

August 12, 2026

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

August 7, 2026

Correspondence and media coverage of interest between July 22, 2026 and August 7, 2026

From: Peter Drekmeier, Yosemite Rivers Alliance, Policy Director
To: Chair Vella and members of the BAWSCA Board of Directors
Date: July 31, 2026
Subject: SFPUC Side Agreement with the Irrigation Districts

Water Supply Conditions:

Date: July 23, 2026
Source: Inside Climate News
Article: Global warming unmakes winter in the West

Water Infrastructure:

Date: August 5, 2026
Source: The Conversation
Article: How hackers attack municipal water systems – and why the utilities are so vulnerable

Date: July 27, 2026
Source: SF Gate
Article: Regional: 10-Year Deadline For Cleaner Wastewater Extended

Water Supply Management

Date: August 7, 2026
Source: Department of Water Resources
Article: California begins a new era of water planning

Date: July 28, 2026
Source: Stanford Report
Article: Improving water affordability for low-income residents

Date: July 22, 2026
Source: CBS Sacramento
Article: As AI expands, California communities debate new data center projects

Water Policy:

Date: July 27, 2026
Source: Public Policy Institute of California
Article: An Exclusive Interview with Outgoing DWR Director Karla Nemeth

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July 31, 2026

Chair Louis Vella and Board Members
Bay Area Water Supply and Conservation Agency
bawscaboardofdirectors@bawasca.org

Re: SFPUC Side Agreement with the Irrigation Districts

Dear Chair Vella and Board Members:

At your July 16 Board meeting, Steve Ritchie referred to a side agreement the SFPUC signed with the Irrigation Districts back in the 1990s. I'm attaching a copy of that agreement.

You'll see that the seventh point in the agreement states:

"The City agrees to support the Districts' negotiating position regarding volumes of water to be provided for fish flows during the FERC mediation process and during any proceedings before FERC relating to that fish flow issue."

The Bay Delta Water Quality Control Plan is conjoined with the current FERC proceedings because the State Water Board intends to include the Bay Delta Plan (or the Tuolumne River Voluntary Agreement) in the Water Quality Certification that will be incorporated into the licenses for Don Pedro and La Grange Dams.

When the draft document for Phase 1 of the Bay Delta Plan was released in 2016, The SFPUC couldn't just come out and say they were opposing the Plan because they had committed to following the Irrigation Districts' lead on fish flows, so they had to manufacture a more compelling argument. A month after the draft Bay Delta Plan was released, the General Managers of the SFPUC and BAWSCA had an [OpEd published in the SF Chronicle](#)¹ that stated:

"Our initial economic analysis of the first iteration of this plan forecast up to 51 percent rationing, resulting in 140,000 to 188,000 jobs lost in the Bay Area. These same forecasts also

¹ *San Francisco to state on water-use cutbacks: How low can we go?*, San Francisco Chronicle, October 7, 2016 – <https://www.sfchronicle.com/opinion/article/San-Francisco-to-state-on-water-use-cutbacks-How-9940351.php>

show between \$37 billion and \$49 billion in decreased sales transactions.”

We were shocked to read this, because just two years earlier we had been invited to review a socioeconomic impact report the SFPUC had commissioned. The projected jobs and economic losses were 2.5 times lower than what were cited in the OpEd, and this didn’t take into consideration major flaws we identified in the 2014 report.

When asked about the disparity, SFPUC staff claimed the 2014 study was just a draft, so they cited the results of the 2009 study, which had been “finalized.” The truth is that the 2009 study had been rushed to meet a deadline for an Administrative Law Judge hearing, and following its release, the very same author (David Sunding of the Brattle Group) began a five-year process to flesh out his work and produce the 2014 “draft study.”

In other words, the 2009 study was a very rough draft and the 2014 study was a final draft. You’ll see below that very little changed from the 2014 draft to the final report in 2018. Despite this, the SFPUC never corrected the record.

The table below shows the projections from the three reports and the OpEd. You’ll see that the OpEd figures were almost exactly the same as those in the 2009 study. The 2014 study was finalized in 2018, and the figures changed very little.

The SFPUC referenced a 2009 report that had been updated in 2014

Water Supply Reduction	2009 Report		2014 Report		2016 OpEd		2018 Report	
	Jobs	\$	Jobs	\$	Jobs	\$	Jobs	\$
10%	4	2	3	>1	x	x	3	>1
20%	7	3	8	2	x	x	7	2
30%	x	x	25	7	x	x	22	6
40/41%	139	37	54	15	140	37	56	15
50/51%	188	49	71	21	188	49	72	21

Jobs = Projected job losses in thousands.

\$ = Projected financial losses in billions of dollars.

It's been great to see BAWSCA Directors questioning the SFPUC at recent meetings. We have multiple examples of them disseminating disinformation, and encourage you to keep digging deeper into their narrative. We can help you identify issues that need attention. Please take advantage of the history, facts and analysis we can bring to the table.

Sincerely,

A handwritten signature in purple ink that reads "Peter Drekmeier". The signature is written in a cursive, flowing style.

Peter Drekmeier
Policy Director

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AGREEMENT

The City and County of San Francisco (the "City") and the Modesto Irrigation District and the Turlock Irrigation District (collectively the "Districts") agree as follows:

1. This Agreement shall, unless sooner terminated or modified by mutual agreement, extend for the remaining term of the FERC license for the Don Pedro Project (FERC No. 2299), including any annual licenses.

2. The Districts will provide all of the water required to satisfy the minimum flow schedules set forth in that certain settlement agreement agreed to by the Districts and the City in the FERC proceeding in Docket No. P 2299-024.

3. In consideration of the payments contemplated in this agreement, the Districts agree, prior to offering water for sale to any out-of-basin entity, to make a good faith offer to the City to sell the water on reasonable, mutually agreeable terms and conditions whenever the Districts, or either of them, determine that water is available for sale.

