetchy, it's the National Park Service that has a duty to consult with U.S. Fish and Wildlife Service if project operations could jeopardize the continued existence of protected species or their habitat.

Yet Secretary of the Interior Sally Jewell has for some reason long ignored that provision of law, by failing to consider Hetch Hetchy's contribution to the decline of these species. The center brought this suit reluctantly, only after the secretary ignored our request that she fulfill her obligations. That left us little choice but to go forward, in hope that the courts will remind the secretary that the endangered species law applies to everyone.

That means we all participate in a national goal of preserving the ecological richness of our country. And a burden shared is a burden lightened. Cities and water districts across California are contributing to the conservation of these endangered species through significant cutbacks. The resulting economic impacts have been severe. Farmers are losing every drop of water behind the dams they paid for; orchards are dying; everyone's food bills are increasing.

But Hetch Hetchy, which diverts and stores water for use by San Franciscans, isn't being held to the same standard as projects serving the other 22 million people in the state. Bay Area water users have been getting a pass, in short, while the rest of the state's water users – urban, suburban and rural – have subsidized the resulting environmental damage.

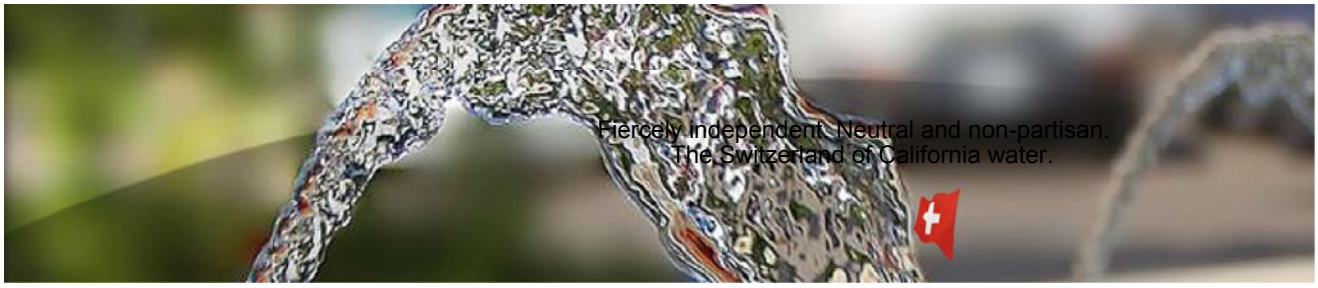
The U.S. Fish and Wildlife Service has determined that the species affected by the diversions at Hetch Hetchy are in danger of extinction. And by not consulting with the service, as required, the National Park Service could very well jeopardize their continued existence. This means the sacrifices made by every other California water user to protect at-risk species are undermined and made even more difficult.

This suit simply aims to ensure that all Californians are a part of the solution. The secretary can resolve this matter by simply directing the park service to comply with the Endangered Species Act and ensure the flows they authorize out of Hetch Hetchy Reservoir are subject to consultation.

While some may question the center's motives, we have been consistent in our mission to ensure enforcement of the endangered species law using the best data available. Sometimes that has led us to urge the delisting of a species; other times, we've fought for stronger

protections. We're driven by data, not dogma, because most of the controversies stem from politicized decision-making or the use of flawed or skewed science.

The Endangered Species Act is a powerful tool for conservation. But for it to be effective, we cannot implement it piecemeal. Our goal with this suit isn't to further muddy the waters, but to enforce the law. Until we pursue application of the law rigorously, it cannot be successful.



MAVEN'S NOTEBOOK

A California water news, science and policy blog

Dr. Peter Gleick on The Untapped Potential of California's Water Supply

Categories: Maven's Minutes, Sliderbox Posts

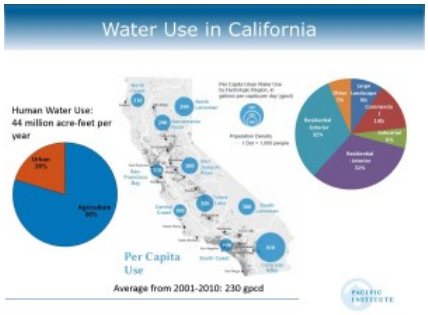
by Maven

September 3, 2014

In June, the Natural Resources Defense Council (NRDC) and Pacific Institute released a study that examined the potential water supply that can be gained from urban and agricultural water use efficiency, water reuse, and stormwater capture. The report, *The Untapped Potential of California's Water Supply*, concludes that 10.8 to 13.7 million acre-feet of water per year could be provided though new supplies and demand reductions. At the August meeting of the California Water Commission, Dr. Peter Gleick from the Pacific Institute briefed the Commission on the results of the study.

Dr. Peter Gleick began by noting that the Pacific Institute has been working for the last 27 years on global water issues, climate change, and international conflicts as well as done extensive work on water in the western US and California. He said that during his talk today, he would discuss the report the Pacific Institute released about a month ago as well as discuss the idea of conservation and efficiency and some of the definitions and misconceptions and misunderstandings around that issue.

The report, *The Untapped Potential of California's Water Supply*, is a joint project with the University of California Santa Barbara, researchers at NRDC and at the Pacific Institute; the work was funded by the Pisces Foundation, the Hilton Foundation in LA, the California Water Foundation, and a variety of sources, he said.

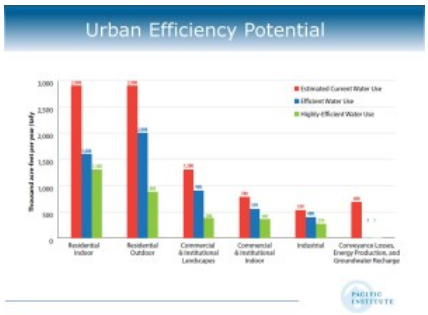


The study looked at four pieces of the California water puzzle: Urban efficiency, agricultural efficiency, water reuse, and stormwater capture. "*I'll say right up front and we say explicitly in the report, California's water problems and solutions are bigger than those four pieces of the puzzle*," he said. "*We aren't suggesting that those are the only four things we have to do, but we did an analysis of those four pieces of the puzzle to contribute to the conversation*."

