Veles Water Weekly Report

June 12th 2025

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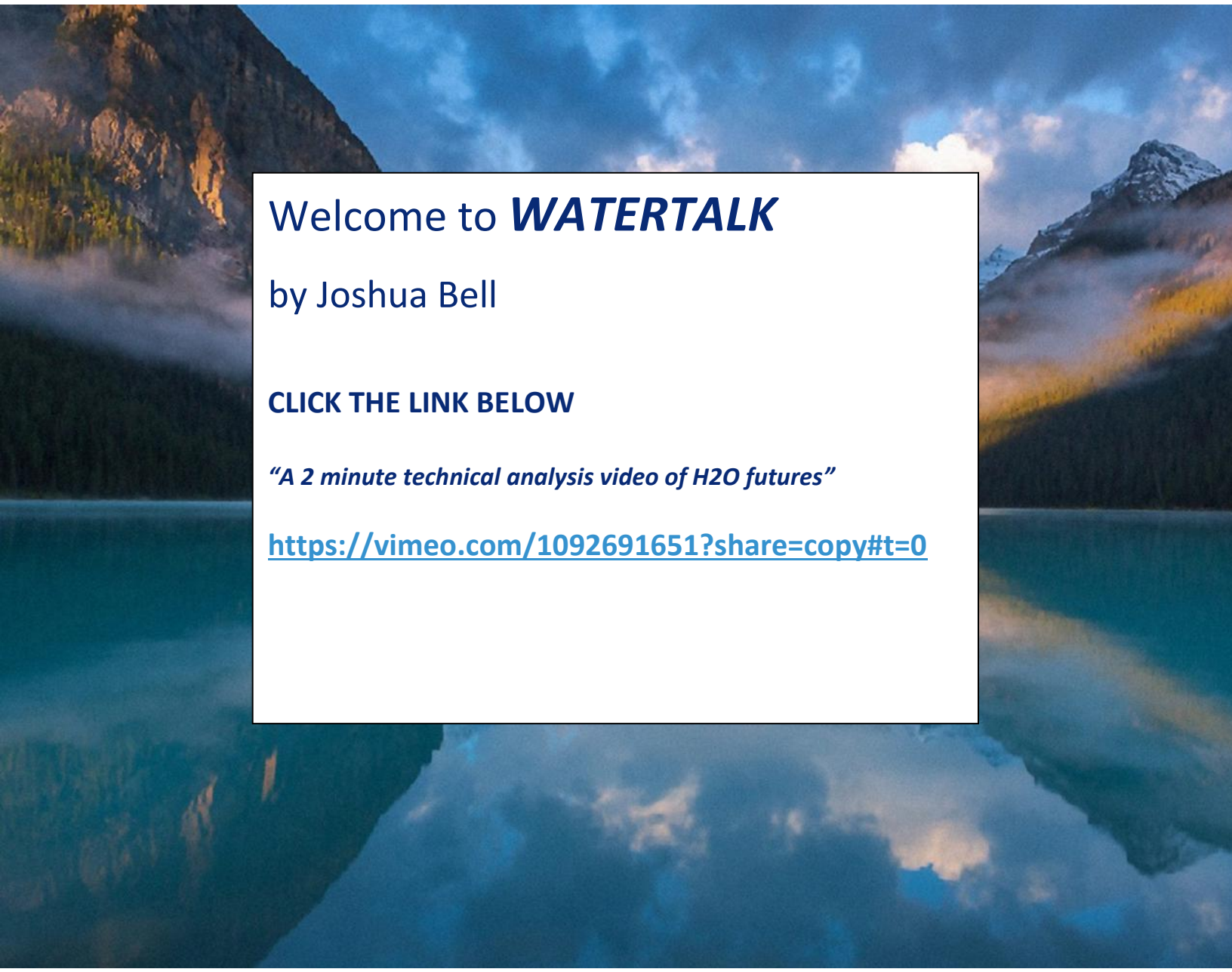
Veles Water

WATER FUTURES MARKET ANALYSIS



Welcome to ***WATERTALK***

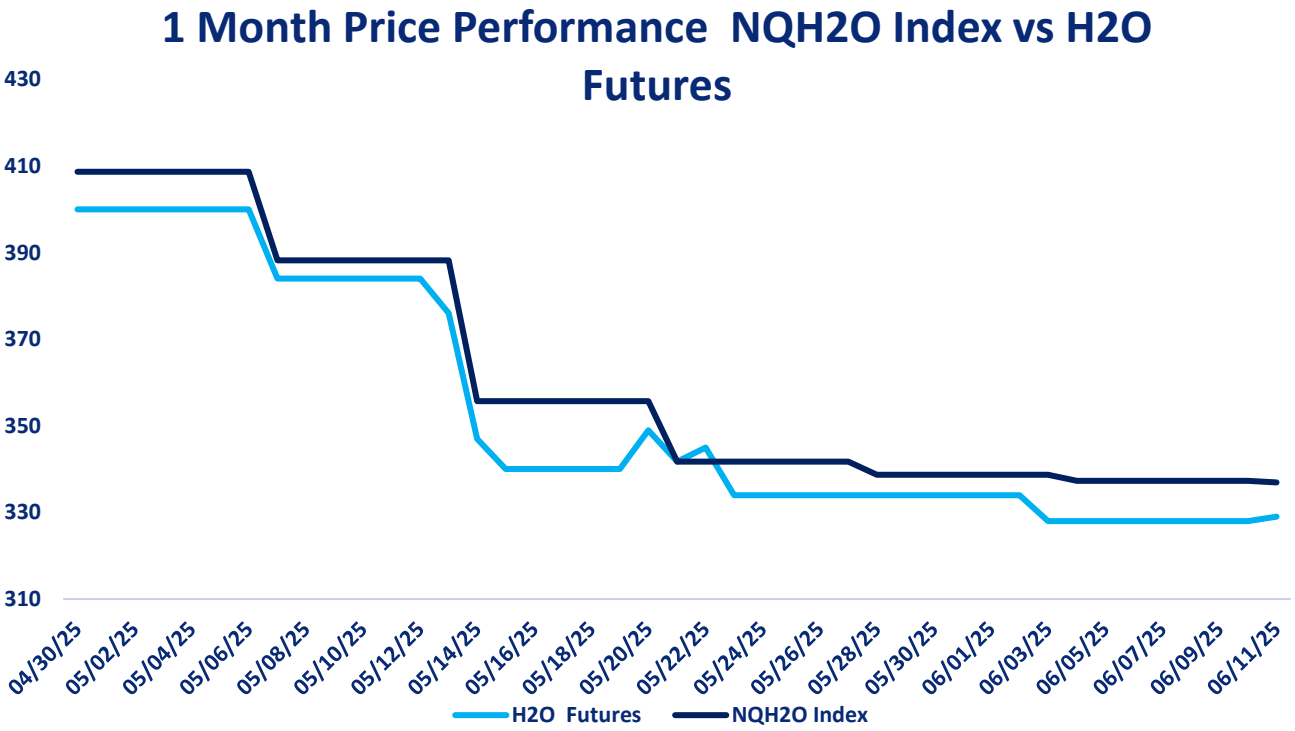
by Joshua Bell

CLICK THE LINK BELOW

"A 2 minute technical analysis video of H2O futures"