4. The City will pay the Districts, in equal monthly payments, the sum of \$3,500,000 per year. The first year shall begin and the first payment shall be due and payable on the first day of the first month after the earlier of (a) the effective date of the FERC action ordering the new instream flows or (b) the date when the new instream flows are provided by the Districts, but in no event earlier than October 1, 1995. Interest on past due sums shall accrue at the rate specified in 18 C.F.R. § 35.19(a). Up to one-half of the first year's payment may be financed by the Districts at a rate of 8 percent per annum amortized over a period of three years, payable monthly in 36 equal installments.

5. The payments due for the sixth year under this Agreement and each year thereafter shall be adjusted to reflect the GDP Deflator index for the most recently available twelve calendar months maintained by the United States Department of Commerce or similar index in the event that index is discontinued.

6. The City may discontinue payments to the Districts provided for in Paragraph 4 on the fifth Anniversary Date or any time thereafter, provided that it has given the Districts not less than one year's prior written notice of such intent. The City in such notice of intent shall state the volumes of water they will provide under each of the water year classifications under Article 37 of the FERC license. On such discontinuance the City shall thereafter meet its obligations under Article 8 of the Fourth Agreement. In the event of a dispute under this paragraph, the City will deposit the payments which would otherwise have been due in the absence of the City's notice of intent into an escrow account until such time as the dispute is resolved. The City and/or the Districts shall be awarded such portion of the amount in the escrow account as is consistent with the resolution of the dispute under Article 8. In the event of a dispute under this Paragraph, the Districts shall not be required pursuant to Article 8 to seek modification by the FERC of the water release conditions set forth in the Settlement Agreement minimum flow schedules before seeking resolution of the dispute. Pending the resolution of such dispute, the Districts will continue to provide all flows as specified in paragraph 2 above.

7. The City agrees to support the Districts' negotiating position regarding volumes of water to be provided for fish flows during the FERC mediation process and during any proceedings before FERC relating to that fish flow issue.

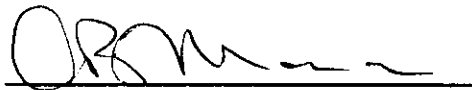
8. The undersigned agree that this Agreement is subject to approval of their respective governing bodies. The undersigned further agree that they shall recommend approval to such governing bodies, and shall exert best efforts to obtain such approvals in an expeditious manner.

9. The Districts and the City agree that they will cooperate in good faith and expeditiously to develop additional standard contract language to be incorporated in this agreement consistent with the above terms and conditions.

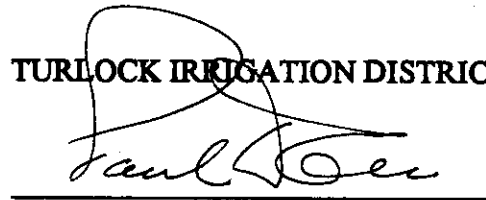
Executed this 21st day of April, 1995.

CITY AND COUNTY OF SAN FRANCISCO

MODESTO IRRIGATION DISTRICT



TURLOCK IRRIGATION DISTRICT



INSIDE CLIMATE NEWS: Global warming unmakes winter in the West

Inside Climate News | July 23, 2026 | Bob Berwyn



A new climate attribution study shows that heating from greenhouse gases could drive extreme snow droughts in the region every third year by 2050.

This article originally appeared on Inside Climate News, a nonprofit, non-partisan news organization that covers climate, energy and the environment. Sign up for their newsletter [here](#).

For millions of people across the American West who rely on water from winter storms to sustain farms, towns and industries, last winter became an agonizing vigil for snow that seldom came.

What little snow did fall melted much too quickly, leading to the worst snow drought on record for nearly the entire mountain backbone of the region, from northern Montana to the Sierra Nevada and the Cascades, through Wyoming, Nevada, Colorado and Utah, and into New Mexico and Arizona. It disrupted daily life and caused economic hardships, dried up streams, left reservoirs depleted and primed forests and grasslands to burn in wildfires.

And if the planet continues warming at the current pace, a snow drought as severe and widespread as last winter's could occur every third year by 2050, and nine out of 10 years by the end of the century, said a team of researchers from Montana, Wyoming and Colorado who analyzed how human-caused warming of the climate system influenced the drought.

Their extreme event attribution study, published this week in the Proceedings of the National Academy of Sciences, found that global warming has already made such a drought about four times more likely today than in a climate without industrial fossil fuel emissions.