"*California's water situation is complicated*," he said. "*We use a lot of different types of water in a lot of different places for a lot of different purposes, for agriculture, for urban, urban use is split into residential, commercial and industrial. There's a great diversity around the state in the way use water and in the demands and in the sources of supply*."

He then presented a graph depicting cumulative groundwater withdrawals from 1962 to present day. "*We are extensively overdrafting groundwater,*" he said. "*Even in a good year, we're overdrafting groundwater. During a drought, groundwater is*

the go-to source to replace missing surface water. We're in a deep hole, and not only has California been incredibly dry the last three years, it's been incredibly hot. This year is going to be a record high temperature year, hotter than it's been in recorded 118-120 years, so it's been hot and it's been dry, and that's part of the hole that we're in."



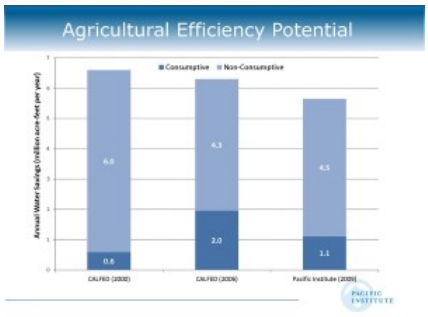
The study looked at urban efficiency, agricultural efficiency, water reuse, and stormwater capture, he said. He then presented a graph depicting the results for urban water use efficiency categorized by sector of water use: residential indoor water use, residential outdoor water use, commercial, institutional, and industrial, as well as conveyance system losses. He noted that red is existing water use. "*The blue bars show our estimate of what efficient use would be if we were comprehensively using the technologies and practices we know work, that in fact we've been developing and applying in California for several decades, but not completely*," he said. "*The green bar is the really optimistic, if we were really efficient, if we were maximizing technology and the policies and practices that we might do – Some of the things that Australia did after eight or nine years of drought when they were really up against the wall and they really had to push beyond the kinds of things that they had been doing day to day*."

"*This is total water use, applied water use, not consumptive*," Dr. Gleick said.

Dr. Gleick pointed out that the graph shoes that most urban water use is residential, which is about 50/50 between indoor and outdoor statewide, but varies depending on the region. "*There's much more outdoor water use in the Central Valley and the hotter areas, and there's much more indoor in San Francisco where they don't have much in the way of lawns*."

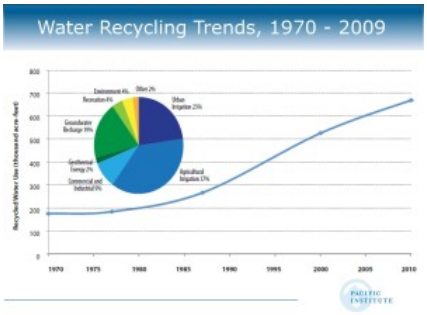
He then presented a slide depicting the residential per capita savings in gallons per day that is achievable by using more efficient dishwashers, faucets, showers, clothes washers, and toilets as well as leak repair. "*The bars on the left show the potential savings in gallons per capita per day – the range in savings for applying indoor improvements and outdoor improvements, and it shows that there's a lot of potential, especially on the outdoor side. We've done pretty well indoors, but outdoors, we could do a lot better which is why urban agencies now are beginning to focus on outdoor landscaping*."

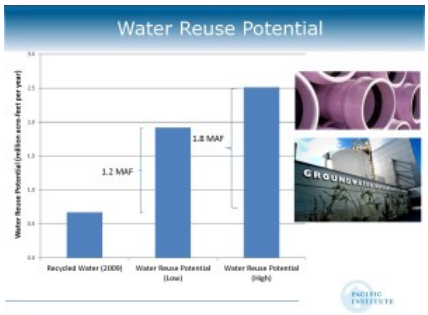
He noted that with really aggressive savings, we could cut residential water use substantially, as much as up to 50%. "*We know that from experience in Australia that these are achievable; this is what really efficient residences could look like. There's a conversation to be had here about what kind of gardens we want and what kind of lawns we want, if we want lawns and gardens. But these are achievable. Whether your savings occur inland or whether your savings occur at the coast make a difference as well*."



He then presented a slide depicting estimates of agricultural efficiency potential, noting that the first two bars are estimates of agricultural water savings from the CalFed studies in 2002 and 2006, and third are the estimated savings from Pacific Institute's assessment that was done in 2009. "*This graph actually does split out consumptive and non-consumptive savings*," he said. "*The dark blue bars at the bottom are estimates of consumptive savings potential; the larger bar is overall non consumptive savings and the sum of the two is the estimate*." He noted that the numbers in the report reflect the 2009 Pacific Institute study, which showed a smaller potential than the CalFed estimates. "*The agricultural sector has made enormous progress in recent years in improving efficiency, but there's more that can be done*."

The other piece of the analysis looked at the potential for water reuse and stormwater capture. He presented a graph showing the trends for water recycling since 1970. "*California has made some progress in improving recycled water production and use*," he said. "*DWR estimates we're using between 600,000 and 700,000 acre-feet of recycled water for a range of things. The pie chart looks at where that water is currently being applied. And some of it's going to agricultural irrigation, urban landscaping and urban irrigation, groundwater recharge, recreational purposes, environment flows – reused water is used for all sorts of things*."

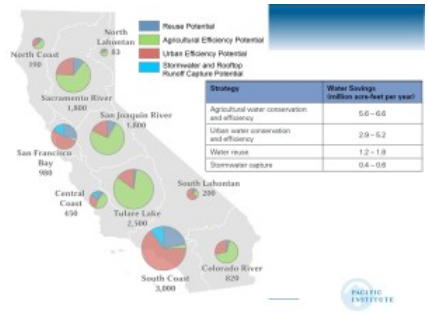




Dr. Gleick said the study looked at the potential to expand that, and he presented a chart of the results for water reuse potential. "*We have a low estimate and a high estimate in our analysis*," he said. "*The high estimate is if we do not do a lot more on urban water use efficiency, then a lot more water goes to our wastewater treatment plants, and so there's much greater potential to them to take that water, treat it, and reuse it. If we're really aggressive on urban efficiency, we cut flows to wastewater treatment plants, there's less wastewater that can be reused, and that's the low estimate*."