https://vimeo.com/1092691651?share=copy#t=0

NQH2O INDEX PRICE vs H2O FUTURES PRICE



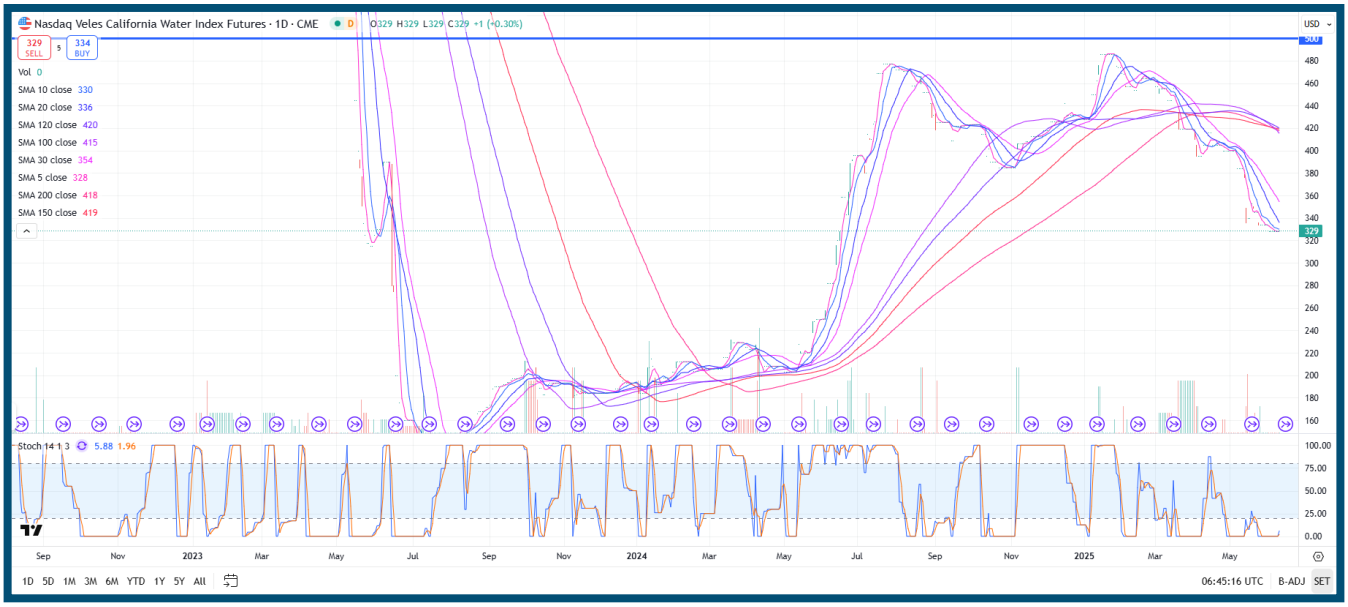
Price Chart Based upon Daily Close

The new NQH2O index level of $336.93 was published on June 11th, down $0.40 or 0.12% from the previous week. The June contract is considered the front month. The futures prices closed at a discount of $7.93 to $9.33 versus the index over the past week.

Below are the bid offer prices on different expiries being quoted in the market.

June 25	329@334
July 25	309@354
Sept 25	300@369
June 26	400@429

H2O FUTURES TECHNICAL REPORT



Price Action

- **Current Price:** $329
- The index posted a small gain of **+0.30%**, closing at $329. While this is technically a green day, it appears to be more of a **pause within a broader downtrend** rather than a reversal. The price remains under heavy pressure from above.

Moving Averages Analysis

Short-Term Averages:

- **5-day SMA:** 328
- **10-day SMA:** 330
- **20-day SMA:** 336

These three averages are now **clustered and downward sloping**, with the price hovering around the 5-day and just under the 10-day. This indicates the market is **attempting to stabilize** but has not broken trend yet.

Medium-Term Averages:

- **30-day SMA:** 354
  Still significantly above current price, continuing a sharp decline, and now acting as a **dynamic resistance** level.

Long-Term Averages:

- **100-day SMA:** 415
- **120-day SMA:** 420
- **150-day SMA:** 419
- **200-day SMA:** 418

The price is now firmly below all long-term averages. These have **flattened or turned downward**, confirming the **transition from a long-term uptrend into a bearish phase**.

Support & Resistance Levels

- **Immediate support:** $325
  This is the key recent swing low. A close below it would likely accelerate bearish momentum.
- **Resistance levels:**
  - $336 (20-day SMA)
  - $354 (30-day SMA)
  - $380–420 range (converging long-term SMAs)
    Until price breaks above at least the 20-day SMA with volume, any upside is considered corrective.

Stochastic Oscillator (14, 1, 3)

- **%K:** 5.88
- **%D:** 1.96

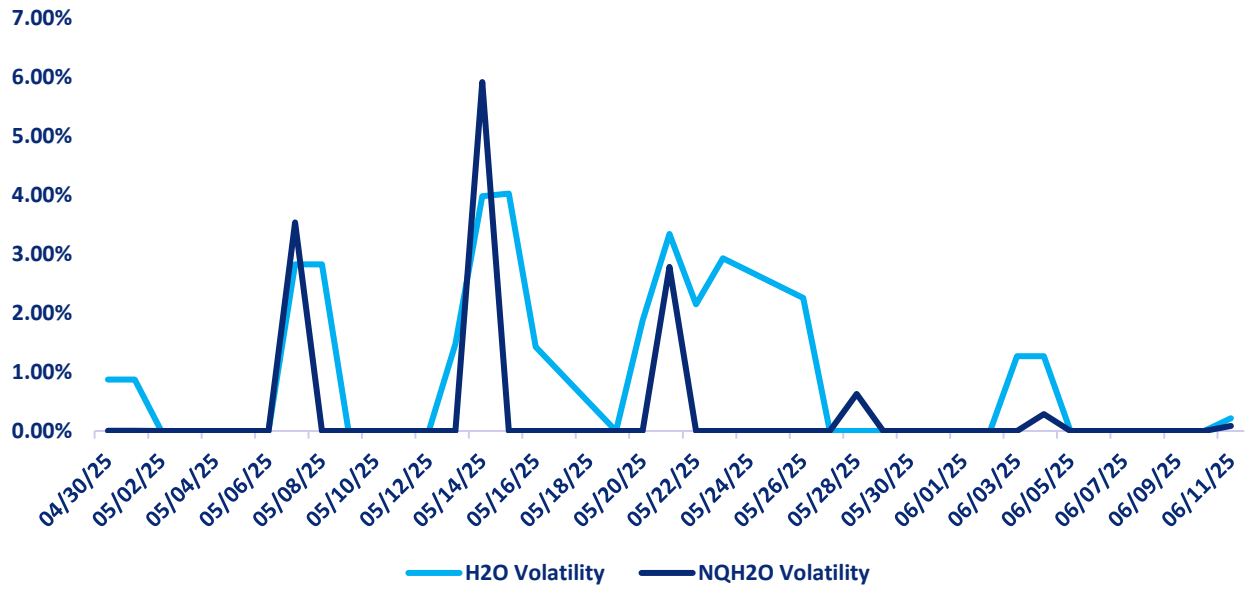
These values place the oscillator **deep into oversold territory**, although still without a bullish crossover. This means the market is technically oversold, but **there is no confirmation yet of a reversal** or a short-term buy signal.

Summary & Key Takeaways

- The **trend remains bearish** across all timeframes, with price below short-, medium-, and long-term moving averages.
- **Short-term oversold conditions** may attract technical buyers, but rallies are likely to be capped by resistance at $336 and $354 unless momentum turns.
- A break below $325 would signal further downside risk, possibly toward the $300 psychological level.
- Watch for a **stochastic crossover** and price action reclaiming the 20-day SMA before considering any bullish bias.

H2O FUTURES AND NQH2O INDEX VOLATILITY ANALYSIS

Daily H2O Futures Volatility vs Daily NQH2O Index Volatility



DAILY VOLATILITY

Over the last week the June contract daily future volatility high has been 0.22%.