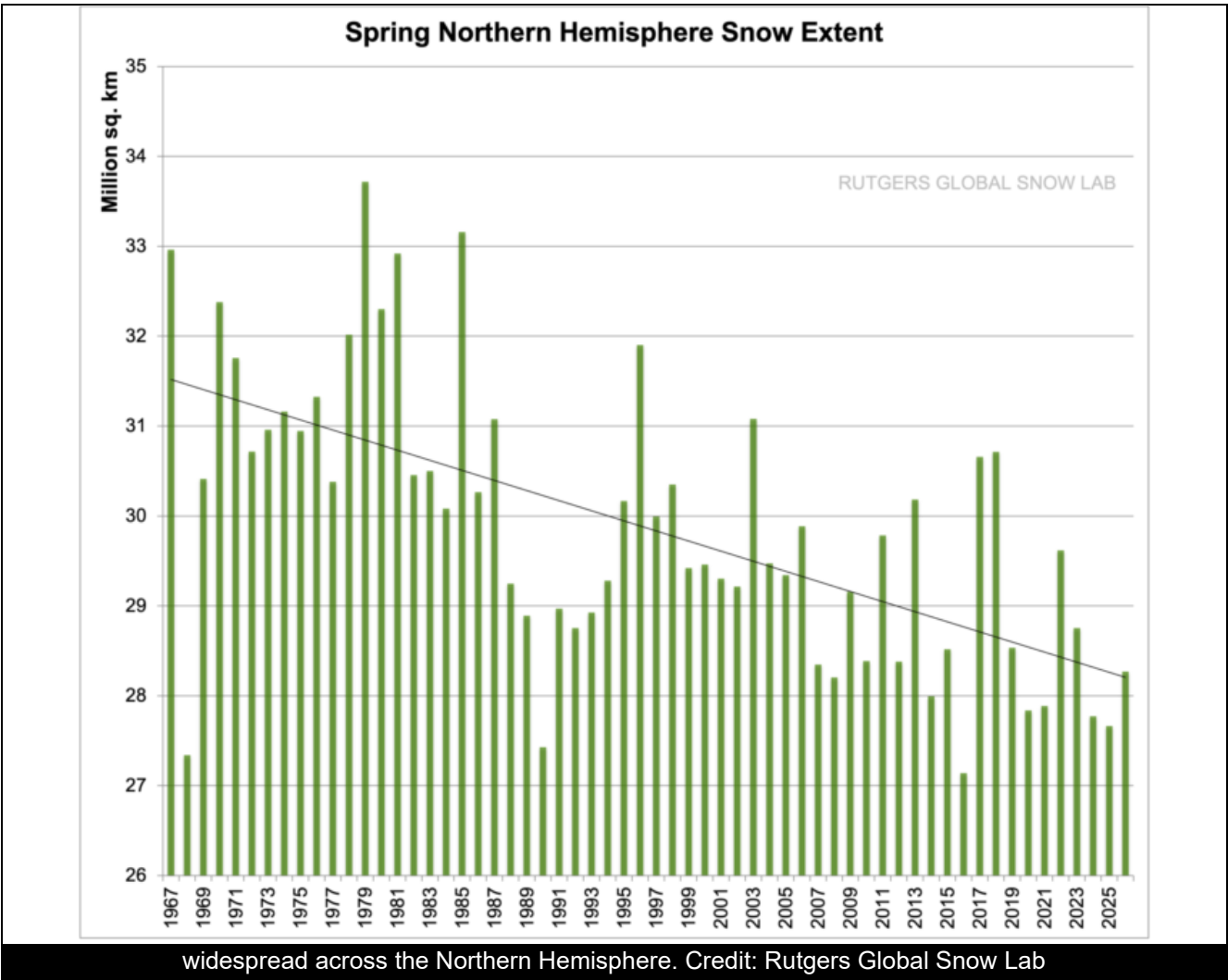
As dry and especially warm conditions persisted for months, uneasiness spread through mountain ski towns and ranching communities. Fearing the summer—and years—ahead, “scientists, the recreation industry, and the press asked whether the low snow anomaly was attributable to climate change,” the authors wrote in the paper.

It became apparent that the 2025-2026 snow drought would make a compelling case study for extreme-event attribution research, said lead author Adrienne Marshall, an assistant professor and hydrologist at the Colorado School of Mines.

The findings have serious implications for state and federal agencies managing water and other natural resources. The study found that global warming made such an extreme snow drought about 14 times more likely in the Upper Colorado River Basin, where accumulated snow usually melts slowly into the summer, providing water to river ecosystems, orchards and power plants thousands of miles away in the deserts of the Southwest.

Marshall said it was a "gut punch" when the study showed how much more frequent extreme snow droughts will likely be if greenhouse gas emissions aren't reduced. It really hit home, she added, when she went on a spring snowpack survey to several high-altitude measuring sites at Hidden Valley and Trail Ridge Road in Colorado's Rocky Mountain National Park.

"There was just so much bare ground where there should have been snow," she said. "It was really striking, and it brought home what we were seeing in the analysis."



Recent progress in climate modeling bolstered their confidence in the results, she said.

In particular, co-author Stefan Rahimi, an assistant professor of computing and atmospheric science at the University of Wyoming, used a new generation of high-resolution Earth system models that simulate the atmosphere and mountains at a resolution fine enough to capture rugged terrain where snowfall and the accumulation of frozen precipitation can vary dramatically over short distances.

At the heart of the effort was a high-resolution physics-based snow data set for the Western U.S., which took him four years to compile, even with some time on the University of Wyoming-based Derecho supercomputer, a flagship system for climate modeling and a partnership between the National Center for Atmospheric Research and the National Science Foundation.

Simply running climate models at higher resolution without improving how well they represent the underlying physics is a bit like doing a jigsaw puzzle with more pieces, but many of them are blank or blurry. For an attribution study on a snow drought, those pieces have to be filled with detailed information on how mountains shape storms, how snow collects and how it melts. Without that, finer-scale simulations are a “fool’s errand,” he said.

Co-author Marianne Cowherd, a climate and Earth scientist and assistant professor at Montana State University, said she used to mainly think of snow as a transportation headache, and a source for school snow days, having grown up in Michigan. When she moved to California, she came to see mountain snow as stored water, a shift in perspective that made snow a compelling way to study climate change.

The snow drought started unfolding even as the winter seemed about normal at first, she said, with only slightly below average precipitation in the Northern Rockies. The problem was persistent warmth. Every major river basin in the West experienced either its warmest or second-warmest winter on record, according to federal agencies. Often, rain fell instead of snow even at elevations higher than 8,000 feet above sea level, where winter rain is historically rare. It evaporated into the warm air, slowly at first, and then all at once when the region was blistered by a March heatwave that left some snow-measuring sites snow-free in early April, when the snow should be at its deepest.

Around Bozeman, people were shocked by early ski area closures and started worrying much sooner than usual about dry forest fuels and the wildfire danger. What struck Cowherd the most was when “people around town started thinking farther ahead than they normally would, and connecting poor snowpack with fire, water and the rest of the climate system,” she said.

One of Cowherd’s contributions to the research was developing ways to define and categorize snow droughts in measurable terms, for example by the total water content stored in the regional snowpack in spring, when supplies for the summer season are assessed.

If extreme snow droughts happen frequently by the end of the century, she added, “We may need to reexamine how we’re defining drought, and even what we intuitively mean by a drought. Is it about an expectation? Is it about supply?”

Among people who spend a lot of time thinking about climate change and studying climate models, “there’s this sense that you just know that certain trends that you see must be driven by climate change,” she said. But a statistical evaluation, considering whether climate change is a factor, or whether an event would have happened without warming, “is a much more rigorous type of question,” she said.

“I think the most surprising thing was just how much the Upper Colorado stood out as being just quite scary,” she said. As the study began, she focused on how unusual it was that so many places were experiencing snow shortages simultaneously. “And then this project really showed me how much worse it was in the Upper Colorado than in any other part of the West.”

