

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

June 3, 2016

Correspondence and media coverage of interest between May 20, 2016 and June 2, 2016

Correspondence

Date: May 25, 2016
From: Nicole Sandkulla, BAWSCA CEO/General Manager
To: Mr. Eric Hansen, Project Manager, Silicon Valley Clean Water
Subject: BAWSCA Support for Pilot Demonstration Project under the California Energy Commission's "Innovative Water and Energy Efficiency Demonstrations for the Commercial, Industrial or Water/Wastewater Sectors" (GFO-15-323)

Date: June 2, 2016
From: Nicole Sandkulla, BAWSCA CEO/General Manager
To: Alameda County Board of Supervisors
Subject: Closure of Calaveras Road to Ensure Public Safety

Media Coverage

Drought:

Date: May 31, 2016
Source: MSNBC
Article: Trump's nonsensical plan to 'solve' California's drought

Date: May 30, 2016
Source: SF Gate
Article: Trump says, "There is no drought" but experts beg to differ

Date: May 29, 2016
Source: Maven's Notebook
Article: Senator Feinstein responds to Trump claim that drought doesn't exist

Date: May 29, 2016
Source: Forbes
Opinion: But Donald Trump Is Right About California Water – The Problem is The Price, Not The Drought

Conservation

Date: May 30, 2016
Source: Maven's Notebook
Article: Senator Feinstein Calls for Moratorium on Taxing Water Conservation Rebates

Date: May 25, 2016
Source: NRDC
Article: Looking Outdoors for Lasting Water Savings in California

Water Management:

Date: June 1, 2016
Source: Truthdig.com
Article: As One of Its Chief Sources of Water Dries Up, California Eases Restrictions on use Nonetheless

Date: May 31, 2016
Source: Water Deeply
Article: What California Can Learn From Israel About Water

Date: May 30, 2016
Source: Water Deeply
Article: The Key to Saving California's Groundwater

Date: May 26, 2016
Source: Valley Road Runner
Article: SWRCB and MWD relax water use restrictions

Date: May 24, 2016
Source: The Guardian
Article: School funded by Facebook founder stalled due to water shortage

Date: May 20, 2016
Source: SF Gate
Article: East Palo Alto looks to wells for economic growth

Water Policy:

Date: May 30, 2016
Source: The Hill
Article: Efforts in Congress are heating up to bring some relief to California's historic drought, just as the dry summer season is staring.

Date: May 28, 2016
Source: SF Chronicle
Article: How do we share California water, a diminishing resource?

Date: May 27, 2016
Source: Sacramento Bee
Article: State moves to drop \$1.5 million fine in water rights case

Date: May 27, 2016
Source: SF Chronicle
Article: State backs away from drought crackdown on two water agencies



May 25, 2016

Mr. Eric Hansen, P.E., BCEE
Project Manager
Silicon Valley Clean Water
1400 Radio Road
Redwood City, CA 94065

RE: BAWSCA Support for Pilot Demonstration Project under the California Energy Commission's "Innovative Water and Energy Efficiency Demonstrations for the Commercial, Industrial or Water/Wastewater Sectors" (GFO-15-323)

Dear Mr. Hansen:

The Bay Area Water Supply and Conservation Agency (BAWSCA) is committed to the responsible use of water and energy as precious resources. BAWSCA provides regional water reliability planning and conservation programming for the benefit of its 26 member agencies that deliver water to over 1.7 million residents and 40,000 commercial, industrial and institutional accounts in Alameda, San Mateo and Santa Clara Counties. We recognize that the development and application of technologies that reduce the energy demands and improve the efficiency and quality of recycled water plays a key role in meeting this commitment.

BAWSCA currently supports its member agencies by identifying and facilitating partnerships and funding mechanisms in order to progress the implementation of recycled water projects. We are submitting this support letter as a stakeholder to the Silicon Valley Clean Water (SVCW) and the Stanford University's joint Staged Anaerobic Fluidized Bed Membrane Bioreactor (SAF-MBR) pilot demonstration project. This testing is important because it will provide data to utilities, state regulators, the public, and other stakeholders to validate the SAF-MBR treatment technology as a low-energy alternative to traditional treatment processes with potential benefits to reduce life cycle costs and energy while improving quality for reuse.

We fully support SVCW and Stanford University in advancing the SAF-MBR technology through pilot and demonstration scale testing under the California Energy Commission's EPIC program.

We are excited to support SVCW and Stanford to advance this promising low-energy treatment and reuse technology.

Sincerely,

A handwritten signature in blue ink that reads "Nicole Sandkulla".

Nicole Sandkulla
CEO/General Manager

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June 2, 2016

Alameda County Board of Supervisors
1221 Oak Street, #536
Oakland, CA 94612

Re: Closure of Calaveras Road to Ensure Public Safety

Dear Supervisors,

As Chief Executive Officer of the Bay Area Water Supply and Conservation Agency, I urge the Alameda County Board of Supervisors to permit the San Francisco Public Utilities Commission (SFPUC) to move forward with the planned closure of Calaveras Road near the Calaveras Dam.

This is a safety issue to protect workers, vehicles and cyclists from the numerous oversized trucks that will be delivering sand, gravel, and rock needed to complete the vitally important Calaveras Dam. Two SFPUC employees have died in accidents on Calaveras Road, as well as other people.

Rebuilding Calaveras Dam is part of the state-mandated improvement of the earthquake-vulnerable San Francisco Regional (Hetch Hetchy) Water System, which provides water to communities in Alameda County as well as much of the Bay Area residents, businesses and community organizations. In total, the Regional Water System serves 2.6 million residential, commercial and industrial customers in the Bay Area. BAWSCA represents the 26 water suppliers in San Mateo, Santa Clara, and Alameda Counties that buy water on a wholesale basis from San Francisco, and deliver it to their 1.7 million residents and 40,000 commercial, industrial and institutional accounts.

We are entering the final stage of completing this new Calaveras Dam, and prompt delivery of materials to finish the job is essential, should be handled safely, and will avoid higher costs for the project.

Please act on this request for Board action promptly.

Sincerely,

A handwritten signature in blue ink, which appears to read "Nicole Sandkulla".

Nicole M. Sandkulla
CEO/General Manager

cc: The Hon. Bill Quirk, California State Assembly, District 20
BAWSCA Board of Directors

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Trump's nonsensical plan to 'solve' California's drought

MSNBC | May 31, 2016 | Steve Benen

It's a problem that Donald Trump has a severely limited understanding of public policy. It's a bigger problem that the presumptive Republican nominee believes his overly simplistic sound-bite solutions will work wonders. Take this USA Today article, for example, on Trump's visit to California late last week.

California suffered one of its driest years in 2015. And last year the state hit its driest four-year period on record.

But Donald Trump isn't sold. The presumptive GOP nominee told supporters in Fresno, Calif., on Friday night that no such dry spell exists.

At the campaign event, the New York Republican vowed, "We're going to solve your water problem. You have a water problem that is so insane. It is so ridiculous where they're taking the water and shoving it out to sea."

Trump added that he'd redirect water to Central Valley farmers and ignore concerns about endangered fish. Towards the end of his speech in California, the Republican candidate assured locals, "We're gonna get it done. We're gonna get it done quick. Don't even think about it."

As it turns out, those last five words – "don't even think about it" – represented an important request, because when one does think about it, the presidential hopeful's rhetoric starts to sound like gibberish. Indeed, using exceedingly charitable language, BuzzFeed's report noted in response, "It was unclear how exactly Trump would deliver on his water promises."

How very polite. The trouble is, Trump is apparently under the impression that there is no drought – a belief that's plainly wrong – which is made worse by the fact that he also believes he can impose a simple solution that wouldn't actually resolve a complex problem.

Slate's Phil Plait gave Trump's remarks a closer look and asked, "Where to even start with something so bizarrely nonsensical?"

To believe there's plenty of water in California you'd either have to be a cactus or completely, utterly oblivious to reality. Because that's grossly wrong. Grotesquely wrong. [...]

Part of what he's talking about in that speech deals with water being diverted from farms to rivers to protect wildlife such as the delta smelt and salmon. That's a very complicated and thorny issue, and I don't pretend to have an answer here. But Trump certainly doesn't either, and simply saying, "If I win, believe me, we're going to start opening up the water so that you can have your farmers survive," as Trump did in his speech, is ridiculous. The laws won't let him

do that, for one thing, and for another it's unlikely to help in the long run. California simply doesn't have an infinite supply of water.