"*Basically we're saying we could double, potentially even triple the amount of water that could be reused from our urban systems*," he said. "*A lot of this is already underway – a lot of the effort of the Governor's budget and the bond is to expand funding for water reuse reflects that understanding of that potential*."

The other piece is stormwater capture and reuse. "*This is an effort to expand our ability to capture stormwater that we currently divert and mostly throw away*," he said, presenting a slide depicting the stormwater capture potential in the various regions of the state. "*There are a lot of efforts underway to try and figure out how to capture water either for immediate reuse and treatment or for groundwater recharge, and the estimate was about 400,000 or 500,000 or 600,000 of stormwater could potentially be capture above and beyond what's now being captured, and instead of diverting it into our storm drains and into the ocean, it could be put to some sort of reuse*." He noted that a significant fraction of the potential is in Southern California, but coastal California in particular.



He then summarized the results. "*The blue parts of the pie chart are reuse potential, the green is agricultural efficiency, the red is urban efficiency, the lighter blue is stormwater capture, and as you can see, different parts of the state have different potential*," he said. "*Obviously there's much more potential for agricultural efficiency improvements where agriculture has a big presence such as in the Central Valley, the Sacramento, San Joaquin, and Kern area, whereas urban efficiency potential improvements are greatest in our urban areas*."

Dr. Gleick next addressed the idea of water use efficiency. "*There's a lot of misunderstanding about efficiency*," he said. "*And there are different terms of art. Some people think conservation means letting your lawn go brown, taking a shorter shower – those things that save water. Those are things we do during droughts and the public's pretty good about responding to voluntary requests to save water in an emergency*."

But efficiency's a bit different. "*Efficiency is the idea of doing what we want with less water*," he said. "*You take a shower, but you do it with a efficient low flow shower head; it's the same length of time for your shower, but you're using less water. You flush your toilet with an efficient toilet, but you use less water than flushing it with an inefficient toilet. There's a distinction between conservation and efficiency in our minds, and it's an important one to keep in mind*."

There are a lot of different definitions of efficiency, and we're not great at measuring how much we use beneficially versus non-beneficially and consumptively versus non-consumptively, he said. "*Data is really an important part of this puzzle*."

The Pacific Institute has worked for a long time on the issue of conservation and efficiency, he said. "*We think it's a really important piece of the puzzle. We have never said it's the only thing we have to do. Sometimes there are straw man arguments out there that say look, conservation and efficiency can't solve all of our problems. I agree with that completely. Storage can't solve all of our problems. Nothing is going to solve all of our problems because California water, as you know, is a complicated beast. But there are some misunderstandings about conservation and efficiency that I think are important to discuss and I want to present some of those*."

California has made remarkable progress on efficiency, he said. "*Our total water use and our per capita water use have declined over the last 40 years, despite a growing population, despite a growing economy, in large part because of the efforts in the agricultural sector and the urban sector to do more with the water we already have. There are a lot of innovative people out there doing a lot of really innovative things*."

There is a new appreciation about the remaining potential and a growing understanding of the definitions and the complexities and that potential, as well as a growing effort to understand the barriers to implementation, he said. *"Why is it difficult in some places and at some times to capture efficiency improvements? Is it economic, is it cultural, is it technological, is it measurement questions? There are a series of barriers to capturing efficiency improvements, and we're trying to understand what those barriers are and overcome them*."

"*But there are some serious misunderstandings and misrepresentations and constraints on implementation that we need to address*," he said, saying he would draw on five examples to describe the definitional questions and some of the misunderstandings:

> Example #1. There is a city with one person living in it, who uses water to only grow a lawn, and he uses two units of water to do so. No water goes downstream. *"If that person uses one unit on their lawn and the other unit actually waters the sidewalk, the one unit on the lawn is beneficial use and it's consumptive; it goes to the atmosphere, nobody else can use it. The one unit on the sidewalk is non-beneficial and it's consumptive. What's the fix? One fix is to fix the sprinkler system so it's only watering the lawn. And you save a consumptive unit that can go downstream. That's new water.*"
>
> Example #2. Same city, one person living there using two units, all of it beneficially on a lawn; now waste, no downstream flow. "*One of the options in the conservation efficiency discussion is replace your lawn with a nice drought resistant garden that may only use one unit. So now it's using one unit; that one unit that's being used is still consumptive, it goes to the atmosphere because it's evapotranspired away like any crop, and it's beneficial because it's being used productively, and the other unit becomes available to go downstream. It's new water. That is a xeriscaping type of response*."
>
> Example #3. Same city, one person living there, only using water in the toilet. "*The water is used beneficially, but it's not consumptive because it's captured, it goes to a wastewater treatment plant, it's treated, and it goes downstream to the next user. It is a beneficial use but not consumptive. You could replace your toilet with a toilet that only uses one unit, but people say to me, why bother, you have two units going downstream anyway. It's not producing new water. It has to be new water, sometimes people claim*."
>
> But here's the issue, he said. "*By only using one unit instead of two, you don't have to treat two units of wastewater; you treat one. There's a savings there. Even if you're not producing new water, that's a savings. It's what we call co-benefits. You're not taking two units out of the stream; you're leaving one instream; maybe there's an ecosystem benefit. That's a co-benefit. There are energy savings for not pumping that water out and pumping it to the treatment plant; there are energy savings. So sometimes conservation and efficiency produce the savings that are not new water, but are still worthwhile doing*."

"*This is an important point*," said Dr. Gleick. "*The argument that conservation of efficiency has to produce new water is wrong. Sometimes, it produces new water but not always. As the ag picture showed that even if it's not new water, it can often produce energy savings, ecosystem savings, water quality savings, and so on*."