#

How hackers attack municipal water systems – and why the utilities are so vulnerable

The Conversation | August 5, 2026 | William Akoto, American University School of International Service



Hackers tried to break into at least 30 municipal water systems in Minnesota on July 26-27, 2026. Since then, Michigan and five other states have reported similar cyberattacks.

The attackers did not try to infiltrate the computers that utility offices use. Instead, they tried to seize control of small computers in equipment like pumps and valves that deliver drinking water to millions of people.

The utilities countered the attacks by shutting down the control computers and sending personnel out into the field to operate equipment manually. Utility officials have said that water remained safe to drink.

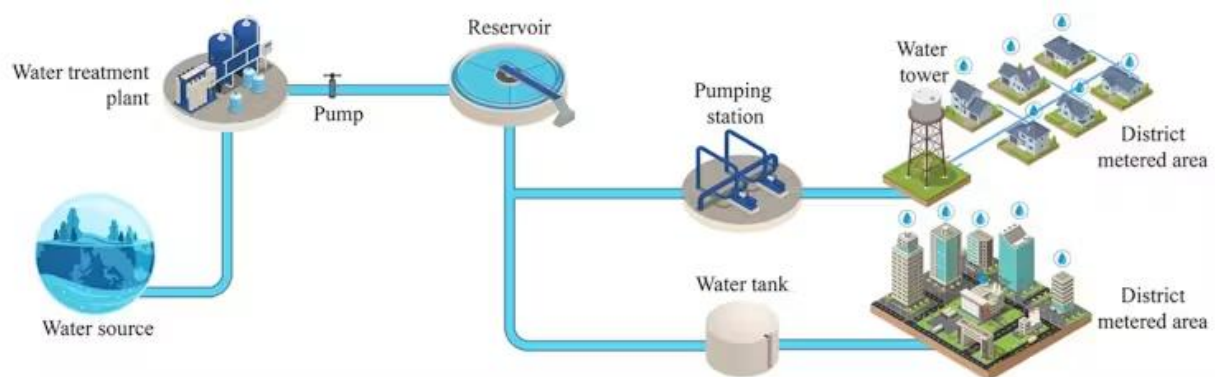
As a scholar who researches cyber conflict, I find that the methods used in these incidents are typical of international cyberattacks. Initial suspicion has fallen on hackers allegedly aligned with Iran, but the U.S. government has yet to attribute the attack to anyone.

How can someone from far away seize control of a water system and possibly shut off the flow or taint the water?

Controlling the water machinery

There are about 152,000 public drinking water systems in the United States, according to the federal government. A municipality gets its water from lakes, reservoirs, rivers or underground aquifers.

Pumps move water through pipes to a treatment plant that filters and disinfects it. More pumps push the treated water into storage tanks, then through distribution pipes to homes and businesses. The entire system can span many square miles.



Small computers control numerous pumps and other equipment involved in moving and treating drinking water, from source to consumer. Taloma et al, CC BY

The hackers accessed small computers called programmable logic controllers at the water systems that operate all sorts of industrial equipment. The programmable logic controllers read sensors that measure conditions such as water pressure, water chemistry, tank levels and equipment status, and automatically operate pumps, valves and alarms. A household thermostat is a useful comparison: It reads the temperature and tells the heating or cooling system what to do.

The programmable logic controllers also transmit operational data to a utility's central computer system. Workers use dashboards to monitor the information and send commands back to the controllers. The two-way communications can travel through wired networks, over radio or cellular links, or through internet connections.

Many utilities operate with small staffs, so remote connections allow an employee to monitor a distant pump or tank, receive an alarm after hours or let a vendor diagnose equipment without traveling to every site.

Controllers that use the internet may access it directly, or go through protective firewalls, secure gateways or virtual private networks. Direct access is more vulnerable because there are fewer defensive barriers. A hacker can find a controller by scanning the internet and finding its Internet Protocol, or IP, address, then try a weak or stolen password or exploit a known security flaw.

To reach a controller through a secure gateway or encrypted service, a hacker would have to steal remote-access credentials, or break into the gateway or private network, or get control of an operator's workstation. The hacker could then use that foothold to reach the controller.

Attempted access can also be part of an intruder's longer-term strategy to collect information, test defenses or establish entry for a later date.

How an attack works

Attacks on industrial control systems often follow a familiar sequence. Infiltration often begins with a quiet search for access. Attackers scan internet addresses for controllers, dashboards and outside companies that provide remote access services, looking for targets that are linked directly to the internet.

Next, the attacker looks for a default or stolen password to log in, an unpatched vulnerability or a misconfigured remote-access service. Sophisticated malware is not always necessary: In 2023, U.S. officials reported that Iranian-linked hackers targeted internet-connected Unitronics programmable logic controllers used by water utilities. Some utilities were still using the manufacturer's default password, according to the Cybersecurity and Infrastructure Security Agency.

Finally, the attacker exploits the access they have gained. This could mean changing a password, issuing commands or attempting to alter the controller's software. Researchers at the National Institute of Standards and Technology note that an intruder could replace legitimate control instructions with malicious commands. An attacker could also sneak into an office computer through phishing, then access the controller network.

Industrial equipment in service for decades is extremely vulnerable because it may not support modern security features, and utilities may delay updates because they want to avoid interrupting operations.

Reports thus far indicate that hackers accessed the Minnesota water systems through controllers that communicate over the internet directly. A July 30 FBI and Environmental Protection Agency advisory stated that attackers remotely accessed Rockwell Automation MicroLogix programmable logic controllers that were connected directly to the internet, and changed their IP addresses and passwords.

Defensive moves that utilities can take

The most immediate step that utilities can take to protect themselves is to remove controllers and human dashboards from direct connection to the internet. Following the Minnesota attacks, the Cybersecurity and Infrastructure Security Agency urged water utilities to place this equipment behind properly configured firewalls and other safeguards.

When remote access is necessary, utilities should route communications through a secure gateway or VPN, require multiple levels of authentication, and limit how much access each user has. Utilities should change default passwords, disable unused remote-access services and install vendor-approved updates to connected equipment.