This is a situation that calls for a lot of political compromise, nuance, and long-term thinking. Trump has none of that.

The Republican presidential candidate speaks with great confidence about his unique ability to solve any problem, despite having no idea what he's talking about. It's one thing to be ignorant; it's something else entirely for someone who is ignorant to convince himself of his own vast and imaginary knowledge.

Paul Manafort, Trump's campaign chairman, argued last week that the Republican "knows he has more to learn." But does he? Or is it more likely that the presumptive GOP nominee is already convinced his instincts and brilliance have provided him with all of the tools he needs to succeed?

As his rhetoric about California's drought helps demonstrate, Donald Trump doesn't understand what he doesn't understand. There are few traits in a presidential candidate that should be less appealing.

#

Trump says, "There is no drought" but experts beg to differ

SF Gate | May 30, 2016 | Updated: May 30, 2016

So, Donald Trump doesn't think there's a drought in California? The experts, and the rest of the state, might disagree.

The presumptive Republican presidential nominee took on water-rights issues in a speech in Fresno on Friday, explaining the state's complicated delta issues thusly: "There is no drought. They turn the water out into the ocean."

Trump was likely referring to water-rights disputes along the Sacramento-San Joaquin River Delta and efforts to protect the Delta smelt, or as Trump called it, "a certain kind of three-inch fish."

State water experts paint a much different picture in an article published in Monday's San Francisco Chronicle. They say the state is very much in the middle of a crisis, with many powerful indicators, like Lake Mead sitting at 37 percent capacity.

"If that isn't an alarm bell going off, I don't know what would be," Stanford University historian David Kennedy, a scholar at the university's Bill Lane Center for the American West, told the Chronicle. "Whoever is elected next — the next several presidents actually — will be sorely lacking in guts if they don't take this issue on."

Other than Trump's comments, there is little from the candidates on this major issue facing Californians. Find out where each candidate stands (or doesn't), and how policy will have a big impact on the drought, in the Chronicle's article [here](#).

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Senator Feinstein responds to Trump claim that drought doesn't exist

Maven's Notebook | May 29, 2016

Senator Dianne Feinstein (D-Calif) today released the following statement in response to Donald Trump's claim that "there is no drought."

"On Friday, Donald Trump made another outrageous statement: He said California is not in a drought. Let me be clear, California isn't only in a drought, it's in an historic drought that continues to devastate our land and economy. And what help we got from the El Niño wasn't nearly enough.

"At the peak of the drought, almost 70 communities faced water supply and water quality problems and more than 2,500 wells were critically low or dry. That means 13,000 residents had either unsafe water or no water at all.

"Last year, the drought hit California's economy to the tune of \$2.7 billion and 21,000 lost jobs. \$1.8 billion of those losses were in the agricultural sector.

"With more than 1 million acres of farmland fallowed in 2015, many farmworkers simply couldn't find jobs. Many were forced out of their homes, and some traveled to distant states to find work to support their children.

"California is so dry the land is actually sinking. Subsidence from pumping too much groundwater has led to the San Joaquin Valley dropping by as much as two inches a month, putting a major strain on our infrastructure.

"And with 50 million trees dead or dying and nearly 900 million more losing canopy cover and drying out, the risk of a cataclysmic fire season is higher than ever.

"Experts say the Sierra snowpack needs to be at least 150 percent of average for us to have a chance of escaping this drought. Today, the snowpack is less than 30 percent of normal for this time of year.

"So to Donald Trump I say yes, California is in a drought. And there's no simple solution. A cursory understanding of the law and the politics surrounding California water makes that abundantly clear.

"I'm hopeful that the bill we've been working on in the Senate—which received a hearing earlier this month—will be marked up soon. It includes \$1.3 billion to fund longterm projects like storage, desalination and recycling, as well as short-term provisions to help move what water we do have more effectively.

“Combating the drought is hard enough without someone like Donald Trump wading into the middle of it without even the slightest understanding of what he’s talking about. I look forward to working with both parties in the weeks to come as we look for real solutions.”

#

But Donald Trump Is Right About California Water -- The Problem Is The Price, Not The Drought

Forbes | May 29, 2016 | Opinion: Tim Worstall

Much amusement around and about the place as Donald Trump tells California that there is no drought and that when he's President then there will be plenty of water for everyone. The amusement being that of course, how could anyone spout such nonsense, everyone knows that California's had a drought for years now!?! Except, of course, that Trump is actually correct here. There is no existential shortage of water in the state, not at all. What there is is misallocation of water and that misallocation is because water is incorrectly priced there. The solution therefore is to get the pricing right: then the allocation will be. We also know something more about this: it doesn't matter what the current or original allocations are. Getting the price right will solve the problem.

So, he's not being quite as stupid as some people think he is:

"California, the alarming statistics about your historic drought are not fooling Donald Trump.

The presumptive GOP presidential nominee — and quack meteorologist — denied the existence of California's relentless drought Friday.

"There is no drought," he told a crowd of Californians who have watched their state's agriculture industry wither from years of excruciating dryness.

The Golden State is, in fact, in the midst of a record-breaking drought. The past four years have been the driest in the state's history. Last year was so bad that ski resorts had to close early, lawmakers passed ultra-stiff standards on faucets and Starbucks even moved water bottling operations out of the state.

Whatever it is that Donald Trump is claiming I am not, I hasten to note, trying to claim that California doesn't have less water than it is used to. Sure, precipitation has been low, the snowpack meagre, agreed, there's less water around than there used to be. However, we do have an area of science, a method of study if you prefer, that tells us how to deal with having not very much of something. That is economics: the study of the allocation of scarce resources. And the answer is that we want to have such scarce resources allocated by price:

"Donald Trump told voters in drought-plagued California on Friday that he had a solution to the water crisis: Open up the water for farmers, because "there is no drought."

"We're going to solve your water problem. You have a water problem that is so insane," the presumptive Republican presidential nominee told a crowd filled with farmers in Fresno. "It is so ridiculous where they're taking the water and shoving it out to sea."

California is now in its fifth year of drought, which has taken a heavy toll on agriculture in particular. Despite an El Niño event that saw an increase last year in snowpacks that supply about one-third of California's water, 86 percent of the state is still considered to be in drought.

Trump insinuated that state officials are mismanaging water policy, at the cost of farmers and their crops. Farmers have sharply criticized the state's irrigation policies, after cuts to water allotments forced them to leave more than a million acres of farmland uncultivated last year.

Yes, of course Trump mentioned the "three inch fish", the Delta smelt. We have in fact visited this issue in general before here:

"It's not just almonds. There are people in California who use (at urban prices) hundreds of dollars of water to grow a hundred dollars worth of alfalfa. And, amazingly, there's even people growing rice in a place with a drought. That's not just ridiculous that's absurd.

#

Senator Feinstein Calls for Moratorium on Taxing Water Conservation Rebates

Maven's Notebook | May 30, 2016 | From the office of Senator Feinstein:

Dianne_Feinstein,_official_Senate_photo_2Senator Dianne Feinstein (D-Calif), along with six Senate colleagues today wrote Treasury Secretary Jack Lew requesting a moratorium on taxing water conservation and storm water management rebates for 2015 and 2016 in order to provide relief to residents participating in water-saving measures, especially those in states affected by drought conditions.

The senators wrote: "Many residents have done their part to contribute to community water conservation by participating in local water utility programs that provide rebates for water conservation efforts. Participants in these programs now find their rebates subject to federal income tax, despite the fact that comparable rebates for energy conservation are tax exempt.

"We are concerned that this treatment of water conservation and stormwater management rebates undermines water conservation efforts and may exacerbate water shortages. At a time when the nation's water resources face significant threats from drought, water supply variability, and extreme weather events, the federal government should do all it can to encourage residents to conserve water and to reduce the impact of runoff on water quality."