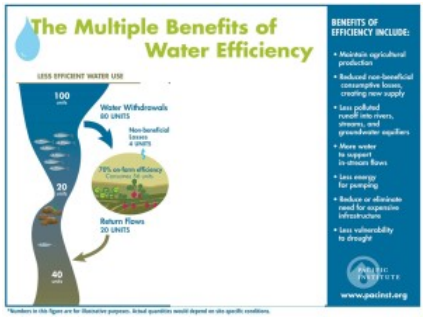
Example #4. Same city, one person, two units of water used for a toilet and there's a drought. Only one unit of water is available. "*If they are using a high efficiency toilet that only uses one unit, they are more drought proof so it provides drought savings as well. Now you may no longer have that extra unit going down the stream because of the drought, but conservation and efficiency provides drought benefits as well. If you've been using one unit instead of two for many years, there's more water stored in your reservoir upstream, you're taking less water out of groundwater, and over time, these savings can accumulate over multiple years*."

Example #5. Same city, one person living there using two units of water, and now another person wants to move in. There are only two units available and this person is using it on a high flow toilet. "*A new person moves to Sacramento and there's no water for that person, but if that person is using a high efficiency toilet uses one unit, and the new person moves to the city and only also only uses one unit, you can have a growing population or a growing economy without new supply – without having to boost that two units to three units by building storage upstream or by finding something else*."

"*Some people believe that the water use efficiency potential is small, and if that's true, then our only options are find new supply, fallow land in the ag sector, or limit population growth in our urban areas, things that are really difficult for us to discuss as a policy in California*," said Dr. Gleick. "*There are things we don't want to do. We don't want to fallow land and we don't want to talk about limiting population. We do talk about new supply and I think the conversation about developing new supply is a perfectly legitimate one. The question should be yield. That's what this beneficial-non-beneficial, consumptive-non consumptive issue is*."

The good news is that the assumption that the water efficiency potential is small is wrong. *"There's plenty of potential still, and despite the efforts that have already been made, a lot more could be done to capture inefficient uses around the state, and that's going to allow us to maintain our agricultural sector and our urban sectors in a much stronger position than otherwise*," he said.

After the report was released, an op-ed in the Bee said there couldn't possibly be 10 to 14 MAF of new water, said Dr. Gleick. "*We never said that 14 MAF was new water, we were very explicit that some of it was new water and some of it was non-consumptive use that had other benefits. Some of this is new water in the agricultural sector; some of it's not. In the urban sector, some of it is new water that can be reallocated, and some of it isn't*."

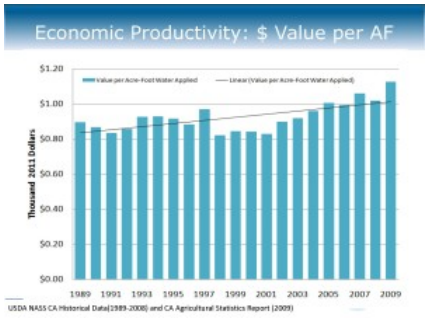


Co-benefits are often ignored in the conversation about efficiency, but they are important. "*Co-benefits being the reduced wastewater treatment costs, the reduced energy costs, and the ecosystem instream flow benefits of conservation and efficiency*," he said. "*Saving a gallon of water in LA with a low-flow toilet is a better thing to do than saving a gallon of water in San Francisco with a low-flow toilet as it takes a lot more energy to pump that water to Los Angeles and the energy savings has to be considered*."

It's not just efficiency of water; it's productivity of water use, Dr. Gleick said. "*The point is we don't want to use water; we want to do things. We want to grow food and fiber. We want to make semiconductors. We want industry and agriculture. So what is really important is what we get out of the water we use – yield per unit of water. Farmers understand this. Or dollars per unit of water, or employment per unit of water, or other measures; there are other ways of measuring water use productivity then just how much water is being used*."

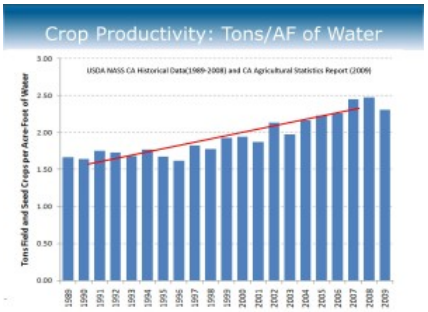
Another co-benefit is the ability to delay or eliminate spending on new infrastructure, he said. "*We may have to build new surface storage; we certainly need groundwater storage. But if our ability to use water more efficiently delays expenditures in a cost –effective way on that new infrastructure, that's an economic benefit. It depends on whether expenditures on efficiency are more effective than expenditures on storage or wastewater treatment or stormwater capture; that's an economic balance question. But I would argue that we can delay or eliminate enormous infrastructure cost with lower cost expenditures on efficiency and conservation*."

Dr. Gleick acknowledged that there are many examples in the agricultural sector of moving to drip irrigation without a change in the total amount of water used. "*People say, drip irrigation doesn't save any water. Or sometimes doesn't save any water. We know it does, sometimes*," he said. "*But the other part of that discussion is that sometimes it leads to an enormous improvement in yield. You're using the same amount of water but you're growing more food with the same amount of water. There is the yield per unit of water, reduced disease outbreaks, improved crop quality, and reduced energy use. The agricultural sector has been really good about describing all these co-benefits associated with these kinds of improvements.*"



He then presented a slide showing the economic productivity per acre-foot, noting that the state has been improving the dollars per acre-foot for decades. "*We get more dollars in the ag sector out of every acre-foot of water that we use now, and this is corrected for inflation. This is another measure of efficiency and productivity*. "

He presented another slide showing crop productivity per acre-foot of water. "*We've also been improving yields. This is tons of field and seed crops per acre-foot of water applied, and it shows an improvement in yield*."



So even if the total amount of water stays the same, income can go up and productivity can go up; these are benefits of some of these efforts to improve efficiency," he said. "*The purpose of improving efficiency is not just to free up new water for reallocation. Efficiency improvements can lead to productivity, quality, financial improvements, and these are real benefits*."