In their guidance on internet-exposed dashboards, the cybersecurity agency also recommends separating operational networks from email and other business systems. This measure makes it harder for attackers to move between the two systems.

Finally, utilities should back up controller programs, log remote-access activity and practice restoring systems and operating manually.

A matter of resources

Rural water utilities with limited resources are a significant vulnerability in the United States' critical infrastructure.

A group of volunteer cybersecurity experts is providing guidance to water utilities, but their reach is limited. Smaller utilities may need government funding or shared cybersecurity services to be able to defend themselves. [The Conversation](#)

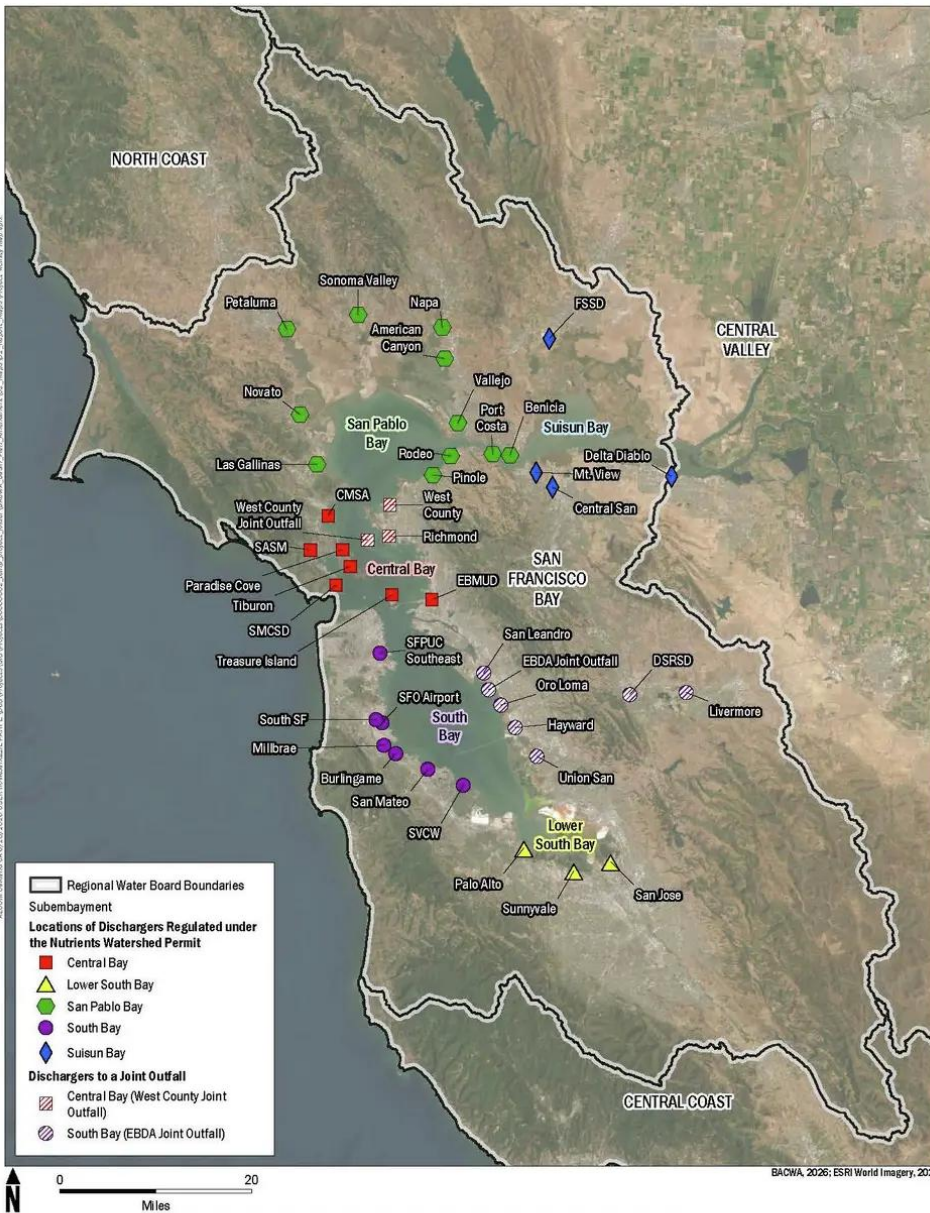
William Akoto, Assistant Professor of Global Security, American University School of International Service

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###

Regional: 10-Year Deadline For Cleaner Wastewater Extended By Water Board For Certain Projects

SF Gate | July 27, 2026 | Bay City News Service



AECOM

Basin Plan amendment to support
nutrient reductions to San Francisco Bay

PROJECT VICINITY MAP

Ray Saint Germain/Ray Saint Germain/Bay City News

Two years ago, the Bay Area's 40 publicly owned wastewater treatment agencies got some hard news. They had 10 years to upgrade their facilities to reduce pollutants entering the bay by 40%, at an estimated cost of \$11 billion.

At a Thursday meeting of the San Francisco Bay Regional Water Quality Control Board, a pathway was initiated for certain projects to get a deadline extension, if they qualify and are moving as quickly as possible.

The 2034 deadline was established when the water board tightened the rules for issuing the permit required to discharge treated effluent into Bay Area waters. The move was in response to massive fish kills in 2022 and 2023 caused by consecutive algae blooms.

"What we learned in 2022 is that it spread throughout San Francisco Bay because of the nutrients," said Eileen White, executive officer for the board. "It was like a buffet for the harmful algal blooms. The algae was eating it up."

The bloom used nearly all the nitrogen available in the water, said Kevin Lunde, senior environmental scientist with the board. "It resulted in extremely low dissolved oxygen levels," he said. "Tens of thousands of fish were killed."

White said that the California Water Quality Control Board has a statewide policy that allows for compliance in 10 years.

"What we're doing with this amendment is basically a little carve-out in the San Francisco Bay Water Board Basin Plan," White said. The carve out includes a five-year extension for special projects in the nine counties covered by the Bay Area plan that provide enhanced environmental benefits.