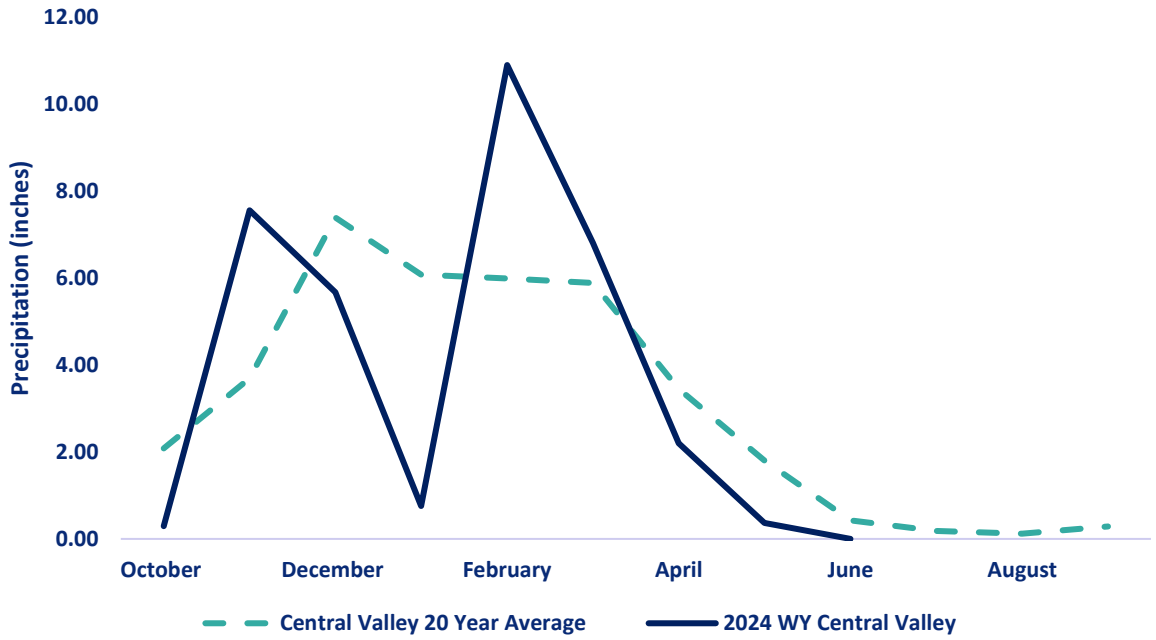
ASSET	1 YEAR (%)	2 MONTH (%)	1 MONTH (%)	1 WEEK (%)
NQH2O INDEX	24.40%	7.97%	0.78%	0.28%
H2O FUTURES	N/A	14.07%	5.48%	0.30%

For the week ending on June 11th, the two-month futures volatility is at a premium of 6.10% to the index, down 0.20% from the previous week. The one-month futures volatility is at a premium of 4.73% to the index, down 0.03%. The one-week futures volatility is at a premium of 0.02% to the index volatility.

*The above prices are all **HISTORIC VOLATILITIES**. All readings refer to closing prices as quoted by CME.*

CENTRAL VALLEY PRECIPITATION REPORT

Central Valley Precipitation Index



Central Valley

average is calculated using data from 19 weather stations in Central Valley, California.
Data as of 11/06/2025

STATION	MTD (INCHES)	WEEK ON WEEK CHANGE (INCHES)	% OF 20 YEAR AVERAGE MTD	2025 WYTD VS 2024 WYTD %	2025 WY VS 20 YEAR AVERAGE TO DATE %
SAN JOAQUIN 5 STATION (5SI)	0	0	0.00	84	68
TULARE 6 STATION (6SI)	0.06	0.06	34.33	82	83
NORTHERN SIERRA 8 STATION (8SI)	0.01	0.01	1.29	91	106
CENTRAL VALLEY AVERAGE	0.02	0.02	5.52	86	86

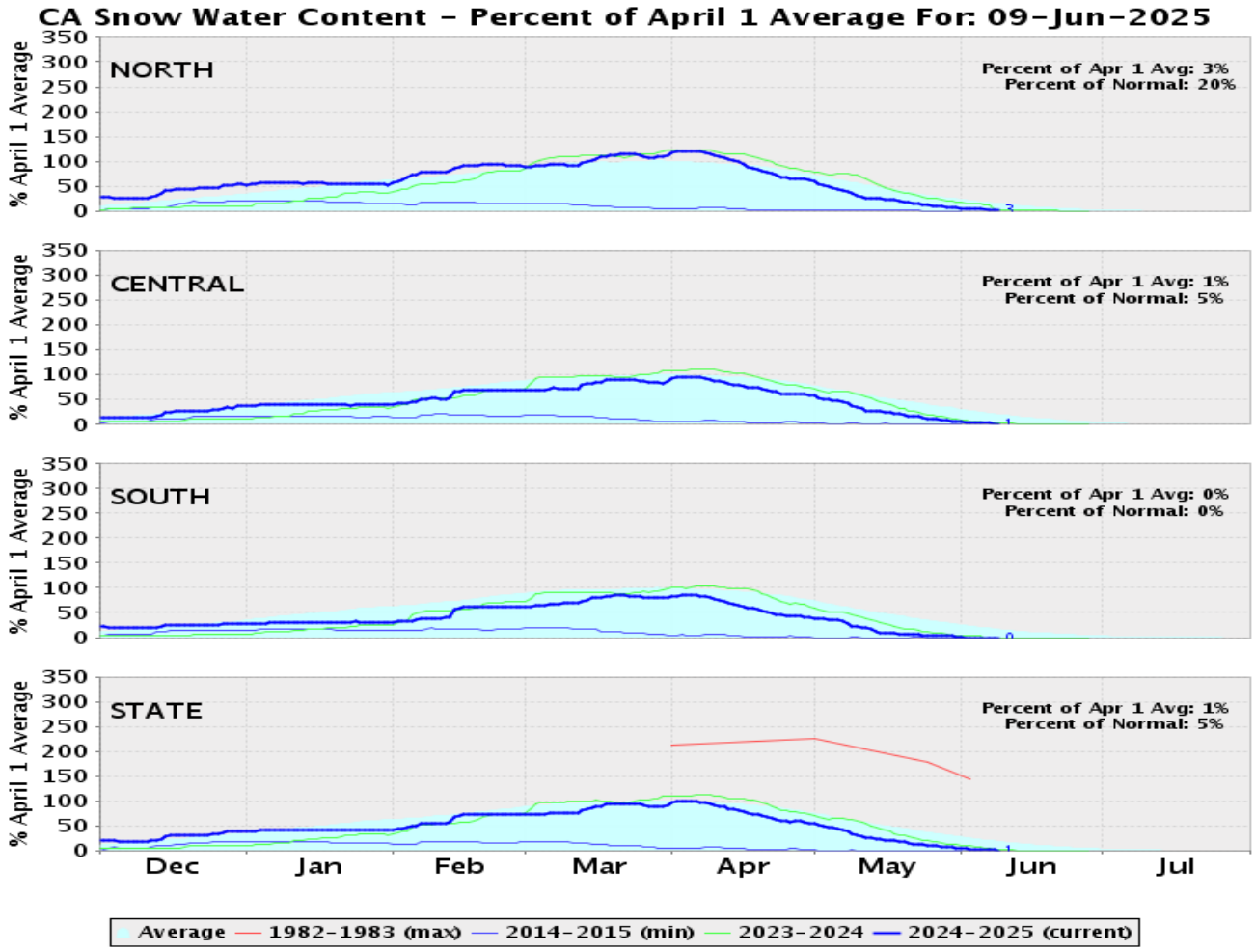
RESERVOIR STORAGE

RESERVOIR	STORAGE (AF)	% CAPACITY	LAST YEAR % CAPACITY	*% HISTORICAL AVERAGE
TRINITY LAKE	2,270,735	93	86	118
SHASTA LAKE	4,087,264	90	93	110
LAKE OROVILLE	3,405,404	99	103	123
SAN LUIS RES	1,222,664	60	57	93

*% Historical Average is based on a daily average that is interpolated from historical monthly averages. The monthly averages are computed using monthly data from water year 1991 to 2024. The monthly averages are updated every 5 years using a sliding 30 year period.