What happens with the saved water is another really important point, Dr. Gleick said. "*I've often heard that we save water through efficiency improvements, but it just gets reused so there are no real savings. That's a policy question. What we do with saved water is a policy question. If a farmer improves water use efficiency on farm, and doesn't return that water to instream flows, that's a policy question. If that farmer then uses that water for expanded production, again, there may be no decrease in water use, but there may be an increase in crop productivity and income. Those are policy questions*."

Click here for the issue brief, "The Untapped Potential of California's water supply"

"*If we save water and don't return it to instream flows, there are no instream flow benefits, but that's a policy question*," he continued. "*If we save water by low flow toilets and efficient washing machines, and the population grows and we just give that water to a bigger population, again, no water may be saved but we're serving more people, and those are benefits to the state, and we see this in the exponential growth of our economy and the exponential growth of our population, and the fact that total water use hasn't gone up, but the policy question about what we do with saved water is a tough one. I don't have an answer for you about that*."

"*There should be some new discussion on a policy level about to capture and monetize or allocate these co-benefits*," he said. "*Often the benefits don't accrue to the person who is saving the water and so there's no real incentive to save water. They might accrue to somebody else, and that's a policy question as well*."

"*So I'm going to stop there …* "

Discussion highlights

Commissioner Saracino said that he was concerned that the numbers in the report might do a disservice to policy discussions on the implication that there's all this new water to be gained, especially from agricultural water use efficiency. *"I think that doesn't allow us to get into the real policy discussion that you mentioned, the fact that we may need to fallow land or find ways to control consumptive use of water … it seems like the new water estimates are grossly exaggerated, and again that concerns me because of the implications on the real policy discussions that we need to have …* "

"*On the issue of new water, we never said the numbers in our report were all new water*," he said. "*That was a misrepresentation of our report, and our report's pretty clear about that. … I think there's still a substantial amount of consumptive use that can be saved that would be new water. Outdoor landscape in the residential urban sector is enormous, frankly, and the biggest part of our urban savings is landscape savings, and that's a consumptive use. In the agricultural sector, our estimates of new water are pretty much in line with the CalFed estimates and DWR estimates. I think there's lots of discussion that could be had on really how much there is and how do you capture it, but it's a little difficult to respond to misrepresentations of the report versus what the reality is*."

Commissioner Del Bosque asks Dr. Gleick to expand on what he meant about evaporative losses.

"*This is an important part of the beneficial non-beneficial, consumptive non-consumptive discussion*," he said. "*There are evapotranspiration losses from agriculture; that's what agriculture is about. You're growing things; plants use water, and they evapotranspire that water. That's a productive beneficial use of water. You can't grow crops without it. What I'm interested in is unproductive evaporative losses, and unproductive evaporative losses are losses from watering the sidewalk. so it evaporates into the air and doesn't produce a benefit, or unproductive losses from sprinkler systems that are evaporating into the air and not benefitting the crop and there are plenty of those … So there are productive and unproductive evaporative losses. We don't very accurately measure unproductive evaporative losses, and yet we know that they exist. It's not 0, it's something, and if we can figure out how to capture unproductive evaporative losses, that's new water. That's, at the moment, a non beneficial consumptive use of water. So that's the distinction*."

"*I have to agree with Commissioner Saracino that I think the numbers are grossly overstated here*," said Commissioner Orth. "*Coming from the Tulare Lake Basin, I have a hard time getting my arms around the concept of 2.5 MAF down there being available for management in a different way, or as potential new water supply. The California Irrigation Institute a few years ago did an analysis that came up with a significantly less number of savings potential or new water potential in the Tulare Lake hydrologic region, which I think substantiates the point that we need to have more discussion and dialog about this …* "

"*I did read the report*," said Commissioner Delfino. "*It was very informational and helpful. And putting aside the issue of water savings and what does that actually mean, I appreciate the fact that the report came out at a time that rebalanced the conversation in what we should be doing to address the drought, and to focus it on the multitude of actions that we need to take in addition to infrastructure, but also efficiency, conservation, and so I appreciate that …* "

"*There are barriers to anything we do in California*," said Dr. Gleick. "*There are a lot of tools for capturing conservation and efficiency, and we've written about this at the Institute pretty extensively. We don't have a preferred tool. There are regulatory requirements that we have to do; appliance standards in California drove the national standards on water efficiency and have been incredibly important; that's a regulatory tool. There are financial tools – the pricing of water and the development of water markets that permit saved water to be transferred, or for somebody to benefit economically from conservation and efficiency or water pricing structures at utilities, or meters, or education – all of those things are important …* "

For more information …

- Click here for the webcast of the August meeting of the California Water Commission. This is agenda item 9.
- Click here for the agenda and meeting materials.
- *Click here for the issue brief on the report, The Untapped Potential of California's Water Supply.*
- Click here for the Water Efficiency Infographic.
- Click here for Peter Gleick's Power Point Presentation.

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Hetch Hetchy water tunnel in danger of 'catastrophic collapse'
Marisa Lagos, SF Chronicle
Wednesday, August 13, 2014

Mountain Tunnel, a key part of the Hetch Hetchy water system - which supplies 2.6 million Bay Area residences and businesses - is at risk of a "catastrophic collapse" and will cost more than $100 million to repair or up to $630 million to replace, according to the San Francisco Public Utilities Commission.

City officials have known for 25 years that significant work is needed on the 19-mile-long tunnel just outside Yosemite National Park in a steep, hard-to-access wilderness area. They considered making it part of the PUC's decade-old, $4.6 billion water system improvement program, which is now more than 80 percent complete. But ultimately, the 89-year-old connector was left out of the rebuild, which focused on upgrading Bay Area water facilities that could fail in an earthquake.

PUC officials say that the program gave priority to infrastructure on the three major Bay Area fault lines whose failure could shut off the water supply, such as the Calaveras Dam near Fremont - and that the tunnel, as well as other "upcountry" projects, didn't pose enough of a seismic risk to be included.

Now, the PUC is grappling with whether to shore up the Mountain Tunnel, which would require shutting it down for two months at a time for up to 10 years, or go the far more expensive but arguably more reliable route of building a new tunnel. The issue has taken on more urgency since the January release of a report that laid out the options and recommended building a new tunnel.