Special projects include nature-based solutions, like building levees or wetlands adjacent to wastewater facilities that absorb the pollutants from treated effluent before it reaches the Bay while enhancing flood protection. Other qualifying projects include recycled water plants that send treated water to another user before discharging it, and innovative technologies that need additional time for pilot testing but have enhanced environmental benefits such as reduced energy and chemical usage or sludge production.

The extensions are also being provided to conventional biological treatment facilities and ones that already fall below the regulatory nutrient limit, as well as the Union Sanitary District in Union City, which was constructing a nutrient reduction project two years before the 2024 permit change.

"We are concerned that the board is allowing too many projects to qualify for its proposed expansion," said Jon Rosenfield, science director with San Francisco Baykeeper, an environmental nonprofit that focuses on the San Francisco Bay watershed.

Rosenfield said in an email that science indicates the 10-year pollution limits are probably too weak to protect the Bay from more harmful algae blooms.

"Fifteen years is too long, the Bay needed better protections from wastewater pollution years ago," he said. "The exceptions are too broad -- all infrastructure upgrades to treatment plants are unique and challenging. The Board should be driving the urgency and innovation by requiring implementation of solutions within 10 years."

Lunde said in Thursday's meeting that some projects, like nature-based solutions and water recycling, might take more than 10 years to complete.

The Regional Water Quality Control Plant in Palo Alto reached a milestone in December with the construction of a pilot horizontal levee. That project began in 2018 and cost \$7 million. The levee will only absorb 100,000 gallons of water out of the 20 million gallons of wastewater treated at the plant each day.

Treasure Island's recycling facility won a prestigious award in 2025 at a cost of \$165 million. In March, San Francisco Public Utilities Commission General Manager Dennis Herrera said in a statement that San Francisco plans to invest \$2.36 billion over the next 20 years to upgrade its wastewater collection and treatment system.

White said Thursday that the board would have the authority to grant the extra time for certain qualifying projects if the Basin Plan amendment is approved by the state Water Quality Control Board, the California Office of Administrative Law and U.S. Environmental Protection Agency.

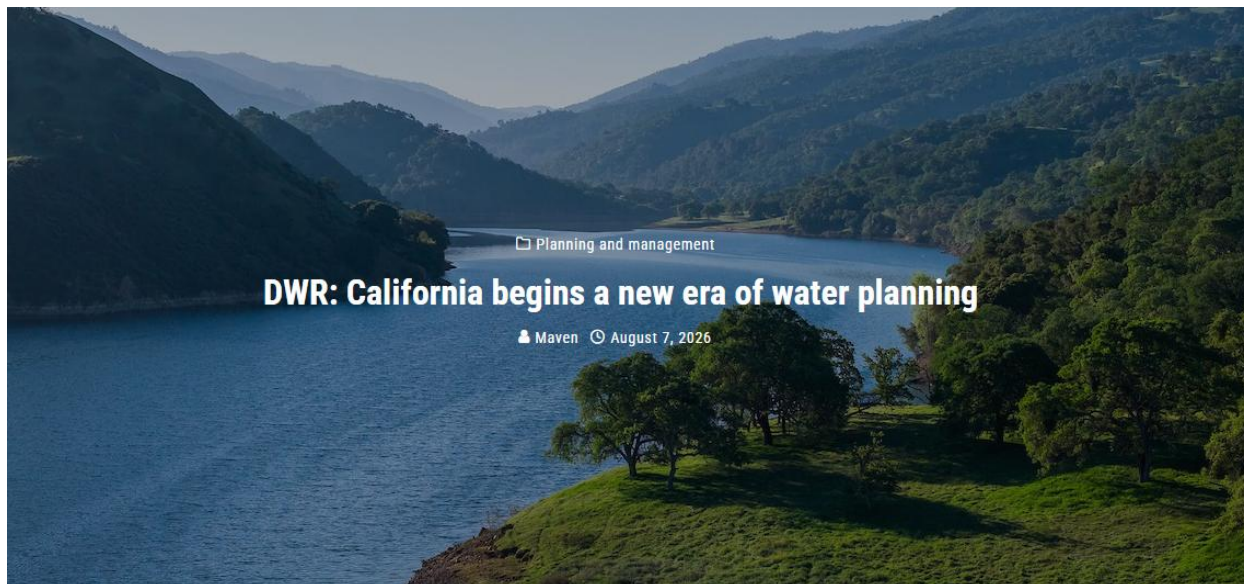
"Even if they are doing one of these qualifying projects, it doesn't grant them more time," White said. "They must be moving as quickly as possible. If they still can't get it done in 10 years, we can give them an extension without going the enforcement route."

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California begins a new era of water planning

Department of Water Resources | August 7, 2026 | Department of Water Resources



The California Water Plan is the state's long-range strategic roadmap for managing water resources. Updated every five years, it helps guide decisions by state, regional, and local water managers. Development is now underway for California Water Plan (CWP) 2028, the first under a new planning approach established by Senate Bill 72 (Chapter 210, Statutes of 2025).

Initial public engagement efforts and early technical work are laying the foundation for a more actionable CWP that will help guide water decisions for years to come. During the first meetings of the CWP Advisory Committee, Tribal Advisory Committee, State Agency Team, and Technical Working Group, participants shared their insights and concerns. DWR will use this information to develop the most significant modernization of the CWP in decades. Early feedback is helping refine technical priorities, shape future engagement, and focus the conversations that will guide implementation of Senate Bill (SB) 72.

Early Input Highlights Needs

At the inaugural Advisory Committee meeting held in May 2026, committee members emphasized the need for transparent technical analysis, stronger coordination across agencies, and clear public communication. They identified groundwater recharge, new water storage, conservation, and recycling as some of the most promising strategies for improving California's long-term water resilience. Members also requested additional discussion of the Water Evaluation Adaptation Planning-Future Scenarios (WEAP-FS) modeling framework and offered recommendations for designing regional forums that encourage meaningful local participation.

A Roadmap for Modernizing Water Planning

CWP 2028 will establish the foundation, while CWP 2033 will expand watershed-scale planning statewide and evaluate regional portfolios of projects and strategies. Input gathered at these meetings will inform a structured implementation roadmap spanning both updates.