Reference: California Water Data Exchange

SNOWPACK WATER CONTENT



REGION	*SNOWPACK WATER EQUIVALENT (INCHES)	WEEK ON WEEK CHANGE (INCHES)	% OF AVERAGE LAST YEAR	% OF 20 YEAR HISTORICAL AVERAGE	% OF HISTORICAL **APRIL 1ST BENCHMARK
NORTHERN SIERRA	0.8	-0.6	20	20	3
CENTRAL SIERRA	0.3	-0.8	15	5	1
SOUTHERN SIERRA	0	-0.5	0	0	0
STATEWIDE	0.4	-0.6	11	5	1

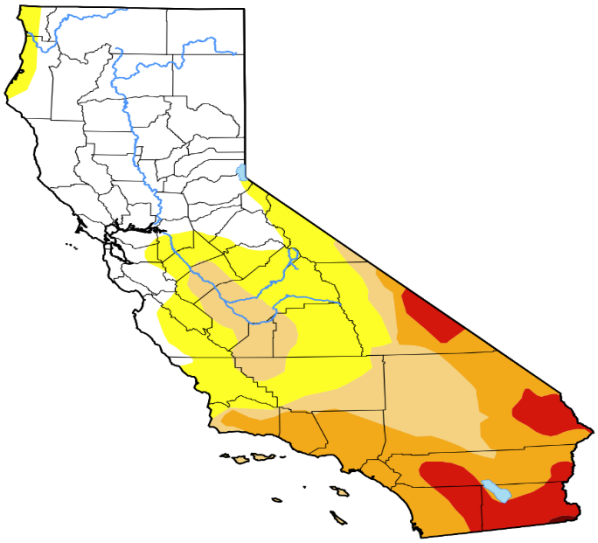
Snow Water Equivalent*, **or SWE**, is a commonly used measurement used by hydrologists and water managers to gauge the amount of liquid water contained within the snowpack. In other words, it is the amount of water that will be released from the snowpack when it melts. SWE has regional variance.**

**** April 1st is used as the benchmark as it when the snowpack in California is generally deepest. It has been used the benchmark date since 1941 by DWR and can be used to predict spring river flow.**

DROUGHT MONITOR

California

Home / California



Map released: Thurs. June 5, 2025
Data valid: June 3, 2025 at 8 a.m. EDT

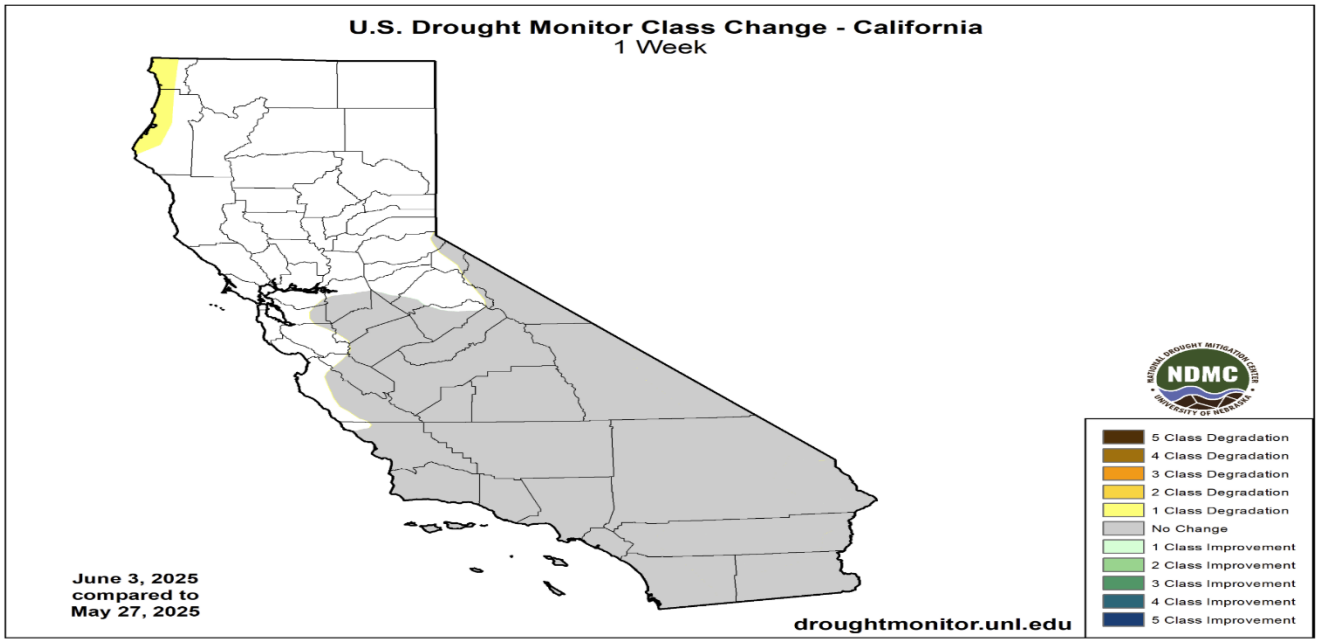
Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Authors

United States and Puerto Rico Author(s):
Brad Pugh, NOAA/CPC

Pacific Islands and Virgin Islands Author(s):
Curtis Riganti, National Drought Mitigation Center

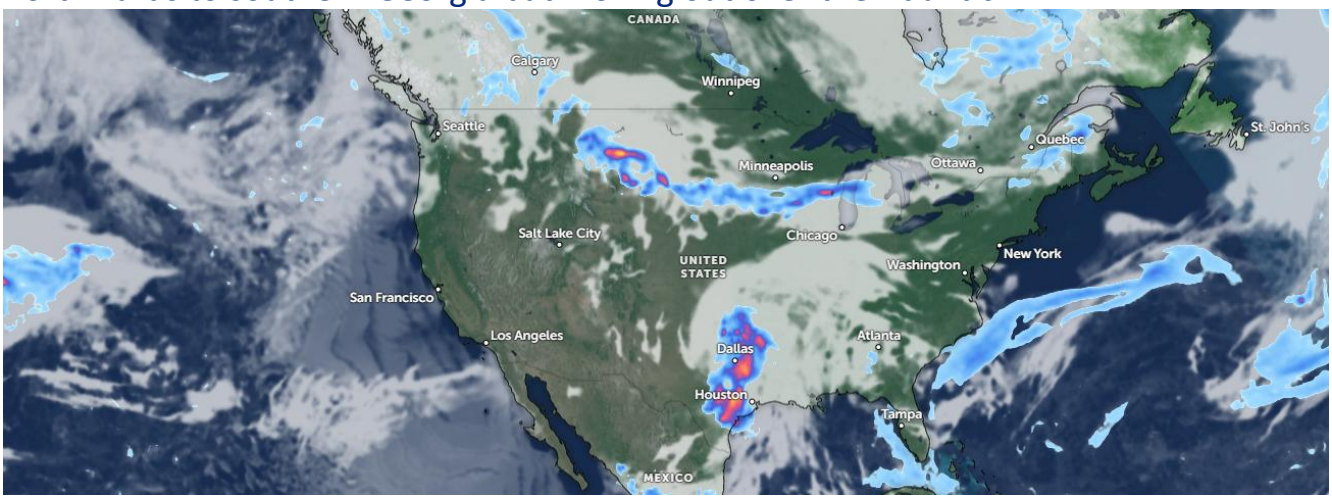


Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2025-06-03	39.01	60.99	39.81	24.73	7.11	0.10	133
Last Week to Current	2025-05-27	40.22	59.78	39.81	24.73	7.11	0.10	132
3 Months Ago to Current	2025-03-04	41.82	58.18	41.58	24.83	14.75	0.73	140
Start of Calendar Year to Current	2024-12-31	40.90	59.10	31.52	5.70	1.06	0.00	97
Start of Water Year to Current	2024-10-01	28.40	71.60	10.67	0.08	0.00	0.00	82
One Year Ago to Current	2024-06-04	98.78	1.22	0.00	0.00	0.00	0.00	1

The U.S Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC.

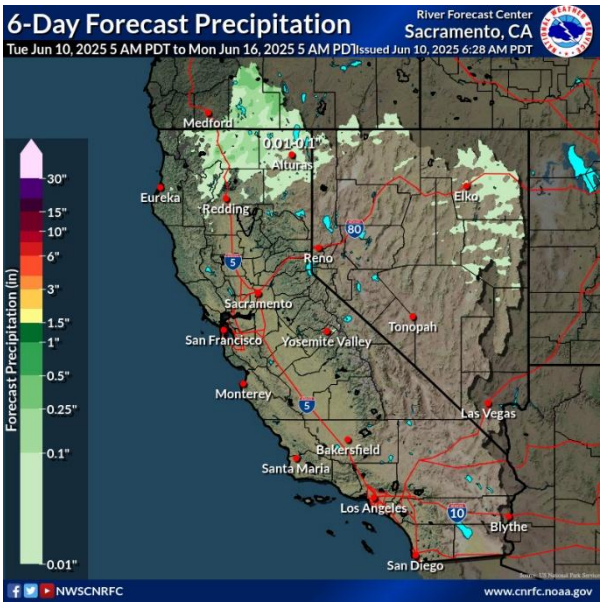
CURRENT SATELLITE IMAGERY

The satellite picture shows three different systems affecting the US. Firstly a line of storms across the northern US stretching from northern Idaho to Quebec curving south of Minneapolis. Secondly a large storm stretching from south of Houston to north of Dallas moving eastwards. Some wet weather over Florida stretching intermittently northwards to southern Georgia but moving out over the Atlantic.