A major project

Whichever fix the agency chooses, said Steve Ritchie, the commission's assistant general manager for enterprise, it's going to be an expensive, complex project - far bigger than most of the individual components of the water system improvement program.

"The risk right now is that the tunnel lining could continue to fail and, at some point, that might restrict our ability to get flow through it," he said. "That would be catastrophic to us - any rapid failure that results in the reduction of water flow by 25 percent. That's a big deal."

Ritchie stressed that the likelihood of something happening is low, but the risk increases the longer the PUC waits.

"The drought keeps me awake at night a lot more than this does," he said. "Saying a section of this tunnel could fail - that applies to anything in our system. ... I think we see the risk of this increase over time, so the time is ripe to get started working on this. If we could accomplish it in 10 years, that would be a good thing. If it took longer than that, I would get more concerned."

Concern outside S.F.

The potential for catastrophe, however, has raised alarms at the Bay Area Water Supply and Conservation Agency, which represents the PUC's 1.7 million residential customers and 30,000 business customers outside the city of San Francisco. The costs of any improvements would be borne by water ratepayers as well as the commission's hydropower customers, because the tunnel is used for both purposes.

Nicole Sandkulla, the agency's general manager, said she and others unsuccessfully pushed for the PUC to include Mountain Tunnel on the agency's larger water system improvement program in order to keep it "front and center," and they were concerned when it "fell off that list."

When the issue came up in January, Sandkulla followed up with a letter to the PUC "about the surprising and alarming notice we received ... that the Mountain Tunnel, a vital part of the San Francisco Regional Water System, is at serious risk of a catastrophic collapse, which could cut off, for months, 85 percent of the water needed by residents, businesses and community agencies in the Bay Area."

Backup plans

She asked the agency about not only the long-term fix but what the commission is doing to ensure it has a way to deliver water in the event of problems with the tunnel.

Customers wouldn't be left without water, Ritchie said. The PUC has four to five months' worth of water in Bay Area reservoirs at all times - something that hasn't changed with the drought - and is in the process of finalizing an emergency response plan that includes agreements with other water agencies, he said. That storage will be even more robust in 2018, when the reconstruction of the Calaveras Dam is completed, he said.

"That's first and foremost, so if there's a failure of any kind, we have a plan in place to deal with the problem," he said.

The agency is also working to increase monitoring throughout the tunnel so it will have early indications if something does go awry. And it is working on improving physical access to the tunnel - such as widening roads - so "that if we have to do something in a hurry, we can get in more easily," Ritchie said.

Finally, the PUC is in the process of signing contracts with three outside experts to study the issue and offer recommendations on whether it should shore up the existing tunnel or build a new one, he said.

Pleased with progress

Sandkulla said she is pleased with the progress made over the past months, particularly around the emergency preparedness plan.

"I'm not here to beat up the PUC for lack of progress - the question is, 'Now that you know you have other infrastructure issues, how are you putting money and effort into making sure you are in a good spot to address it?' " she said. "I want to make sure they are moving promptly to address the situation, and taking the necessary precautions now, because nothing happens fast with this kind of issue - it takes time for a final fix."

She agreed with Ritchie that the seismic issues in other parts of the system addressed by the PUC in recent years were far more pressing and potentially catastrophic.

"This is different," she said. "As long as we stay focused and the PUC stays focused on making progress on near-term actions and longterm plans, we can manage this risk."

Marisa Lagos is a San Francisco Chronicle staff writer. E-mail: mlagos@sfchronicle.com
Twitter: @mlagos

Opponents Ask California Governor Jerry Brown to Veto Groundwater Bills
Sierra Sun Times, September 10, 2014

September 10, 2014 - By Dave Krantz - Farmers, ranchers, other water users and nearly three-dozen members of the state Legislature have urged Gov. Brown to veto a package of groundwater-regulation bills that reached his desk in the waning hours of the legislative session.

The bills—Assembly Bill 1739 by Assemblymember Roger Dickinson, D-Sacramento, and Senate Bills 1168 and 1319, both by Sen. Fran Pavley, D-Agoura Hills—would establish a broad, new regulatory framework for managing groundwater.

Gov. Brown has until Sept. 30 to sign or veto the legislation.

Opponents, including the California Farm Bureau Federation, say the bills go well beyond addressing issues of basins in overdraft, casting a cloud on water rights and establishing requirements that will lead to confusion and litigation.

CFBF President Paul Wenger said Farm Bureau has always encouraged the proper management of groundwater, but that doing the job efficiently and effectively should have been the priority.

"Instead," Wenger said, "the Legislature took the 'ready, fire, aim' approach, rushing these bills through and creating a massive new regulatory program in the final days of the legislative session."

Farmers, ranchers and other California landowners will be left to pick up the pieces, he said, dealing with the consequences of the legislation for years to come.

Under the bills, basins in critical overdraft would be required to develop groundwater-management plans within five years. Other basins would have seven years, but low- and very low-priority basins would not be mandated to develop plans.

A bipartisan group of 35 Assemblymembers and senators urged Gov. Brown to veto the legislation and to call a special session of the Legislature in December to reconsider groundwater management.

"Like you, we are concerned about the increasing conditions of overdraft in many groundwater basins," the legislators wrote to the governor. "However, the legislation before you punishes groundwater users in basins that have little or no overdraft or already have effective management efforts in place. It will also infringe upon the right to groundwater, at a time when available water supplies are getting tighter."

The legislators warned that the authorities granted in the groundwater legislation "will radically alter the landscape of groundwater law" in coming years and will have "a destabilizing impact on those who depend on groundwater supplies."

In their letter, the legislators said they are willing to help the Brown administration craft a

"narrower, more effective measure focused on basins where real problems exist, encouraging them to implement management measures modeled by other regions, and providing new state authority to intervene where local management fails."