Attachment: *Letter of May 26, 2016*

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United States Senate

WASHINGTON, DC 20510

May 26, 2016

The Honorable Secretary Jacob J. Lew
Department of Treasury
1500 Pennsylvania Avenue NW
Washington, D.C. 20220

Dear Secretary Lew:

We write to request that the Department of the Treasury impose a moratorium against taxing water conservation and storm water management rebates for 2015 and 2016 in order to provide relief to residents participating in water-saving measures, especially those in states affected by drought conditions. We also request that the Department explore options under current law to make these rebates permanently exempt.

Many residents have done their part to contribute to community water conservation by participating in local water utility programs that provide rebates for water conservation efforts. Participants in these programs now find their rebates subject to federal income tax, despite the fact that comparable rebates for energy conservation are tax exempt.

We are concerned that this treatment of water conservation and storm water management rebates undermines water conservation efforts and may exacerbate water shortages. At a time when the nation's water resources face significant threats from drought, water supply variability, and extreme weather events, the federal government should do all it can to encourage residents to conserve water and to reduce the impact of runoff on water quality.

The water conservation and storm water management measures that utilities have promoted in 2015 have already shown positive results and have the potential to continue in 2016 and beyond. Taxing these rebates discourages efforts to reduce water consumption and penalizes rebate recipients for their constructive actions.

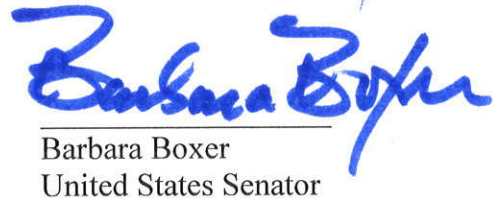
There are many challenges impacting our nation's water quantity and quality, and it is imperative that we take action now to avoid penalizing residents who provide a public service by participating in these programs. The efficient use and management of water also results in energy savings and community and environmental benefits. There is no reason to treat energy conservation and water conservation incentives differently.

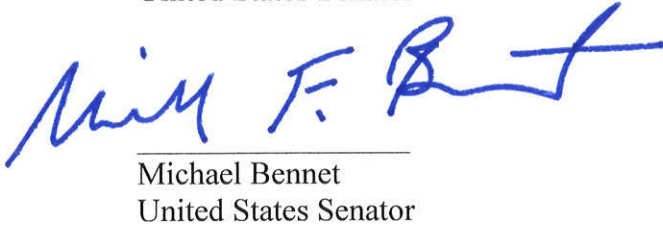
We would appreciate your prompt reply to this time-sensitive request given that the 2015 tax filing deadline was on April 18, 2016, and this temporary moratorium should be applied to programs in both 2015 and 2016.

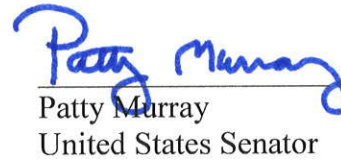
We look forward to working with you to protect the nation's supply of water and to ensure the success of water conservation and water quality efforts in our states.

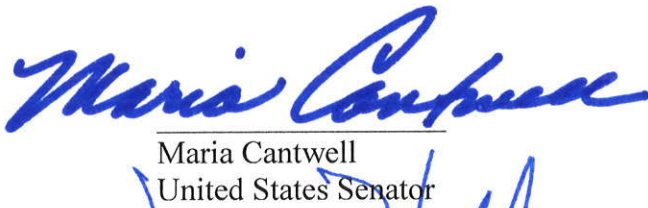
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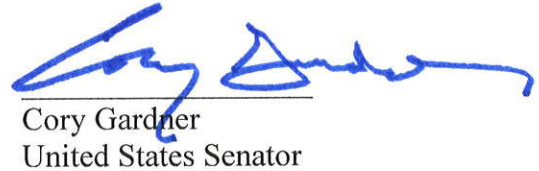

Dianne Feinstein
United States Senator

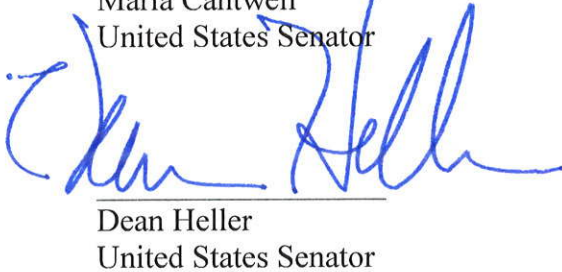

Barbara Boxer
United States Senator


Michael Bennet
United States Senator


Patty Murray
United States Senator


Maria Cantwell
United States Senator


Cory Gardner
United States Senator


Dean Heller
United States Senator

CC: The Honorable Ernest Moniz, Department of Energy
The Honorable Sally Jewell, Department of the Interior
The Honorable Gina McCarthy, Environmental Protection Agency

Looking Outdoors for Lasting Water Savings in California

NRDC | May 25, 2016 | Ed Osann

The drought news from California this month is slightly less dire—“only” 64% of the state is still experiencing drought conditions that are considered “severe” or worse.

However, extreme drought still lingers over nearly all of heavily populated Southern California. So while a modest snow pack in the mountains is allowing for an easing of water use restrictions in parts of the state, officials are also reinforcing the message that water conservation needs to become “a California way of life.” At least, that’s how Governor Brown put it when he issued a new Executive Order May 9, in which he directed state agencies to improve water efficiency and curtail unnecessary water use on a permanent basis. The following week, as if on cue, a set of recommendations with enormous potential for urban water savings was released by a state panel convened three years ago.

A new report by the Independent Technical Panel (ITP) on Urban Water Efficiency, on which I served, focuses entirely on landscape water efficiency in California. An enormous amount of water is used outdoors in California’s cities and towns, accounting for about half of the state’s total urban water use. The Panel’s goal is to cut landscape use of potable water in half from pre-drought, business-as-usual levels, and to do so within 20 years. If successful, this would save about 2 million acre-feet of water each year, which is about one-fourth of all urban water use in the state ... or about four times the amount of water used annually by the entire City of Los Angeles.

The Panel also noted that more water-efficient landscapes can improve the financial health of water utilities as well as customers:

“Landscape water use is the most variable part of urban water demand—subject to wide swings in use between wet and dry years and from winter to summer. Nearly every urban water utility’s peak demands are shaped by landscape water use and these peak demands drive requirements for costly conveyance, treatment, and distribution capacity. A less thirsty urban landscape would mean less volatility in demand throughout the year and from one year to the next, and provide greater revenue stability for water suppliers and lower peak-related costs to be recovered from customers.”

Last April, as he contemplated a future marked by a warmer climate and less predictable water supplies, Governor Brown stated:

“We’re in a new era. The idea of your nice little green grass getting lots of water every day, that’s going to be a thing of the past.”

Indeed, the ITP Report offers a vision for this new era:

“By 2035, the use of potable water on urban ornamental landscapes will be much less common than today. Residential and commercial landscapes will be attractive and functional, and will be largely sustained by natural precipitation where it falls, harvested rainwater, and on-site sources

of water acceptable for landscape use. Such landscapes will retain most precipitation for storage, direct use, or recharge, rather than generating runoff.”

So landscapes can be both attractive and functional, while producing less runoff and requiring far less drinking water to be poured on the ground to keep them in shape.

The report’s 19 recommendations are a complementary set of policies to help reach this goal, some requiring new legislation, while others fall well within the current authority of state agencies. A proposed tax credit for residential and commercial turf replacement over the next 5 years is one of the most visible recommendations, but the wide scope of the recommended actions are illustrated by these other examples:

- labeling of all landscape plants sold in California for their expected water requirements
- including a check on the irrigation system in any home inspection performed in connection with the sale of an existing home
- requiring a local permit for the installation of large irrigation systems not otherwise covered by a building permit
- reporting the water use and efficiency of all large landscapes every three years
- adopting water efficiency standards for new landscape irrigation equipment
- making water efficiency requirements for new landscapes part of the state building code
- establishing a state R&D program for landscape water use efficiency
- improving the examination for state certification for landscape contractors
- transforming landscapes around all state-owned buildings

As the Panel noted, no single program will transform California’s urban landscapes, and

“ . . . it is unrealistic to expect that all landscape conversions will be financed with public funds. The policies and practices that will achieve these results will involve a combination of market forces, targeted incentives, reasonable regulations, improved business models, workforce preparation, evolving social norms, and applied research.”