Map Ref: Zoom Earth

10 Day Outlook



In between these lows offshore, high pressure will build and shift towards the coast the rest of the work week as the southwest low hovers near Baja. By Friday afternoon, the ridge will be firmly overhead with 500 mb heights exceeding 590 dm. This will keep dry conditions over the region and bring well above normal (+10 to +20 deg F) afternoon temperatures. Overnight lows will also be well above normal by similar amounts through Saturday. Many locations across CA are already under heat related products (please see local WFO pages for heat risk/alert information). Into Sunday, a trough will move through the PacNW as the ridge shifts further inland. Troughing will dig into nrn CA/NV as well while the low offshore of Baja finally begins to move inland. This will provide some relief across the region with coastal areas back to near/below normal and afternoon temperature anomalies inland down to about +5 to +15 deg F.

Reference: National Weather Service / California Nevada RFC / Sacramento CA

WESTERN WEATHER DISCUSSION

The Desert Southwest had a rare wet start to June as a mid-level low pressure system interacted with enhanced moisture from former Tropical Storm Alvin in the East Pacific. Central Pima, northern Maricopa, and southern Yavapai counties of Arizona received 0.75” inches of precipitation with isolated amounts exceeding 2 inches, supporting a 1-category improvement. Although amounts were lower in southeastern Arizona, there was enough precipitation to warrant shifting the exceptional drought category (D4) to extreme drought (D3). A lack of springtime precipitation led to an expanding area of abnormal dryness (D0) and short-term drought (D1) across the Pacific Northwest. Based on worsening soil moisture and low 28-day average streamflows, a 1-category degradation was warranted for parts of central and southwestern Montana. A 1-category degradation was also made to parts of central and northeastern Utah. Elsewhere, across the West, little to no changes were made as California and Nevada enter their drier time of year.

Reference:
Lindsay Johnson, National Drought Mitigation Center
Richard Tinker, NOAA/NWS/NCEP/CPC

WATER NEWS

CALIFORNIA WATER NEWS

California sewage crisis bubbles up in key House race

A cross-border sewage crisis affecting Southern California could play a role in a prominent congressional race, where a Republican challenger has become a national figure on the issue.

Jim Desmond, a San Diego County supervisor, has been sounding the alarm recently on Fox News and other conservative outlets about the untreated sewage that's been flowing from the Tijuana River in Mexico to the Pacific Ocean, contaminating the water and sickening residents.

At the same time, he's seeking to unseat Rep. Mike Levin, accusing the Democratic incumbent of not doing enough to protect residents. "We need to put more leverage on Mexico," Desmond said in a recent interview.

Levin counters that Desmond is a Johnny-come-lately on the matter, though he has praised the Trump administration for taking action.

The sewage situation has only grown worse as the population in and around Tijuana, Mexico, has ballooned and the area's treatment plants have struggled to keep up. Often, the plants simply dump sewage when they can't take more.

Shortly after Desmond started calling on the federal government to take action, the Trump administration took notice.

EPA Administrator Lee Zeldin began pushing the Mexican government for results in March following a major sewage spill. He visited the area in April, meeting with local officials and with Alicia Bárcena, Mexico's secretary of environment and natural resources.

Desmond says Levin's focus — including $635 million that Levin has gotten approved for projects like improving a major sewage plant on the Mexican side through the bipartisan infrastructure law, among other actions — lets Mexican officials off the hook.

"My opponent is proud of the strategy of throwing more money into the processing of the sewage," Desmond told POLITICO's E&E News.

"If your neighbor is throwing their garbage in your front yard, the answer isn't just to go buy more garbage cans," he continued. "You do everything possible to stop the sewage flow."

Levin said he's the one who's actually taken action on the issue. He pointed mainly to the money for the Mexican plant, known as San Antonio de los Buenos, but also to fund improvements for the U.S. side's South Bay treatment plant, which takes some of Tijuana's sewage to treat, along with pressure to leaders in both countries.

"We both got elected to our respective positions in 2018," Levin said of Desmond.

"He hasn't done anything on this issue until about 18 months ago. And what he's done since then is talk in the media and point fingers, and frankly, offer a ridiculous, counterproductive idea," Levin continued, referring to Desmond's advocacy for a dam along the north side of the Tijuana River. That idea has been criticized by air and water experts.

"It would be a disaster for disease, for contamination, lead to all kinds of problems, respiratory problems, other problems," he said.

'It's all hands on deck'

Desmond, an immigration hawk who has pushed for stricter enforcement along the U.S.-Mexico border, supports President Donald Trump and boasts that, if he were in Congress, he'd be a better representative on the Tijuana River issue.

"I think I can get more of the attention of the Trump administration in working on this, getting things done, than my opponent has. He had that for several years with the Biden administration and didn't do much about it," Desmond said.

But Levin has nothing but kind words for the administration's involvement. He met with and appeared with Zeldin during the administrator's visit to San Diego and has found him to be a good partner, he said.

"I was encouraged by his visit. I felt that he was genuine and sincere in expressing a desire to work collaboratively on it. It's all hands on deck. Solving it requires real cooperation, bipartisan cooperation, across all levels of government," Levin said.

He pushed Zeldin to ensure that the money that's been appropriated is fully spent, even given the administration's budget and spending cuts, he said.

Following the visit, Zeldin said he successfully pushed Mexican officials to speed up improvements to their plant. EPA proposed a number of other changes to accelerate various promises Mexico has made, and the agency is still negotiating on those.

"It's important for Mexico to clean up the raw sewage coming from Mexico. And Congress has already appropriated hundreds of millions of dollars," he said at a House Appropriations Committee hearing.

Original Article: E&E News by Timothy Cama

The fishermen allying with farmers in California's water wars

In California's water wars, fishermen and farmers have long been enemies. But now that federal and state regulators have closed the salmon commercial fishing season for an unprecedented third year in a row to protect declining populations, at least one major commercial fishing group is shifting its alliances.

The Pacific Coast Federation of Fishermen's Associations teamed up with farmers for a first-ever joint Washington, D.C., lobbying trip in early May. They met with members of Congress and federal officials to ask for more money for salmon hatcheries, which breed, raise and release young fish.

For the farmers — mostly irrigation districts in the northern Central Valley known as the Sacramento River Settlement Contractors — the goal is to stop fish populations from declining so much that they trigger reductions in water deliveries that are called for under endangered species laws.

For the Fishermen's Associations, which have sued for decades to keep water in California's rivers for fish instead of being diverted to farmers, the trip is part of a larger pivot amid growing desperation as high temperatures and low water levels kill their business.

"We've been in water wars for 50 years, and we're on our third year of salmon closure, so obviously we're not winning," said **Lisa Damrosch**, who joined PCFFA as executive director a year and half ago.

The realignment is also coming at a time when President **Donald Trump** is promising more water to farmers and slashing both environmental funds and rules — which Damrosch sees as a potential opening. She spoke with POLITICO about her "America First" pitch, her group's already-tenuous relationship with some environmental groups and the future of commercial fishing in California.

This interview has been edited for length and clarity.

Lisa Damrosch is the executive director of the Pacific Coast Federation of Fishermen's Associations. | Courtesy of Lisa Damrosch

How did this trip come together and why did you all feel like now was the right time?

Everyone is scrambling for what their place is for their industry in a new and changing political climate. We really have been focusing at PCFFA on meaningful change, which we believe is increased hatchery production. We've been working for about a year and a half with the Bridge Group, which is this informal gathering of water users, farmers and fishing industry organizations, basically just to talk about salmon and to come up with some plans. A lot of it's been around hatchery operations.

George Bradshaw, who's the president of PCFFA, made a decision that was a little scary, because I think typically, the perception has been that our farming water users and our fishermen are at odds, and I think we've known deep down that that may not be true, because we come from the same kind of place and the same results-based business and hard work and all of the things of food production, but also, we've been pinned against each other in water wars. A conversation was born, and relationships have been built.