The letter was signed by Assemblymembers Katcho Achadjian, R-San Luis Obispo; Travis Allen, R-Huntington Beach; Frank Bigelow, R-O'Neals; Rocky Chávez, R-Oceanside; Connie Conway, R-Tulare; Brian Dahle, R-Bieber; Tim Donnelly, R-Twin Peaks; Steve Fox, D-Palmdale; Beth Gaines, R-Roseville; Jeff Gorell, R-Camarillo; Adam Gray, D-Merced; Shannon Grove, R-Bakersfield; Curt Hagman, R-Chino Hills; Diane Harkey, R-Dana Point; Brian Jones, R-Santee; Eric Linder, R-Corona; Dan Logue, R-Marysville; Allan Mansoor, R-Costa Mesa; Melissa Melendez, R-Lake Elsinore; Kristin Olsen, R-Modesto; Rudy Salas, D-Bakersfield; Donald Wagner, R-Irvine; Marie Waldron, R-Escondido; Scott Wilk, R-Santa Clarita; and Sens. Tom Berryhill, R-Twain Harte; Anthony Cannella, R-Ceres; Jean Fuller, R-Bakersfield; Ted Gaines, R-Roseville; Cathleen Galgiani, D-Stockton; Bob Huff, R-Diamond Bar; Steve Knight, R-Antelope Valley; Mike Morrell, R-Rancho Cucamonga; Jim Nielsen, R-Gerber; Andy Vidak, R-Hanford; and Mimi Walters, R-Irvine.

Other legislative opponents of the groundwater bills from Central California included Assemblymembers Luis Alejo, D-Salinas; Ken Cooley, D-Rancho Cordova; Susan Eggman, D-Stockton; and Henry Perea, D-Fresno. Perea noted that the bills would have a disproportionate impact on the Central Valley, and said the costs of implementing the legislation would be "enormous."

CFBF President Wenger said Farm Bureau and other opponents had been able to "take some of the edge off" the bills during negotiations that preceded the final votes on the legislation.

"It now includes protections for water rights and other provisions that could lessen its detrimental impact," Wenger said. "For that, we must thank those in the Capitol who helped rein in some of the proposals' worst overreaches and the legislators, both Democrats and Republicans, who voted against the bills."

Even so, he said, Farm Bureau considers the legislation to be fatally flawed and has urged the governor to veto all three bills.

"True resolution to California groundwater problems will come through measures that this legislation does not address, such as a streamlined adjudication process and the recognition of groundwater recharge as a beneficial use of water," Wenger said.

Most importantly, he said, California must improve its surface water supplies.

"All the fees and fines in the world won't heal our aquifers unless California builds additional storage and improves management of surface water in order to reduce demand on groundwater," Wenger said.

# # #

Historic California groundwater regulations head to Gov. Jerry Brown

By Jeremy B. White
jwhite@sacbee.com

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California could soon become the last state in the West to regulate water pulled from beneath the earth, with the Legislature on Friday advancing an unprecedented groundwater-management strategy.

The Legislature passed the three-bill package after lengthy debate about whether state government should oversee pumping from the water table. Lawmakers argued over the long-term fate of California's water supply as a severe drought puts water scarcity at the forefront of public consciousness.

"Every single member on this floor recognizes that we've been overdrafting our groundwater not just in the last year, not just since the drought started, but for decades," said Assemblyman Roger Dickinson, D-Sacramento. "Proponents know it, and opponents concede it. The question is not what will happen if we act, the question is what are the consequences if we fail to act?"

But critics from both parties said the legislation would upend more than a century of water law and create another layer of bureaucracy. They said the measures threatened to make a bad drought situation worse by restricting farmers and other property owners' ability to pump water to help make up for sharp reductions in surface water.

Central Valley Assembly members whose districts encompass California's sprawling farm belt stood in unison against the bill. Assemblyman Adam Gray, D-Merced, said any groundwater legislation should have the same level of backing as the revised water bond lawmakers recently put on the ballot with near-unanimous support.

"We need to put a measure off this floor that can have the same kind of consensus and support that the water bond did," Gray said. "But we've chosen to move forward as a divided house, and I think that's an extraordinary mistake on an issue of this magnitude."

Dickinson's measure, Assembly Bill 1739, had already cleared the Senate and emerged from the Assembly on Friday by a 44-29 tally. It moved in tandem with a related measure, Senate Bill 1168, that on Friday passed the Assembly 45-26 before the Senate sent it to Gov. Jerry Brown on a 24-10 vote.

The bills are structured so the governor must sign both for either to take effect, along with a third bill emerging out of negotiations this week between legislative leaders and the Governor's Office.

The legislative package would compel water-basin managers in certain areas to craft groundwater plans guarding against overdrafts. The state would review the plans and reserve the power to step in if they are not prepared or enforced.

California can regulate water diverted from streams and reservoirs but currently lacks the authority for state-level oversight limiting how much water is pumped out of the ground. Landowners are generally free to extract any water that lies beneath their property.

As deliveries from surface sources have evaporated during a severe drought, farmers and others have turned to water from wells. Up to 65 percent of California's water supply could flow from underground this year, according to a California Water Foundation report, up from an estimated 40 percent in regular years.

That increased use has drained aquifers at a rate scientists call unsustainable, in some places causing the San Joaquin Valley to sink measurably as a result. A California Department of Water Resources study found that, in about half of the thousands of wells surveyed, water levels had plummeted to their lowest point in a century.

California has historically resisted broad state-level controls over groundwater even as other Western states have adopted them. Deference to local property rights has trumped the desire for an expansive state role.

But with the drought straining water supplies and setting off a well-drilling frenzy, local water managers have begun accepting the notion that regional authority need not be absolute, according to Timothy Quinn of the Association of California Water Agencies. He called the bill a necessary remedy for what has been "a simmering crisis for half a century."

"This bill is built around the notion that local agencies are in the best place to solve this problem – let's give them the tools and the flexibility to solve this problem locally," Quinn said, but "there is a backstop. If the locals don't respond responsibly, then the state is allowed to step in. Local management should be focusing on long-term sustainability for their economy and their environment."

Agricultural groups remained largely opposed to the groundwater package. A letter from a broad coalition of growers that included heavyweights like the California Farm Bureau Federation denounced Dickinson's bill and said the measure "severely threatens existing water rights" and could spur litigation.