Panel members were drawn from diverse interests, including water suppliers and landscape professionals, so their strong agreement on these proposals should encourage state decision-makers to act favorably. Nevertheless, some interests may be apprehensive of change, so we should expect some push-back along the way before the full package gets approved. With lawmakers still looking for drought solutions and state agencies charged with finding permanent water savings, this vision of a new and more sustainable urban landscape could be well on its way to adoption before the end of this year.

What’s not here? Most notably, the Panel made no recommendations for specific water efficiency targets for individual water providers. But the Governor’s order directs state regulators to develop such targets, and adoption of the ITP recommendations will help water suppliers meet the new levels of water savings they will be expected to achieve in the years ahead.

###

As One of Its Chief Sources of Water Dries Up, California Eases Restrictions on Use Nonetheless

Truthdig.com | June 1, 2016 | Abraham Lustgarten

Earlier this month, California lifted its sweeping restrictions on how its towns and cities use their water, signaling that even though much of the state continues to face extraordinary drought, a moderately wet winter has blunted officials' sense of urgency over water shortages.

Seemingly overlooked, however, is the state's enormous reliance on the Colorado River for its urban water supplies — and the fact that the Colorado is approaching its worst point of crisis in a generation.

Colorado River water provides a significant portion of the drinking water to some 19 million of the state's 39 million residents, making up, as the state's largest water utility puts it, "the backbone" of supplies for Los Angeles and 25 other cities and municipalities. In San Diego County, Colorado River water comprises 64 percent of the total supplies.

"The importance of the Colorado River is very little understood by Californians," Felicia Marcus, chair of the California State Water Resources Control Board, told ProPublica in an interview in February. "Folks just really don't know where their water comes from."

On May 18 — the same day that California's Water Resources Control Board lifted its restrictions — Lake Mead, the reservoir that stores Southern California's share of the Colorado River, reached its lowest point since 1937.

Mead will continue to reach a new record low each day until the middle of June, when managed flows from reservoirs upstream will allow the bleeding to be temporarily staunchened. Then levels will dive deeper still, next year.

California gets its water from the Colorado River through 242 miles of canals and pipelines that begin at Lake Havasu on the Arizona border, and are drilled through mountains into Riverside County, where the Colorado River Aqueduct empties into Lake Matthews, one of the largest reservoirs to supply metropolitan Southern California. Another system, the All American Canal, runs 80 miles along the Mexican border and draws more water from the Colorado for California farmland.

The falling water levels in Lake Mead won't immediately dry up those canals. The state is promised all of its water even as the Colorado dries up and Arizona, Nevada and other states face critical shortages, thanks to California's seniority in interstate sharing agreements that stretch back some 94 years.

But whether such a divisive posture can be maintained as supplies continue to dwindle is an open question. In a nod to an answer, California just this spring has been considering voluntary cuts in its water, along with those other southern states, in anticipation of Lake Mead's supplies getting even worse.

That is almost certain to happen. The U.S. Bureau of Reclamation, which manages Lake Mead and distributes Colorado River waters, predicts the reservoir — now 37 percent full — will reach a new record low in 2017, part of a steady decline that began more than a decade ago as southwestern water users continued to draw far more out of the Colorado each year than the river provides. By 2019, the Bureau says, there is a 64 percent chance the water in Lake Mead will drop so low as to trigger a federal emergency provision that mandates further cuts to the states.

California is the single largest draw on this resource — using nearly one third of the entire Colorado River's flow.

California's water planners need to recognize that the Colorado may soon leave California with a significant shortfall, and, "That may happen sooner, rather than later," said James Famiglietti, a senior water scientist at NASA's Jet Propulsion Lab in Pasadena, California.

Meanwhile, the rest of California's water supplies are far from secure. Though the state's largest reservoirs filled quickly after heavy precipitation blanketed northern parts of the state this past winter, precipitation in the Los Angeles area was just 59 percent of normal, and more than 43 percent of California remains in what the U.S. Drought Monitor describes as a state of "extreme drought." Furthermore, California pumped deeply into its groundwater reserves as a sort of water piggybank over the last half decade, depleting supplies that will take many wet years in a row — if not centuries — to replenish.

So why ease up on water limits now? Cities, Marcus told ProPublica, "thought we were being too paternalistic." So the state decided to back off.

While the state made permanent a set of common-sense limits on car washing and lawn watering, it set its towns and cities loose to determine their own water conservation guidelines.

The relaxed posture is not meant to green light runaway use; it's more of a trial run for local independence.

"It's really a question of what's the appropriate role of the state emergency regs?" said Marcus, who also points out that the restrictions only applied to municipal water; the state's farmers, who use the vast majority of the state's water, fall under a different set of limitations. "I called it a show me the water approach. You prove to us you can go through three more lousy years, and show us where the water is coming from and set your own standard."

But therein lays the risk. California has always faced a shortage of water. Yet up until Gov. Jerry Brown imposed the statewide drought restrictions early last year, few California cities had effectively curtailed water use by their own free will.

###

What California Can Learn From Israel About Water

Could Israel's innovative use of water provide the answer for California and other water-strapped areas of the world? Seth Siegel, author of "Let There Be Water," believes so. Here's a look at his findings.

Water Deeply | May 31, 2016 | Alastair Bland

A postwar refugee exodus to Palestine made Israel in 1948. Then, Israel made water.

The new nation had to. Its population exploded, placing extreme demand on land and water resources. For the production of food, especially, efficient use of water, and producing more where resources lagged, were essential. Author Seth Siegel's 2015 book "Let There Be Water" chronicles Israel's role as a developer of water technology and innovation. He suggests that other arid economies look at Israel as a model and follow the young nation's path toward water security.

In the realm of water, Israel was disadvantaged from the start. Its climate is dry – similar to that of California. However, whereas large rivers run through the arid regions of America's most populous state, Israel's surface water supply is scant. On top of that, its human population has boomed. Israel was home to about 800,000 people in 1948. Today, its population is 8 million. That's roughly a quarter the population of California crammed into a land area one-twentieth California's size. Moreover, Israel's "annual rainfall – not generous to begin with – has dropped by more than half" in the past several decades, according to "Let There Be Water."

So, as Siegel discusses, Israeli leaders were forced to make almost immediate innovations. The nation employed scientists and engineers to design ways to reduce its demand for water, increase efficiency and create more usable water. In the 1950s, as parts of the developed world began cautiously discussing the novel idea of treating sewage water before discarding it, Israel was already contemplating treating and reusing its sewage water for irrigation. Today, 95 percent of its sewage water is treated to high levels of purity, and 85 percent is reused.

In Israel agriculture consumes the majority of fresh water – as in California. The country has streamlined its farming systems. For one thing, plant breeders have developed salt-tolerant varieties of staple crops, including melons that can grow in saline soils irrigated with undrinkable water.

An Israeli invented drip irrigation, too. The concept – using a tiny hose and a minute stream of water to feed a tree or other plant only the moisture it can immediately consume – seems to have been born in the 1930s and was first tested in the 1950s. Today, Siegel tells us, not a single farm in Israel uses flood irrigation – still standard practice in much of California, even though it is widely viewed as inefficient and wasteful. Instead, nearly every Israeli farm uses drip. The practice has since spread around the world and is considered state-of-the-art nearly anywhere that water supplies are not fully reliable.

Desalination, perhaps more than any other technology, has created autonomy for Israel from its neighbor nations. In the span of a decade, Israel went from using no desalinated water to treating enough to make up 94 percent of household water use, according to Siegel. Israel doesn't only desalinate seawater but also reduces or eliminates salinity in brackish groundwater in agricultural regions. Siegel explains that the ability to produce huge volumes of desalinated water has buffered Israel against the unexpected and sometimes brutal whims of nature.

In comparison to Israel, California has lagged in its advancement of desalination projects. Siegel tells us that Israel has built its five desalination plants "in less time than it took California to overcome legal issues just in building the Carlsbad plant [in San Diego County]."

However, desalination – though it seems a miracle – is not in itself a solution to a nation's water woes.

"Desalination may be the most valuable part of the mix [of methods used to address water shortages], but it cannot succeed standing alone," Siegel writes. "It is too expensive, and the security risk too great, to allow it to become the only or even majority source of Israel's water."