You're getting closer with farmers. How much is this also a break with environmental groups who want to protect flows in the Sacramento-San Joaquin River Delta?

PCFFA, as the representative of commercial fishermen along the entire California coast, is working to stand on our own. Commercial fishing has been hurt by bad environmental groups doing bad things in our crab fishery, for example, and in other fisheries, wanting to shut down commercial fishing. But there's also some great groups doing great work

that want to solve problems. We're just trying to make sure that we aren't assumed to have any locked in positions that 'This is what's good for salmon.'

Trump, with his obsession with California water, has clearly positioned himself on the side of Central Valley farmers. Are you just trying to appeal to Trump?

Well, his executive order on American seafood, seeing those words was very encouraging. I think it's about trying to make sure that there's an understanding that these things are interconnected, that if we're going to move water around, we have to figure out how to mitigate the effects on our fish, because otherwise we can't improve our seafood production. We're looking for the middle.

There is a real problem in the Central Valley in that there's not enough water [in rivers] for the natural production of salmon required for healthy harvest and enough water for all of the other uses. So what do you do? We think in this particular case, there's hatcheries. What happened is, over the years, the hatcheries became just about conservation and only just making sure that things didn't go extinct, but not producing enough fish to make sure there was food production. We're trying to shift that back. And I think that's something for the Trump administration. It seems like that is something that is in line with "America First."

Setting aside water flows and hatcheries, a lot of fish have been dying and will continue to die just because of hot temperatures. What makes you believe in this project despite the continued bad climate outlook?

I think that salmon are one of the most amazing species in the world. They're so incredibly resilient and will swim up a puddle of water to try and complete their cycle. We're pretty smart humans, and salmon are pretty resilient, and between us, we should be able to make things work. That may be naive, but I don't believe in the doom and gloom. For commercial fishing fleets, it's as bad as it can be. We're closed. It doesn't really get worse. Businesses won't survive. Salmon is a huge economic driver in the state of California, so I can't give up hope on that.

Original Article: Politico by Camille Von Kaenel

Contra Costa Water District working to repair canal for $1 billion

During the Contra Costa Taxpayers Association Members and Leaders monthly luncheon in May, Contra Costa Water District Board President, Ernesto Avila provided an update on the district's current work and plans. They include repairing 20 of the 48-mile canal at a cost of $1 billion, keeping water rates as low as possible and expanding service to keep up with growth.

The district includes the Central County cities and communities of Martinez, Pleasant Hill, Concord, Clayton, Pacheco, Clyde, Port Costa and portions of Walnut Creek, and in East County, the cities and communities of Pittsburg, Antioch, Oakley, Bay Point, and portions of Brentwood.

Half of the district's water is provided to treated water customers and the other half to raw water customers, Avila stated and then spoke about ensuring adequate "water supply during disasters such as fire and earthquake emergencies."

"When PG&E outages occur all of our tanks go full," he shared. "Water only stays sweet for six to seven days to meet the water quality requirements of the state."

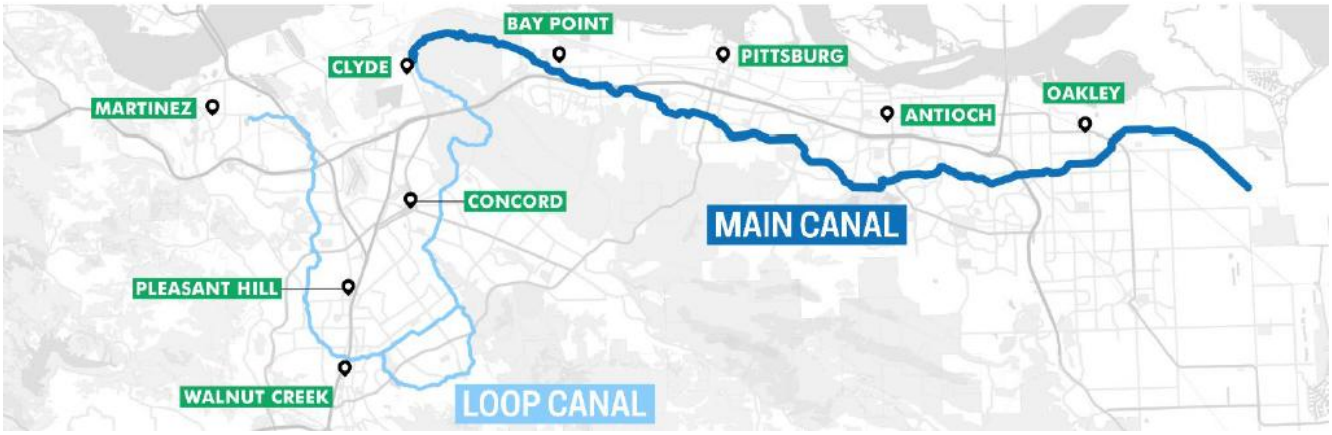
"Lake Shasta is where we get all of our water from through the Central Valley Project," he continued. "It's currently 94% full."

The district owns Los Vaqueros Reservoir for storage, which is currently 93% full. But "we can't just draw water whenever we want," Avila stated. "All of our intakes are screened to protect fish."

"We are out of our drought," Avila added. However, "during the drought there were no constraints on water supply for development and growth."

CANAL REPLACEMENT

CONTRA COSTA WATER DISTRICT



Source: CCWD

Canal Replacement Program

There have been "landslides on the west side of the canal and repairs can cost millions," he stated and spoke of the district's "Canal Replacement Program" which will cost "$1 billion".

"Nobody likes to raise rates," Avila continued. "We've replaced four miles, so far and have 16 miles to go. It will be a pipeline"

Asked what happens to the pipe during an earthquake he said, "If it's an older pipe, it will probably crack. We're looking at a very ductile pipe that can move easily."

Asked if there will be solar panels over the canl

Click here to learn more about the Contra Costa Canal.

Water Supply

Avila then spoke about providing enough water to meet the demands of residential growth including "redevelopment of the Concord Naval Weapons station" where "15,000 homes" are projected to be built.

"Ten percent of the district's water is provided through recycling," he stated. "We want to bump that up to fifteen percent."

Budget & Water Costs to Users

"Energy costs have been the greatest increases from 2020 to 2024, medical coverage is second greatest," he shared. Those are followed by "pension and OPEB (other post employee benefit) liabilities."

"The average customer spends about $3.00 per day for water," Avila stated. "The cost is 1.3 cents per gallon per day."

He compared that to EBMUD rates which are at 2.0 cents per gallon.

The district as an AAA Bond Rating which keeps interest costs on bonds down, Avila shared.