During 2026, DWR is gathering statewide data, expanding watershed-scale models, and revising planning assumptions. This work will provide a stronger scientific foundation for evaluating future water supply challenges and identifying strategies to improve California's long-term water reliability.

Opportunities to Participate

Engagement will continue throughout development of CWP 2028 and CWP 2033. Californians can participate through Advisory Committee meetings, regional forums, California Water Commission briefings, and topic-specific workshops. Future opportunities for members of the public to engage in the planning efforts will be shared under Public Involvement at CaliforniaWaterPlan.com.

Regional forums beginning later this year will bring together local agencies, water managers, Tribes, and interested parties, including members of the public, to discuss watershed conditions, review planning assumptions, identify regional plans and projects, and help develop strategies that reflect local priorities while supporting statewide planning.

Looking Ahead

As planning, technical work, and public engagement continue, each phase will build on the last. DWR will continue sharing progress and incorporating input to help create a CWP grounded in sound science, informed by Californians, and focused on implementation. The next public meeting of the Advisory Committee will be held August 25 and 26, 2026, in Alhambra.

#

Learn More

[California Water Plan Home Page](#)

[California Water Plan Roadmap Fact Sheet](#)

[Advisory Committee Meeting Materials](#)

Improving water affordability for low-income residents

Stanford researchers are working with the City of Santa Cruz to improve assistance programs for residents who pay their water bills indirectly through rent.

Stanford Report | July 28, 2026 |



Santa Cruz, California, beach and wharf | Getty Images

In brief

- Water affordability is a growing strain, particularly for low-income households and those in multi-unit housing.
- California's Proposition 218 limits how much utilities can subsidize lower rates, making assistance programs hard to design.
- Stanford researchers and the City of Santa Cruz have launched a program extension to reach renters who pay water bills indirectly through rent, rather than as direct customers.

Water utility assistance programs in California struggle to reach and assist many customers affected by rising rates, particularly renters and those who don't pay water bills directly to utilities.

"Water affordability challenges are a large and increasing issue for folks, especially low-income populations. And that's being exacerbated by aging infrastructure, climate change, and

changing funding structures to programs,” said Khalid Osman, a Stanford assistant professor of civil and environmental engineering and leader of the Osman Lab.

31% of Californians live in households at risk for water poverty.

He and Sarah Fletcher, assistant professor of civil and environmental engineering and a Center Fellow at the Woods Institute for the Environment, are collaborating with the City of Santa Cruz Water Department on a research project supported in part by Stanford’s Office of Community Engagement.

Osman brings experience from his study in East Palo Alto and Detroit that assessed residents’ perceptions of tap water quality and advocated for equitable infrastructure reform. Fletcher leads the Fletcher Lab and has collaborated with the City of Santa Cruz on water affordability since 2020. Greta Markey, a Knight-Hennessy Scholar pursuing a PhD in civil and environmental engineering and a research student at the Fletcher Lab, is leading the study.

A California-centric issue

A key factor in water affordability for California residents is the state’s Proposition 218, which requires water utilities to charge customers based on the actual cost to service them. This limits options for subsidizing lower rates for some customers through assistance programs.

“About 31% of Californians live in households with incomes considered at risk for water poverty, and in the state, about 155,000 households owed more than \$1,000 in water bills as of the latest data we have,” said Osman.

Almost a quarter of the U.S. population doesn’t pay water bills directly to utilities, according to the Water Research Foundation. Rather, they pay through rent or split within multi-unit housing. Groups paying water bills through indirect methods are considered hard-to-reach populations.

“There’s a lack of data on how these hard-to-reach populations experience water affordability challenges, and what the impact of indirect billing is,” said Markey.

The collaboration between Stanford and Santa Cruz was born out of this research gap. “If we don’t understand how renters experience water affordability,” Markey said, “we may be missing how to design customer assistance programs or effective rate structures that reach folks who need this help most.”

Customer assistance program extension

Water utilities’ customer assistance programs (CAPs) have emerged in California over the past five years as infrastructure upgrades for climate resiliency and state requirements have caused prices to increase substantially.

The [Santa Cruz Municipal Utilities Customer Assistance Program](#) has a single-family CAP accessible for residents who either own their home or are renters with the water bill in their

name. Recently, a CAP extension was launched that expands the program for multi-family customers.

Multi-family CAPs are difficult to implement due to a lack of available research and population accessibility challenges; hence, only a few exist nationwide. But those working to address the challenge are hopeful.

“We are venturing into uncharted territory,” said Megan Bunch, a program analyst at the Santa Cruz Water Department and a coordinator of the Santa Cruz Municipal Utilities CAP. “Analyzing data from this project will give us a better ability to evaluate success.”

A thirst for knowledge

After conducting focus groups with landlords, property managers, and tenants to gather their perspectives on water affordability and bill routing, researchers designed surveys based on the results. Long term, the results will help both Stanford and Santa Cruz better understand what water affordability looks like for hard-to-reach populations.

“I care deeply about bridging community science with engineering and infrastructure design,” Markey said. “So, being able to do this qualitative community-engaged work that supports technical modeling is exactly what I want to be doing with my research: showing that engineering is primarily people-focused.”

The CAP extension could also set an important precedent, Bunch said. “If we can get this off the ground and show success, then it could be a template for other utilities to move forward with developing this kind of program and expanding the reach of support beyond those who are account holders to multi-family tenants.”

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For more information

Stanford’s Department of Civil and Environmental Engineering is a joint department of the Stanford Doerr School of Sustainability and the School of Engineering.

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As AI expands, California communities debate new data center projects

CBS Sacramento | July 22, 2026 | Darrielle Fair

As California races to build the infrastructure needed to power artificial intelligence, communities across the state are increasingly weighing whether they want data centers in their own backyards.

The rapid expansion of AI has fueled demand for new data centers, prompting local governments to consider proposals from developers while lawmakers debate how the facilities should be regulated.

Some cities are embracing the projects. Others are putting the decision directly in the hands of voters.

Last month, voters in Monterey Park overwhelmingly approved a ballot measure prohibiting the development of new data centers within city limits. More than 86% voted in favor of the ban.