Desalination is also an extremely energy-intensive process, and one that perhaps cannot – or should not, anyway – be sustained. David Zetland, a water policy writer and the author of "Living with Water Scarcity," told Water Deeply last year that desalination plants may cause more problems than they solve by burning energy and contributing to global climate change-related drought.

Indeed, the reader of "Let There Be Water" may wonder at the discussion of desalination as a solution to water shortages when, on the same pages, the California lifestyle is described as including Jacuzzis, swimming pools and "frequently washed cars." In San Diego County, supported by desalination, per capita water use is about triple that of the San Francisco Bay Area. Should water use be curbed before energy-intensive methods are used to manage the water supply?

Changing water demand is just as important as supply, as Israel has also shown.

"While Israel has invented many of the solutions that have changed the world of water, what sets the country apart isn't the technology – all of which is known and available to all – but rather the extent to which it has adopted these techniques," Siegel writes. "Throughout Israel, one can find posters exhorting citizens and visitors to make every drop count. It is that mindset that may be the most important solution of all for a water-starved world."

The parallels between Israel and California are well worth considering as water security emerges as a threat to the environment and the global economy. Israel and California are both agricultural powerhouses. Each is on the coast with, in theory, all the water it could ever want at hand. Each has large arid areas. Each has experienced a massive population boom over a brief span of time. The chief difference, perhaps, is that California, thanks to its unique geography of

high mountains and large rivers, has had the liberty to wait on innovating advanced water-supply solutions.

But, as Siegel writes in respect to global circumstances, "With a water crisis at hand, the time to act is now. Israel has shown how."

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The Key to Saving California's Groundwater

California made a big step in 2014 by passing a law to manage groundwater. We talk with Michael Kiparsky, the director of the Wheeler Water Institute at the University of California, Berkeley, about the challenges of implementing that law.

Water Deeply | May 30, 2016 | Tara Lohan

Dennis Hall, left, and Micha Berry from the city of Fresno's water division, repair a well's pump in Fresno, Calif. Fresno, which has for decades relied exclusively on groundwater as a drinking water source for its residents, is one of many water users throughout central California that have seen a drop in their water table, causing some wells to bring up sand, slow to a trickle or go completely dry. Gosia Wozniacka, AP

For years California was behind the curve on managing groundwater, with dire results. There are now 21 groundwater basins or subbasins in the state that are critically overdrafted. Help may be on the way, though. The state took action in 2014 with the passage of the Sustainable Groundwater Management Act (SGMA). The legislation will take decades to fully implement, but if done well, would provide a crucial framework for managing one of the state's most important water resources.

If things go poorly, however, then California is set to continue on a course of overdrafting groundwater basins, resulting in land subsidence, saltwater intrusion and water quality problems.

Michael Kiparsky, the director of the Wheeler Water Institute at the Center for Law, Energy and the Environment at the University of California, Berkeley, coauthored a recent report outlining the need for good governance in laying the foundation for SGMA.

The report calls SGMA "a grand experiment in the design of institutions for groundwater governance." But it also highlights the great potential of SGMA to "transform the state from having a system of groundwater management that is among the most deficient in the country to having a set of locally inclusive governance systems that will achieve long-term groundwater sustainability."

Water Deeply talked with Kiparsky about the challenges and opportunities that SGMA presents, and why it is so crucial that California gets this right.

Water Deeply:

Before we get into the details of SGMA, is it too late for California to manage its groundwater sustainably?

Michael Kiparsky:

In some places, no, as long as the local entities who are tasked with implementing the new Sustainable Groundwater Management Act decide to move quickly and intelligently and

creatively in order to implement aggressive changes in how they manage the finite, common-pool resource that groundwater is.

Water Deeply:

The first challenge in doing this is the establishment of Groundwater Sustainability Agencies (GSAs), right?

Kiparsky:

That's right. The first phase of SGMA implementation that we are in now in is all about creating new institutions. The local entities that are going to be tasked with achieving groundwater sustainability in these basins, the GSAs, are in the process in many places of deciding whether and how they will form themselves and declare themselves to be GSAs.

This is an essential period of institutional design to develop the basis for the governance of the groundwater basins. In our view, it's an extraordinarily important time.

Water Deeply:

It seems like there is a lot that can be challenging here, especially when you have multiple entities overlying a groundwater basin. What are the risks?

Kiparsky:

One of the things that could go wrong is that it's entirely possible that many of these agencies could end up being paper tigers without the ability to do what it's going to take to achieve sustainability.

There is no shortage of motivation or talent to make agencies work. However, the challenges are extraordinarily complex and unprecedented. California has historically been a leader in many types of environmental management, but groundwater has been an exception to that rule. Without a statewide framework for managing this resource, there has been, in many cases, a tragedy of the commons.

For the first time in many places, these basins will be facing the need, collectively, to reduce the use of a resource that has, to this point, been more or less unrestricted. And any time you take any resource and reduce access to it, it is likely to create the potential for conflict.

GSAs will face challenges figuring out how to curtail pumping by the right amount and in the right ways for the basin, and how to allocate that reduction among the existing users. What exacerbates that challenge is that the agencies will be responsible for figuring out a way to fund their efforts to do this.

That will involve asking people in the basins to pay to be regulated, which is typically not a very popular ask of someone.

Water Deeply:

What things do we need to think about to form successful GSAs?

Kiparsky:

If GSAs are to succeed, they need to be both effective and fair. They also need the authority and capacity to actually get things done and the funding to do it. Even the best plan won't be worth the paper it's printed on if the agency is not capable of actually implementing it.

One of the things GSAs need to develop is expertise, which would include the ability to conduct the modeling to understand a resource that is difficult to observe directly and needs to be understood through data analysis, modeling and monitoring, and needs to be evaluated on an ongoing basis.

Water Deeply:

Is there a good sense about what sustainability means and what these GSAs need to achieve?

Kiparsky:

In fact, yes. It defines sustainability as the avoidance of six undesirable results. Those six results are, first, the lowering of groundwater levels. Second, reductions in groundwater storage. Third, impacts on water quality. Fourth, saltwater intrusion from seawater. Fifth, subsidence of the land surface. And finally, impacts on interconnected surface waters.

The definition of sustainability is avoiding those six things. How to operationalize that in detail remains to be seen. There are no quantitative targets that are attached to these undesirable results either in the law itself or in the emergency regulations for groundwater sustainability plans that were just passed.

So, while these are a visionary set of targets to reach for in concept, it is tempered by the fact that it is not yet clear what exactly it means to avoid these undesirable results in a measurable way.

It argues again for the need for GSAs that are both strong and independent, and technically sophisticated enough to make good judgments about how these elements of sustainability will be operationalized.

Water Deeply:

Getting beyond the formation of GSAs, what other challenges do you see down the line with SGMA?

Kiparsky:

If we form GSAs and they are great at managing sustainability, then problem solved. But I think there is a tremendous number of challenges and unknowns and some of them relate to legal questions.

One of the unanswered questions involves impacts on interconnected surface waters and the relationship between groundwater and surface water. SGMA is going to become an exercise in trying to understand how to manage for both benefits we get from surface water and the uses that people want to make of groundwater.

Water Deeply:

What are the opportunities that could come out of this?

Kiparsky:

SGMA presents a tremendous opportunity for innovation. There is more than one way to think about how to bring a groundwater basin's water budget into balance. One is to pump less groundwater. The other is to find a way to bring other sources of water into the basin to augment that supply to help recharge aquifers directly or to use in place of water demands that were otherwise satisfied by groundwater.

One example is something that is actually happening right now in the Pajaro Valley, where they have implemented a policy called Recharge Net Metering. The groundwater agency in the valley will refund the pumping fees it charges groundwater users in the basin when those users put projects in place that return excess stormwater into the basin during the winter.

It's one example of a mechanism to incentivize innovative projects like greater stormwater recharge. I'm looking forward to seeing whether SGMA can spur more of these type of things.

Water Deeply: How important is getting SGMA right for our water future in California?

Michael Kiparsky:

Simply put, it's essential. Although it's not as visible as California's rivers, groundwater provides about a third to half of the state's water supply and it is particularly essential during droughts like the current one.

If California does not figure this out, then what we are essentially doing is making a choice to use a resource now at the expense of our children's and grandchildren's ability to enjoy the range of benefits that the resource provides to us.