"We believe the legislation would result in a forced reduction in California's agricultural economy and also the devaluation of land in large areas of the state," the letter warned. "This in turn would directly and substantially impact property tax collections in many areas, and the services and programs that are dependent upon them."

As the legislative session raced to its end-of-August conclusion, some of those interests worked to craft an alternative bill. Sen. Tom Berryhill, R-Twain Harte, who authored the alternative, rejected the Democratic package as a hastily constructed solution to a complex issue.

"These bills in their current form will not help advance sustainable groundwater management," Berryhill said during Wednesday's Senate floor debate.

It was the second time in as many weeks lawmakers focused on momentous water-related legislation. They previously passed a new $7.5 billion bond that voters will approve or reject in November.

In addition to borrowing money for surface-storage projects and environmental stewardship, the bond would allocate $900 million for groundwater. Within that outlay, $100 million would go to regional management.

Call Jeremy B. White, Bee Capitol Bureau, (916) 326-5543. Staff writers Jim Miller and Laurel Rosenhall contributed to this report.

Water bond opponents attack money for dams

Capital Press, September 8, 2014 9:46AM

Opponents of California's $7.5 million water bond proposal announced their presence by unveiling a poll claiming to show soft support for the measure negotiated by Gov. Jerry Brown and the Legislature.

SACRAMENTO — Opponents of California's $7.5 billion water bond proposal signaled their presence Sept. 5 by unveiling an internal poll that suggests soft voter support for the November measure.

The poll, which shows Proposition 1 favored among likely voters by 42 percent to 24 percent with 34 percent of voters still undecided, shows the measure may not have the bedrock of support needed to withstand organized opposition, pollster Joshua Ulibarri told reporters in a conference call.

"As a pollster when I'm advising 'yes' sides, one of those thresholds we try to meet is to start in the high 50s or low 60s with intense support in the high 30s to low 40s," said Ulibarri, a partner at Lake Research Partners. "The reason is quite simple — propositions tend to lose support over time, not gain support."

Voters are also concerned about adding to the state's debt and perhaps having to dip into the general fund to complete projects, Ulibarri asserted.

Campaign consultant Steve Hopcraft said the poll's unveiling wasn't a formal launch of the opposition effort. That will come in the next week as the leaders of various organizations explain their views in a similar teleconference, he said.

But the No on Prop. 1 campaign has already gathered the backing of more than a dozen environmental groups, including the Center for Biological Diversity, the Pacific Coast Federation of Fishermen's Associations and Restore the Delta.

The groups complain on the campaign's website that the bond's $2.7 billion for water storage won't produce new water but "subsidizes unsustainable mega-growers." Barbara Barrigan-Parilla of Restore the Delta told reporters the money would be better spent on projects such as fixing leaking urban water supply systems.

"We've already seen how Proposition 1 is squeezing funding for education," Hopcraft said. "They kicked a school construction funding measure off the ballot to put this one on."

The campaign's survey, which was taken in late August by 600 participants, begins what promises to be a lively two-month political joust over the initiative finalized last month after intense negotiations involving Gov. Jerry Brown, legislators and farm and other groups.

The bond measure that passed overwhelmingly in the Legislature on Aug. 13 and was promptly signed by Brown would likely provide money for the long-discussed Sites Reservoir west of Maxwell, Calif., as well as another reservoir northeast of Fresno. It also includes money for drought preparedness, replenishing and cleaning up groundwater, water recycling and other uses.

The initiative is supported by a veritable who's-who list of California politicians and groups, including Brown, U.S. Sens. Dianne Feinstein and Barbara Boxer, the California Farm Bureau Federation and the Nature Conservancy.

No committees have yet filed financial statements with Secretary of State Debra Bowen's office, but Bowen was taking public comments through Sept. 12 on arguments to be printed in voter information guides.

In a rebuttal to opponents, Brown argued that Proposition 1 is "fiscally prudent" and pays for public benefits such as water quality, flood control and natural habitat.

"Water storage is key and we haven't added any storage in 30 years," the governor wrote. "Proposition 1 carefully invests only in the most cost-effective storage projects."

The opponents' poll is at odds with other surveys taken earlier in the year, including one by the Public Policy Institute of California in July that found 51 percent of likely voters would have supported an $11.1 billion bond while 26 percent were opposed. The level of support would rise to 59 percent if the bond was for a lower amount, according to the poll.

In addition, 61 percent of likely voters statewide and 63 percent in the Central Valley told the PPIC that the supply of water is "a big problem" where they live, and 68 percent of likely voters said it's at least somewhat important to pass a water bond this year.

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ACWA Board of Directors Formally Endorses 2014 Water Bond

SACRAMENTO – Citing a critical need to invest in a comprehensive plan to secure the state's water future, the Association of California Water Agencies (ACWA) this week took a formal position in support of the $7.545 billion water bond measure set for the November ballot.

The statewide organization's Board of Directors voted unanimously in a special meeting to support Proposition 1, the Water Quality, Supply and Infrastructure Improvement Act of 2014, saying it would provide much-needed funding for new surface and groundwater storage projects, regional water reliability, sustainable groundwater management and cleanup, water recycling, water conservation, watershed protection and safe drinking water, particularly for disadvantaged communities.

Legislative approval of a bond to replace the $11.14 billion measure previously set for the November ballot had been a top priority for ACWA's Board of Directors since early 2013. The $7.545 billion measure, approved by the Legislature and signed by Gov. Jerry Brown on Aug. 13, would provide targeted funding for the kinds of projects and programs ACWA has long advocated as part of a statewide, comprehensive plan to improve the resiliency of the state's water system and help local water agencies combat the effects of drought, climate change and other challenges.

"This bond is the right size at the right time for California," ACWA President John Coleman said. "It will provide investments where we need them, including additional water storage to increase the amount of water that can be stored during wet years for use in dry times, sustainable groundwater management and strategies such as water recycling and conservation that will help us withstand future droughts."

ACWA is statewide association of public agencies whose 430 members are responsible for about 90% of the water delivered in California. For more information, visit www.acwa.com.

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