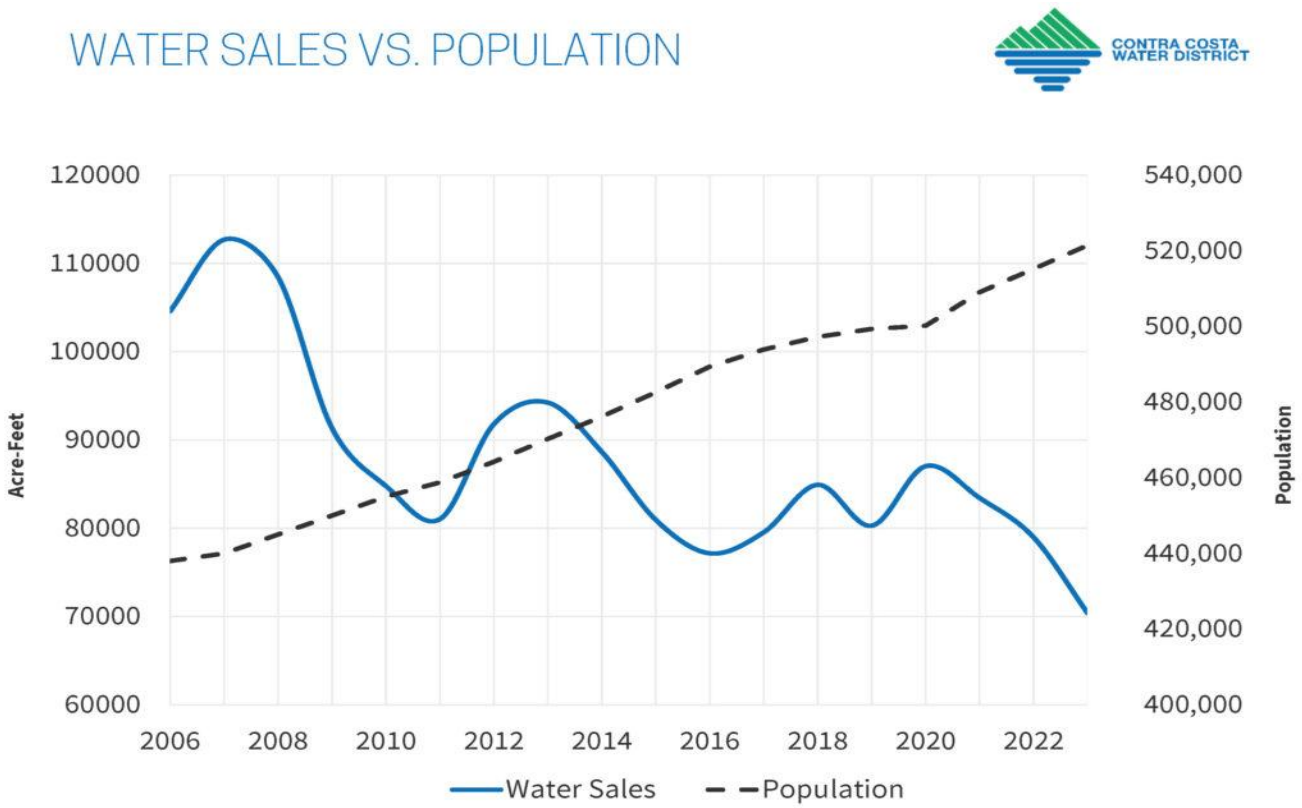
He was then asked about "money going to DEI programs. I this something you should be doing anymore?" Avila responded, "there are three employees dedicated to it. There are 317 employees which is 30-40% of the budget We have one person in Human Resources dedicated to it. We have a $200 million per year budget. Not even one percent is dedicated to it."

"It's about trying to enhance the culture for our employees to work together better," he added. "We review it every six months. Our Master Plan is on the website."

Asked about "EPA clean water requirements getting tougher each year" Avila spoke about "unfunded mandates we have to comply with. We work with various associations and collaborate on a national level as regulations are mostly at the federal level."

"Our biggest concern is the issue of diminishing return on conservation," he explained. "During the drought, people in our area reduced use by 25 percent while Southern California only reduced 2-3 percent."

According to the chart in Avila's presentation total water use has actually decreased over the past 17 years even though the population has significantly increased.



Source: CCWD

No Los Vaqueros Capacity Increase Due to Too Much Cost and Regulation, Offline for Too Long

Asked about increasing capacity at Los Vaqueros, Avila said, "The district spent $10 million on raising the…reservoir, for a cost/benefit analysis funded by the state. It was over subscribed with more customer demand than supply, 250,000 versus 120,000 acre feet."

"But with so many constraints on pumping water into the reservoir, demand dropped to 50,000 acre feet then to zero," he continued. "The cost increase with inflation went from $800 million to $1.6 billion, mainly from more material and labor cost increases, plus, engineering costs."

Finally, Avila shared, "Los Vaqueros Reservoir would have had to be offline for six to seven years. It just wasn't viable. They knew that, going in. The issue was negotiating supply from EBMUD and others" who "couldn't guarantee any water."

He also spoke about future supply including the proposed offstream Sites Reservoir project west of Colusa in the Sacramento Valley.

"In California, for every one million acre-feet of storage, there is eight to nine acre-feet of surface storage," Avila stated.

Finally, in response to a question, he said, "Water from a canal behind a house is not grandfathered in if the home is sold."

Original Article: Contra Costa Herald by Allen D. Payton

US WATER NEWS

How a wildfire challenged Boulder County's water supply in a matter of hours

Following a wet spring that resulted in a vast amount of vegetative growth, Boulder County, Colorado, experienced a very dry fall. The dry conditions zapped the moisture out of the vegetation.

The county was under a red flag for extremely windy conditions. The heavy winds were coming from the west through the east, enveloping the open area of the county. The dry vegetation, combined with the windy conditions, created the perfect recipe for a fire to break out. What ensued over the following hours would be studied for years to come.

2021 Marshall Fire case study

A case study, titled "Water Utility Resilience: A Case Study of the 2021 Marshall Fire," was conducted and prepared by Professor Brad Wham, University of Colorado, Boulder, Professor Erica Fischer, Oregon State University, and University of Colorado, Boulder, Graduate Assistant Rachel Geiger.

Geiger and Wham presented the findings of their case study at the American Water Works Associations (AWWAs) Annual Conference & Exposition (ACE) in Denver, Colorado, 25 minutes from where the fire took place.

Geiger detailed the day the fire broke out, as well as the impact of it on five nearby water systems and the residents they serve.

First fire reported in Marshall at 11:06 a.m.

Heavy winds combined with the fuel of the vegetation quickly spread the fire. The fire was headed straight for the city of Louisville and town of Superior. Louisville has two water treatment plants serving 20,000 people and Superior has one plant serving 17,000 people.

The hours following ignition

Within the first two hours the Louisville southern treatment plant had to evacuate, and Superior's water treatment plant was preparing to evacuate. The fire reached Louisville's southern treatment plant which resulted in a loss of electricity.

The water plants all utilized the same type of electricity, with backup generators that used natural gas systems. While the fire was approaching, gas was shut off by the regional power utility.

During this time, the town of Superior began evacuating.

"Two hours after ignition, the fire jumps over highway 36," Geiger said. "This is a major road that connects Denver to Boulder."

Geiger stated that during her talks with people, many thought the highway would operate as a fire break, but it didn't. The spread of the fire led to the evacuation of

Louisville as well as the East Boulder County Water district, which serves roughly 300 people and receives water from the town of Lafayette.
In response to this, Louisville decided to push its northern treatment plant to maximum capacity due to increased water demand. Superior's water treatment plant lost power as the fire pushed up to it. The plant didn't suffer any direct damage, however its generator house was destroyed.
East Boulder County Water District then lost power.
Louisville and Superior began communicating with each other. Louisville's norther plant began pumping 1 MGD to Superior via an interconnect in the distribution system to support firefighting efforts.
The utilities begin working on restoring power. Superior has some success in restoring two-phase power, with about half the system receiving electricity.
Louisville becomes curious on what its water levels are. Due to the power outages, readily available data isn't accessible, which requires a manual read of the storage tanks. This required a technician to climb on the tanks during extreme winds and a spreading fire to get a measurement.
"Imagine climbing up this under 100mph winds and smoky conditions," Geiger said, "but that's what's required in this situation."
The technicians looked down into the tanks and reported one to two feet of water. Louisville and Superior decide to close the interconnect, with Louisville sending untreated water into the distribution system with the one goal of maintaining water quantity.
During this time, the Colorado Department of Public Health and Environment (CDPHE) issued a boil water advisory for all three systems due to the partially treated water and concerns of depressurization.
Superior's SCADA system then came online and showed 15% storage, followed by reports of low pressure or no water at hydrants.
Original Article: Water World by Alex Cossin

Reclamation Awards Colorado River Indian Tribes $1.1M to assess existing infrastructure and potential modernization opportunities

The Bureau of Reclamation announced an investment of $1.1 million to the Colorado River Indian Tribes to assess the Colorado River Indian Irrigation Project. The funding will assist the tribe to review existing infrastructure and identify necessary maintenance. It will also be used to identify potential opportunities to install new equipment and utilize updated technology to modernize the project.
"We appreciate the Colorado River Indian Tribe's collaboration for many years on implementing its decreed water rights and the Water Resiliency Act," said **Acting**

Commissioner David Palumbo. “We look forward to utilizing this funding to further this partnership.”

This assessment is intended to assist the Colorado River Indian Tribes as they evaluate a potential title transfer of the project in order to take direct ownership. This could allow for water leasing and other opportunities that could contribute to overall water savings in the Colorado River Basin.