This type of concern for the future is something that is implicit in SGMA and it's one of the beacons of hope for California's long-term water security and sustainability.

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SWRCB and MWD relax water use restrictions

Valley Road Runner | May 26, 2016

Over the last few weeks, things have happened in Sacramento and Los Angeles to dramatically reduce the water use restrictions that have impacted Valley Center and all of California for well over the last year.

While the El Niño was somewhat of a bust, it still provided enough rain and snowpack to California's key watershed to move the State Water Resources Control Board (SWRCB) in Sacramento and the Metropolitan Water District (MWD) Board in Los Angeles to loosen the reins outside landscape irrigation and water use by commercial agriculture.

According to Gary Arant, Valley Center Municipal Water District (VCMWD) general manager, "The most important change in the revised State Board regulation is that the mandatory water conservation standards for each water agency will be based upon a verifiable self-certification of actual local or regional water supply conditions rather than on a topdown 36%, now 28% mandated conservation level from Sacramento that we have been living with for the last year."

Under the changes to the SWRCB regulations, each water agency will certify as to the available supply, water demand and anticipated shortfall over the next three years. In the case of VCMWD, the water supply certification will come from the San Diego County Water Authority (SDCWA), which provides 100% of the district's potable water.

As has been widely known over the last year, the SDCWA has had enough water to serve 98%-99% of the normal urban water demands of its member agencies. In fact, with the additional water placed in the raised San Vicente Reservoir over the last year, the Carlsbad Deal Plant fully on line, more flow coming from the IID Water Transfer, and likely a full supply from MWD in FY 2016- 2017 the percentage of available supply will likely be at or very near 100%, even under the SWRCB's stringent and conservative certification guidelines.

It is possible that VCMWD will have no mandatory conservation level, or in the worst case, something very nominal (3%-5%), which could be readily addressed with ongoing conservation measures and enforcement of basic water waste prohibitions.

Agencies have until mid-June, 2016 to file their respective certifications, which, when approved by the SWRCB, will be effective June 1, 2016, for water use reporting for the month of June, 2016. Agencies not filing a self-certification will remain under the current mandatory reduction system. VCMWD will be filing a self-certification with the SWRCB as soon as data is available from the SDCWA.

Also the SWRCB made permanent several water waste prohibition measures which have been in effect over the last year, including measures to:

- Prevent irrigation runoff from over-watering
- Require use of an automatic shut-off valve on a hose when washing a motor – vehicle
- Prohibit using potable water to wash down driveways and sidewalks
- Prohibit using potable water to irrigate outdoor landscapes within 48 hours of a measurable rainfall
- Prohibit use of potable water in non–recirculating decorative water features (fountains, ponds)
- Require

serving water only on request at restaurants, bars or any food establishments • Require hotels and motels to provide guests the option to re-use towels and linens; and • Require water agencies to promptly notify customers of leaks in private plumbing systems

Arant noted that these basic, now permanent water prevention measures will be monitored and enforced through warning, citations and fines if necessary.

Prior to recommending any formal specific changes to the VCMWD board for the district's Drought Response Program to implement the new SWRCB regulation, Arant advised that there are several things that must happen.

"First, the SDCWA will need to provide its member agencies with a water supply availability certification. Once that is made available, VCMWD will then need to develop a water demand estimate for the next three years. With those two data sets, a certification of water supply availability will be forwarded to the SWRCB for approval."

While the exact data is not available at this time, Arant anticipates that the SDCWA will be able to certify that it will be able to provide at or very near 100% of the District's domestic and commercial demand beginning June 1, 2016 through January 10, 2017, the term of the extended regulations.

Once that is confirmed and approved by the SWRCB, staff will then present recommendations to the VCMWD board for changes to the district's current program.

While staff has not developed details as of yet, Arant told The Roadrunner: "Generally there will likely be a significant relaxation of outside water use restrictions in terms of limiting days of the week watering and watering duration, as long as the use of potable water falls within the mandatory water waste prevention measures (listed above in the article)."

Arant emphasized that the district will, "Continue to encourage general water conservation and efficiency practices through its website (www.vcmwd.org), bill messages and media advertising.

As for the district's commercial agricultural users (Transitional Special Agricultural Water Rate – TSAWR and Commercial Agricultural Full Price –CAFP), in response to MWD's action on May 10 to lift the 15% water supply reduction to its member agencies, effective July 1 the district anticipates that action will be taken at the May 26 SDCWA board meeting to formally rescind the water use allocations for agricultural customers.

"In response to actions by MWD and what will most certainly happen at the SDCWA, VCMWD will turn off the water allocation and penalty calculation functions in the billing programs for the June, 2016 cycles and going forward as long as MWD provides a full supply to its member agencies. We also anticipate that with a combination of very cool May weather and the ability to better address requests for additional water that the vast majority of TSAWR/CAFP penalties will have been eliminated by the end of June, 2016 billing cycles," said Arant.

Arant continued, "At least for the next thirteen months, TSAWR and CAFP customers will have no water use restrictions other than having to comply with the applicable mandatory water waste prevention measure previously discussed above in this memo."

He added, "All in all, this is good news compared to what our customers have had to deal with for the last year. While there is certainty with the positive impacts on the TSAWR and CAFP Programs, there is still some minor degree of uncertainty the how the changes to the SWRCB Drought Regulations will impact the domestic and commercial customers."

Even a with the water supply/water demand calculations still to be completed, Arant said he is confident that the resulting limitations on outside landscape irrigation, will be much, much less stringent than the current rules. However, the district will still be requiring its customers to comply with the basic permanent water waste prohibitions and encouraging continued conservation and efficient use potable water resources.

"With the Drought Emergency Response winding down for now, we have to thank our customers for the sacrifice and doing an amazing job of helping the district to meet the state imposed conservation mandates. Believe me when I say, we didn't like putting our customers through it any more than they liked having to live through it over the last year. Our customers deserve a break and hopefully we will get good hydrology for a while to keep us out of the emergency drought condition for a while," Arant said.

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School funded by Facebook founder stalled due to water shortage

The Guardian | May 24, 2016 | Sam Levin

A free school for low-income students set to open this fall in Silicon Valley with Priscilla Chan as CEO can't get permits to start building

A new school funded by Facebook founder Mark Zuckerberg and his wife, Priscilla Chan, is facing delays in construction due to a water crisis in East Palo Alto, a Silicon Valley city that has struggled with poverty amid the region's tech boom.

The Primary School, a private school for low-income students scheduled to open this fall with Chan as CEO, cannot currently get permits to build its facilities due to a major local water shortage that is creating obstacles for numerous development projects in East Palo Alto, according to city officials.

The potential construction setback for Chan's school highlights one of many challenges that has plagued East Palo Alto, which is one of the least affluent communities in Silicon Valley and is located directly south of Facebook's headquarters in Menlo Park.

The school is the latest philanthropic effort of the billionaire Facebook CEO and his wife, a pediatrician and former teacher, who have had mixed results with past charitable initiatives in education.

Timed with the birth of their first child, the couple announced in December that they would give away 99% of their Facebook shares in their lifetime to a philanthropic organization dedicated to charitable causes. The roughly \$45bn pledge came several years after Zuckerberg partnered with the city of Newark, New Jersey, in an effort to help improve its public schools.

The \$100m donation to Newark schools earned significant backlash after officials spent large portions of the funds on consultants and the controversial expansion of charter schools in the area. Zuckerberg's political advocacy group dedicated to immigration reform also sparked criticisms over its ties to conservative politicians.

It's unclear how the water crisis in East Palo Alto may impede the Primary School. The school initially declined to comment, but after publication of this article, spokesman Brent Colburn released a statement saying the school would open in a temporary space in the fall, adding: "We look forward to continuing to work with the city on permits for a permanent location."

The private school, which was announced in October and will be free, will eventually enroll students pre-kindergarten through eighth grade and aims to integrate a range of healthcare services, including mental health and prenatal care, into the facilities. The school is partnering with a local health center and is recruiting families from East Palo Alto and Belle Haven, a neighborhood in Menlo Park that has struggled with rising rents in the shadow of Facebook.

While the school is on track to enroll its first class of four-year-old pre-K students at the interim site, it remains to be seen if and when the school can break ground on building facilities at its intended permanent site, which is roughly two miles away from Facebook's headquarters.