In Calistoga, residents recently voiced concerns during public meetings over the possibility of data centers being built on the Napa County Fairgrounds.

Gov. Gavin Newsom said he believes those decisions should remain with local governments.

"I believe localism is determinative," Newsom said. "It's a local planning decision, and I think that's appropriate."

At the same time, Newsom said major technology companies should help pay for the infrastructure needed to support their operations.

"You're Microsoft. You can afford to make those contributions. You're Google. You can afford to make those contributions," he said.

Data centers, which store and process the massive amounts of information used by AI systems, have drawn criticism for their high electricity and water demands, as well as concerns over noise and environmental impacts.

While data centers have operated in California for decades, the AI boom has accelerated interest in building new facilities across the state.

CBS News Sacramento reached out to several data center operators about their water and energy use. Most declined to comment.

Paul Royere, senior vice president of finance and administration for Stockton-based Nautilus Data Technologies, said modern data centers can provide economic benefits while minimizing environmental impacts when they are built in appropriate locations.

"Built in the right areas under the existing environmental and permitting requirements, data centers are a net add to communities," Royere said.

He said facilities should be located in industrial areas with existing infrastructure rather than in residential neighborhoods or rural communities.

As development proposals continue to surface, Newsom said the California Public Utilities Commission has been tasked with developing recommendations on how the state should regulate data centers while protecting Californians from higher electricity costs.

Several bills are also moving through the California Legislature that would establish new oversight of data centers. Among the proposals are requirements for operators to publicly report monthly water and energy usage and to incorporate data centers into California's statewide water shortage planning.

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[An Exclusive Interview with Outgoing DWR Director Karla Nemeth](#)

Public Policy Institute of California | July 27, 2026 | Jeffrey Mount and Sarah Bardeen

California Department of Water Resources (DWR) director Karla Nemeth left the department last month after nearly nine years of service. Before she takes over as the director of the Association of California Water Agencies (ACWA), we sat down with her to talk about how DWR changed during her tenure, what (still) keeps her up at night, and what advice she'd offer California's next governor.



California Department of Water Resources Director Karla Nemeth Speaks at the Inaugural Water Resources Science Symposium, DWR

Why has managing water at DWR become so complicated?

DWR was established in 1956, after a devastating flood in northern California. World War II veterans were drafted to engineer a huge system that would deal with flooding and move a lot of water vast distances for water supply. So a very linear era with narrow objectives birthed both the State Water Project and the department. We live in a very different world today. With extreme weather and older infrastructure, both day-to-day and season-to-season management are much harder, and the cumulative damage to groundwater basins and river systems over the last 100 years is catching up with us. The stakes are just off-the-charts.

We started bringing together 300 DWR experts, supervisors, and managers for one big meeting, twice a year. Every fall we'd talk about how the water year was setting up, flood and drought risks, information gaps, and opportunities to manage better. Then every spring, we'd talk about how the water year went. When you have engineers, operators, geologists, hydrologists, and biologists all comparing notes, it can get pretty creative. Everyone starts to understand the value of managing State Water Project pumps, groundwater recharge, or floodplains for fish in real time. And we all fell in love with better forecasting—I know I did!

What are you most proud of?

I'm proud that the department became expert implementers of groundwater management. When the groundwater legislation was signed, we knew it was the most important piece of water legislation in at least a generation. It's a huge thing to be entrusted with a brand-new program—one that needed governance, technical expertise, and regulatory decisions. There's much more to do—groundwater management lies in its implementation—but I think DWR's done a good job.

I'm also proud of our leadership culture around multidisciplinary science. We've integrated not just across disciplines but across the people managing an emergency, the people doing long-term planning, and everyone in between.

We've also made it safer to try new things. We can and do disagree, but in the end to make progress we have to commit. Part of that involves revisiting decisions without recrimination. That gets everybody more comfortable with incremental risk-taking, because everybody's learning and following new information as it becomes available.

What does the future hold for the Sacramento–San Joaquin Delta?

I worry about the Delta all the time. It faces physical challenges with climate change and political challenges with emotions that run high. Despite years of downsizing, the tunnel project remains an unfortunate diversion from the Delta's broader issues. I worry about levees threatened by seepage underneath them as much as overtopping. The state can and should deal with both Delta conveyance and levees. I've hoped for a partnership, but that's been stalled for the last eight years. I find that heartbreaking.

What's the future of the Central Valley Project and the State Water Project?

That also keeps me up at night. It's nearly impossible to overstate the enmeshment of the State Water Project and the federal Central Valley Project. Deep cuts at the Bureau of Reclamation are concerning, and I'm worried that the system's not performing as well as we've come to expect. We need to get as much as possible out of these projects to meet urban, agricultural, business, and environmental needs, and that will take ongoing and unprecedented cooperation. They have always been two parallel systems. In 2010, along with many other water governance reforms, the Little Hoover Commission explored the benefits of merging them. It's complicated, but in this age of climate and affordability pressures, enabling our system to work more efficiently and reliably may be enough to motivate us to work through the potential.

What advice would you give the next governor?

If I could sit down with the next governor, I would first urge him to become familiar with the incredibly dynamic nature of California's hydrology and how we manage it. The organizational structures we have in place today won't meet the water challenges we already face, much less those in the near future. We will have to evolve. Water needs are intensely local and diverse. Listen to everyone—but challenge them to be part of a vision for the whole state.

Second, get behind the backbone infrastructure projects: large-scale groundwater recharge, large-scale water recycling, the tunnel, and Sites Reservoir. They are big, but they are the most affordable solutions over the long haul. Don't let a single project take all the oxygen in the room. We need them all, and they work together: surface water, groundwater, recycled water.

Finally, I would remind him that DWR doesn't solve everything, but it can be better a better partner to local water districts, regulatory agencies, environmental groups, and environmental justice groups, just by doing the work it's already doing better. Help your departments do that.

My list is much longer than that, but that's enough. There's water work to be done in every part of the state. I loved my time at DWR, and I'm looking forward to taking the helm at ACWA. I want to see ACWA at the forefront of consequential water management strategies that set California up for the next century, including passing the baton to the next generation of water leaders—and preparing them to run with it.

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