The delay in issuing permits stems from what East Palo Alto officials describe as a major “water crisis” tied to a shortage and lack of an emergency system in place if its current water source suffers an interruption.

When the city was incorporated in the 1980s, officials allocated East Palo Alto far less water than surrounding cities, according to local paper the Peninsula Press.

The disparity and water shortage remains a problem today, according to East Palo Alto assistant city manager Sean Charpentier, who noted that the city receives roughly 76 gallons of water per day per capita – a significantly smaller amount than the 114 gallons surrounding municipalities receive.

In a recent report on the crisis, the city said it has delayed approvals for numerous projects, including the Primary School, “due to the lack of water”.

“We cannot entitle projects until we can prove there is a water supply available for them,” Charpentier said, adding: “We have a water allocation that is inadequate for the size of our city in terms of allowing it to grow.”

The city’s report said that the water crisis has also delayed entitlements for an affordable housing project and two office developments. Charpentier said the city was requesting an increase in its allocation from the local public utilities commission and plans to build new groundwater wells – but that construction could take years.

Over the years, East Palo Alto has struggled with crime, homelessness and gentrification and is often cited as an illustration of rising income inequality in Silicon Valley.

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East Palo Alto looks to wells for economic growth

SF Gate | May 20, 2016 | Kaitlyn Landgraf

East Palo Alto is at a critical juncture in its economic development, but it needs one resource in order to grow: water.

Faced with a severe shortage, the city is beginning construction on two wells that it hopes will together provide about half of East Palo Alto's projected water needs.

The current lack of water supply means that the city cannot move forward with development projects, like housing and office space. East Palo Alto gets virtually all of its water supply from San Francisco Public Utilities Commission's Hetch Hetchy water system, and for the past 14 years, it has consumed all of its allocated water.

The shortage dates back to the city's founding: when East Palo Alto was incorporated in 1983, it was allocated far less water than surrounding cities, a disparity that persists to today. In 2010, the SFPUC assigned East Palo Alto 1.96 million gallons per day — in contrast to the 14.66 million gallons it allocated to neighboring Palo Alto. And per capita, East Palo Alto uses far less water than the Bay Area average: less than 37 gallons used per day per resident, compared with more than 50 gallons in the broader San Francisco Bay Area.

The lack of water supply has a direct impact on the city's growth and economy: development projects can't be approved by the planning commission without enough water to meet code requirements. Stalled projects include 120 new affordable housing units and office space, and a plan to develop University Avenue into a vibrant mixed-use downtown. Also in limbo is The Primary School, a private school led by Priscilla Chan, wife of Facebook CEO Mark Zuckerberg.

"In general, we cannot process new development projects" without water, said East Palo Alto Assistant City Manager Sean Charpentier. "For us, it's very real."

Also from Peninsula Press: [New FEMA maps show more of East Palo Alto at risk of flooding](#)

The city is solving the problem in two ways. It's in the process of requesting that the SFPUC increase its allocation, but it's also beginning construction plans on two groundwater wells: one at Gloria Way, and one at Pad D, located adjacent to the parking lot of the local Home Depot.

"The groundwater wells are critically important to us," Charpentier said. "We don't have emergency water storage or supply ... and we need additional water to support our leadership efforts in affordable housing as well as meet our economic goals."

It is hard to accurately predict the output of a well, Charpentier said, but the two wells are conservatively estimated to produce around 700,000 gallons a day, or half of the city's projected need. The well water will be used for everything that the Hetch Hetchy water is currently used for: tap water, fire hydrants, municipal needs and development projects.

The Gloria Way well was used in the 1980s, but shut down when residents complained about its smell and taste, due to high concentrations of manganese in the water. But advanced filtration systems can now address that problem, Charpentier said.

The Pad D well has yet to be drilled. But initial tests indicate that aquifers below ground are productive and have good water quality.

East Palo Alto is also taking measures to ensure that its well water usage is sustainable. In November, it became the only city in San Mateo County to develop a groundwater management plan, according to Charpentier.

“We’re the smallest city, we’re the poorest city, we’re the most diverse city, and we’re the only one with a groundwater management plan,” he said. “We wanted to make sure that we operate these wells in a way that does not negatively impact the groundwater resources.”

#

Efforts in Congress are heating up to bring some relief to California's historic drought, just as the dry summer season is starting.

The Hill | May 30, 2016 | Timothy Cama

The Golden State is in its fifth year facing exceptional drought conditions.

And while its congressional delegation is eager to find ways to better save water, and redirect it where needed, longstanding partisan and regional fights that fueled water wars since before California was a state are paralyzing efforts to help.

The House twice in recent days has debated GOP-backed measures to increase the water pumped through federal infrastructure from the Sacramento-San Joaquin River Delta — a massive delta that acts largely as the hub of the federal and state water canals — to Central Valley farms and Southern California.

Democrats have tried to stop the efforts, arguing that the water losses would hurt endangered fish and the delta's ecosystem. They say conservation and technology development are key to solving a drought exacerbated by climate change.

Meanwhile, the Senate is debating Sen. Dianne Feinstein's (D-Calif.) bill to give more flexibility to federal authorities in water pumping decisions.

And California's drought is entering the presidential election too, thanks to a Friday visit to Fresno by Republican Donald Trump, who declared, "we're going to solve your water problem."

"Gentlemen and ladies, welcome to California water wars," Rep. John Garamendi (D-Calif.) said on the House floor in opposition to the GOP attaching California-focused water measures to an energy and waterways spending bill.

"This is not the way to handle it."

Thomas Holyoke, a professor of political science at California State University Fresno, said years of regional conflict in the state are fueling the fight in Congress.

"California for its entire history has been torn apart regionally over water," Holyoke said. "A lot of the water that comes to the Central Valley for irrigation — and a lot of the water that goes all the way down to Los Angeles and San Diego — actually originates in Northern California. So Northern Californians have a tendency to feel that their water is subsidizing the entire rest of the state."

The divides have split lawmakers even within the same party.

This year's El Nino greatly increased the amount of precipitation that hit California, providing temporary relief for the state and building up reservoirs. But that is only temporarily, and forecasters expect the problems to continue.

From the federal perspective, efforts to help California through its drought mostly involve water infrastructure operated by the Bureau of Reclamation. That infrastructure takes water from Northern California to the Central Valley and Southern California.

As the drought has stretched on, the amount of water pumped has fallen.

The GOP and representatives of the areas that receive the water also blame the Endangered Species Act. They say the Obama administration is using that law to justify letting water flow through the rivers to protect Delta smelt and other fish species instead of through canals for farmers.

The House GOP's main bill on California's drought is sponsored by Rep. David Valadao (R-Calif.) and endorsed by Majority Leader Kevin McCarthy (R-Calif.) and the whole Republican delegation. It sets minimum pumping volumes and new standards for when endangered species concerns can override pumping — something the Democrats say amounts to gutting the law. The House passed the bill last year.

"This is not in a third world country," said McCarthy. "This is in the United States of America, this is right here in California, and this is something that's happening in these communities because of this water being wasted," he said.

Feinstein's bill doesn't dictate volumes, but gives federal officials more flexibility in how they make water and species decisions. The Obama administration has endorsed her legislation, but not Valadao's.

The GOP also successfully put key pieces of Valadao's bill into an energy bill, to get it into conference negotiations with the Senate — over the objections of nearly all of the state's Democrats.

"There's a simple message for our Democrat colleagues in the Senate: House Republicans won't stop. We will keep passing bills until our people get the water they need," McCarthy said during debate about that measure.

"Because once we get water, so much of the uncertainty facing California and the west will be brushed aside."

Valadao's bill also would undo an agreement to remove a dam on the San Joaquin River.

Both the Valadao and Feinstein bills, to different degrees, aim to increase water storage, support desalination projects and other measures.

Sen. Barbara Boxer (D-Calif.) has yet to sign on to Feinstein's bill, though is open to negotiations. Most House Democrats also oppose it, but say they prefer it to Valadao's.

"It's basically Congress overriding peer-reviewed biological opinions and dictating, at a very prescriptive level of detail, how this complex water system will be operated, for some undefined period of time," Rep. Jared Huffman (D-Calif.) said of Feinstein's bill.

With lawmakers deadlocked, the state is bracing for another hot summer.

But whatever Congress does about California's water would really be a drop in the bucket, Holyoke cautioned.

"The big problem is that we're starting to fight over a diminishing amount of water, and that raises the stakes for everybody," he said.

"The legislation really just works at the margins."

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How do we share California water, a diminishing resource?

San Francisco Chronicle | May 28, 2016

Congressional battles over California water have intensified, unleashing a surge of mostly divisive and ill-advised federal legislation. On Friday, presumptive Republican Party presidential nominee Donald Trump even dived into the fray at his Fresno rally when he declared, “There is no drought,” accusing state water officials of denying water to farmers to save a 3-inch fish. None of this will help California’s ongoing water concerns.

If anything, these efforts threaten to derail what progress the state has made toward establishing rational rules to share a diminishing resource in a warming world. The state’s Water Action Plan has set out broad priorities for water use and is letting local water interests take up the hard and necessary work of hammering out rational, reasonable water rules. What’s needed now is a statewide commitment to allocate — up front — water for the environment. Fish (and birds and wildlife and the land itself) as well as cities and farmers need a seat at the water bargaining table.

When Australia endured a decade long drought, political leaders allocated 50 percent of the continent’s water to the environment. That needs to happen here. California and Australia share an arid climate and a culture shaped by ranching and a mining boom. But where California and the rest of the American West developed an ethos of rugged individualism and individual property rights, the Aussies pegged survival on sharing resources. Nothing better explains the differences in Australian water policy from ours, said Felicia Marcus, chair of the State Water Resources Board, the agency shaping the rules that will assure Californians a secure water future.

But share we must. Those new rules will require new thinking, new approaches and new flexibility — which means we need to figure out what we can afford from our water budget. The budget needs to serve everyone’s interest rather than individual districts demanding water under a wide array of state and federal laws. We can’t manage our water supply by Environmental Species Act dictates alone, and we can’t have local agencies using Congress to foot statewide decisions and change the laws to take water from the environment and struggling West Coast salmon runs. Otherwise, we risk harming the land that supports us.

Sorting out California’s maze of conflicting, overlapping and sometimes legally questionable water rights will take years, if not generations. But that work is under way. In some instances, it may be faster, cheaper and better to simply buy water rights for the environment — either permanently or on a long-term lease. The state water bond included \$200 million for “enhanced stream flow,” which could include following land or restoring habitat or acquiring water rights outright. This approach is a first for California. The California Department of Fish and Wildlife is using a pilot-project approach to see what works. By the beginning of this year, it had approved \$22 million for 24 projects. Now it is gearing up to review the second year’s grant proposals.

That's why the congressional activities of the past week seeking to divert more water from Northern California are so disturbing. House Republicans attached one bill, HR2898, introduced by Rep. David Valadao, R-Hanford (Kings County), whose passage had stalled, to an unrelated Senate-approved \$37.4 billion must-pass energy measure when that bill reached the House floor. The Valadao bill orders more pumping from the Sacramento-San Joaquin River Delta to farms south of the delta, shrinks a salmon-habitat restoration program and prohibits using federal money to enhance flows for the environment in severely drought-stricken water basins. The Obama administration opposes the sections attached to the energy bill, saying they preempt California water law and state and federal environmental law.

Sen. Dianne Feinstein, D-Calif., had offered an alternative, S2533, as drought relief that has a good chance of becoming law. That's dispiriting too, because it contains some of the worst parts of the Valadao bill.

Congress has no business trying to allocate our water and run our pumps from Washington.

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State moves to drop \$1.5 million fine in water rights case

Sacramento Bee | May 27, 2016 | Ryan Sabalow

In a case that highlights how difficult it is to enforce agricultural water reductions in California, a state panel has moved to dismiss a \$1.55 million fine it levied last year against a Delta-area agency accused of ignoring an order to stop diverting water in the drought.

State water regulators alleged last June that Byron-Bethany Irrigation District in the southern Sacramento-San Joaquin Delta defied a state order issued to dozens of senior water rights holders. The order told them to stop pulling water from streams and rivers due to extremely dry conditions.

It was the first time since 1977 that California had curtailed water used by agricultural districts with senior water rights that predate a system the Legislature put into place in 1914.

Almost immediately, about a dozen districts sued the state, challenging its authority to impose cuts and its methods of policing California's complex water rights system.

The complaint alleged that after the state issued the stop order, Byron-Bethany continued to divert 2,067 acre-feet of water over the next 13 days from an intake channel at the state-run Banks pumping station near Tracy.

The station delivers water to farms and cities south of the Delta. An acre-foot is 326,000 gallons.

At the time, the state said it could fine Byron-Bethany up to \$5.18 million, but regulators reduced the fine to \$1.55 million in part because the district delivers water to power plants "that may be deemed critical energy suppliers." It also delivers water to Mountain House, a Tracy suburb that until recently depended completely on Byron-Bethany for its water.

On Thursday, the State Water Resources Control Board said it was moving to drop the enforcement action after several days of hearings.

In a draft ruling, board members said prosecutors failed to provide enough supporting evidence and didn't adequately explain why there wasn't enough water available for the district to use.

Jennifer Harder, a water law expert at University of the Pacific's McGeorge School of Law, said the board members were smart to describe in their ruling how they'd like to see enforcers explain their methodology in future cases.

"I don't think it will preclude future enforcement," Harder said. "I think it will make future enforcement more fair. They've essentially laid out a recipe for how to do that."

In a written statement, Byron-Bethany General Manager Rick Gilmore said the district "finally did the right thing."

“This day is a long time coming,” Gilmore said. “We maintained all along that we were legally exercising our pre-1914 senior water right. We are thankful the state water board’s hearing team found multiple, significant discrepancies in the case against us. We will review this ruling in greater detail with our legal team and look forward to putting this chapter behind us.”

In its draft ruling, the board also said it would also drop a complaint against West Side Irrigation District, a small agricultural district in the Delta town of Tracy that also was accused of violating the state’s curtailment order.

Both actions will be voted on at the board’s June 7 meeting.

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State backs away from drought crackdown on two water agencies

SF Chronicle | May 27, 2016 | Kurtis Alexander |

Two Central Valley irrigation agencies slapped with unprecedented penalties last year during the state's drought-related crackdown on illegal water users are likely to see their cases dropped.

In a dispute that has been closely watched by California's farmers and water managers, the State Water Resources Control Board moved to dismiss its complaints that the Tracy-area irrigation districts were taking river water illegally. The agency acknowledged there was insufficient evidence to prove wrongdoing.

The cases were widely viewed as a test of the state's power to regulate longtime water rights holders. Last year, California's historic drought prompted state regulators to enact sweeping restrictions on pumping river water. The restrictions limited access even for those with water rights dating to 1914 and earlier — known as senior water rights and long considered ironclad.

The Byron Bethany Irrigation District, which serves about 160 farms and the 15,000-person community of Mountain House, faced a \$1.5 million fine for pumping water from the Sacramento-San Joaquin River Delta after state regulators told it to stop. The nearby West Side Irrigation District, which provides about 45 growers with delta water, faced potential \$10,000-a-day fines for the same reason.

The Byron Bethany district holds senior water rights on the southern end of the delta. The West Side district has slightly newer water rights on the delta's Old River.

Both challenged the state's complaints against them, maintaining that they were entitled to take the water that the state accused them of stealing. Byron Bethany also argued that the state didn't have the authority to regulate pre-1914 water rights.

The water board held hearings in March in which state regulators and the water districts presented their arguments. Members of the agency's governing board serve as the decision maker.

In proposing Thursday to drop the cases, water board regulators acknowledged that they had used flawed methods to measure water draws and had failed to prove the districts did anything wrong.

At the same time, however, state officials stood by their power to govern senior water rights. "We conclude that the board has the authority to take enforcement action ... against the unauthorized diversion of water under claim of a pre-1914 water right," state regulators wrote in a proposed decision to drop the case, which will be taken up by the five-member governing board June 7.

Byron Bethany officials, however, portrayed the proposal to drop the complaint as a validation of its claim on delta water.

“This day is a long time coming,” district officials said in a statement. “We maintained all along that we were legally exercising our pre-1914 senior water right.”

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