Interior continues its commitment to Indian tribes in the Colorado River Basin. The Department honors its trust responsibilities to tribes and recognizes that these same tribes have much to contribute to the future management and health of the Colorado River. With this in mind, we look forward to continuing dialogue with tribes whose ancestral homes are in the Colorado River watershed.

This progress comes as the Department and Reclamation continue collaborating with basin states and Tribal Nations to develop Post-2026 Operating Guidelines—an essential framework for managing the Colorado River as current agreements expire.

Original Article: USBR

This city is exploring an unconventional solution to water scarcity: sewage

Water scarcity, population growth and climate change are on a collision course in the American West.

That's clear in cities like St. George, a desert community surrounded by stunning red rock cliffs and mesas in Utah's southwest corner. The population is booming and climate change is making heat more intense and rain less reliable. But local leaders have a plan to stretch the area's water supply by turning to its sewage — a solution that could help other drought-stricken cities, too.

That plan started with a simple math problem.

"All the water has been used. It's been called for. But yet, we have one of the fastest-growing communities in the Western United States," said Zach Renstrom, general manager of the Washington County Water Conservancy District in St. George.

"So, we're looking at hundreds of thousands of people moving to our community," said Renstrom, "and we have no extra water for them."

As recently as 2021, this sun-drenched outdoor recreation hub was the fastest-growing metro area in the U.S. The local population, now just over 200,000, has more than doubled since 2002. The University of Utah projects it could double again by 2050.

That's where the sewage plan comes in.

At a construction site just east of St. George, Renstrom walked toward a maze of rebar and concrete that's slated to become a new wastewater reclamation plant by the end of 2025. Once complete, it'll take effluent from local kitchens and bathrooms and clean it with screens, bacteria and UV light.

In the near term, the treated wastewater will be sprayed on lawns and farm fields.
But that will free up water for homes, too, because the county currently uses some of its drinking water for outdoor irrigation. Within two decades, Renstrom expects the district will start sending the clean water from its reclamation plants directly into the drinking supply.
Reusing water that would have otherwise flowed downstream to Lake Mead — the nation's largest reservoir — is the centerpiece of the district's long-term water plan. But it will come at a steep cost: over a billion dollars.
"Traditionally, I would say that you would have to be a very large, large, large municipality to be able to afford that massive infrastructure," Renstrom said. "But now we're getting to the point where, even small communities like us, it's our only option."

The tall task facing cities in the West

St. George's quandary is a microcosm of the challenges cities face across the Western U.S. as overuse and drought strain the Colorado River and the basin's seven states fight over how the river's water gets distributed in the future.
Expanding wastewater reuse operations regionwide could go a long way toward easing that pressure, said UCLA water researcher Noah Garrison. There just needs to be a lot more of it.
"One of the reasons why we need to be investing in wastewater recycling now is that this isn't some hypothetical future concern we're dealing with," Garrison said. "We already are seeing water scarcity and water stress in all of these regions, and developing out wastewater recycling does take time."
While other places like Los Angeles, Phoenix and San Francisco recycle a lot of their sewage already, Utah reuses less than 1% of its wastewater statewide. A recent analysis Garrison co-wrote suggested that if all basin states start reusing more than half of their wastewater — as Nevada and Arizona already do — it could make up for around a third of the region's expected water shortfall.
A visit to St. George's main water source, the Virgin River, highlights the urgency.
This waterway carved the towering red rock canyon in nearby Zion National Park. But after a historically dry winter, the section snaking through St. George has become shallow enough to walk across without getting more than your ankles wet.
"This is it," district conservation manager Doug Bennett said as he motioned toward the meager flow. "This is the lifeblood of the entire region."
Original Article: NPR by David Condos and Ryan Kellman

New algae system helps Arizona farmers grow better crops with less water

Ed Curry is passionate about the green, red and yellow chile peppers he grows on his 3,000-acre farm in Pearce, Arizona, about 90 minutes southeast of Tucson.
He’s also passionate about saving water.

A new technology Arizona State University is analyzing and promoting has combined his love for spice and conservation.

"On the farm we have a saying: Make more crop per drop," said Curry, who founded Curry Seed & Chile Co. in 1976 and is a member of Arizona Gov. Katie Hobbs' Water Policy Council. "Our goal here is to cut our water usage whenever we can."

Curry said he cut about 50% of his water usage in the 1990s by going to a drip system. More recently, he estimates he's cut another 10% through a new soil service.

ASU and MyLand, a Phoenix-based soil health company, demonstrated how soil health innovation can drive measurable water conservation at Curry's farm at an event on May 14. This is achieved by using live, native microalgae to improve soil so that farmers like Curry can achieve greater water efficiency, increased yields and reduced environmental impact.

With more than 900,000 acres of irrigated farmland in Arizona, the potential for large-scale impact is significant.

"This is a carbon story and a water story because atmospheric carbon is being converted into food, using water as the medium," said Enrique Vivoni, Fulton Professor of Hydrosystems Engineering in the School of Sustainable Engineering and the Built Environment and the director of the Center for Hydrologic Innovations. "Our goal is between 7% to 15% water savings to demonstrate the water efficiency gains from better soil health."

Thanks to a grant administered through the Water Infrastructure Finance Authority of Arizona, the project will provide free access to a nature-based soil health technology across thousands of acres of Arizona's commercial farmland. This effort aims to enhance water efficiency, reduce water consumption and improve water quality in the state's agriculture sector.

"I'm really excited to see these kinds of efforts," said Paul E. Brierley, director of the Arizona Department of Agriculture, who was also at the event in Pearce. "I once headed a commission titled the Advisory Commission on the Future of Food and Agriculture Production in the Drying Climate. I found that one of the most challenging things was getting people to focus on agricultural production because everybody wanted to solve climate change, or they wanted to augment the water supply.

"What we're really talking about is how can we keep agriculture productive, even in the face of less water? Which is what we're facing here in this county. So, there's a lot of different ideas, a lot of different solutions."

MyLand came up with this idea almost 15 years ago, according to Dave Booher, senior vice president of sales.

"The company was founded in 2011 by three individuals with a passion for agriculture and thinking of a better way to regenerate the soil," Booher said. "We spend a lot of

time treating things above ground but haven't really thought about the potential for what's below ground."

MyLand's "Soil as a Service" approach uses live, native microalgae to improve soil health and influence biological, physical and chemical changes in the soil. These changes enhance the soil's ability to hold and utilize water, which in turn supports both productivity and sustainability.

"We have growers who have documented a 15% decrease in water use on alfalfa, an extra half-day between irrigation cycles on peppers and a 24% improvement in water-use efficiency on tree nuts. MyLand is helping producers today with an eye on the future."

MyLand's service includes installation and operation of the system, which makes it easy to implement for the grower. The system grows the live, native microalgae in algae production vessels, on-farm, and injects directly into the irrigation system.

Greg Sweatt can attest to this.

"I harvest Ed's pecans for him, and I noticed that last year was one of the better-quality crops," said Sweatt, owner of Whitewater Irrigation Inc. in Cochise County. "I asked Ed if he had sprayed the crops with pesticides. He said, with MyLand, he never sprayed anything. I was like, 'Wow, that's crazy!'"

That's because when the quality of the crops improves, the insects stay away, according to organic farmer Chad Coehn.

"All insects are nature's garbage collectors," said Coehn, who is the owner of Coehn Farms LLC in Pearce. "When you change the health of the plant, those insects will leave it alone."

The lessons learned in Pearce will be shared with other farmers in Arizona and beyond through outreach and education, said Lindsay Gaesser.

"Our goal will be to engage with farmers about the benefits of this microalgae solution and how they could use it on their farms," said Gaesser, a research specialist with the Swette Center for Sustainable Food Systems. "We also have students engaged in this research who will be working on a capstone project this summer to support wider adoption of this technology and pursue its approval as a conservation practice with the USDA."

While Curry is amazed by the technology and achievements of this new service, he said more needs to be done for water conservation.

"Balancing the water basin is akin to balancing a checkbook," Curry said. "We must balance it for our children, our grandchildren and their children. We must do it if we want society to continue."

Original Article: ASU News by Marshall Terrill

Amazon to expand number of data centers using recycled water to 120

Amazon is expanding the number of locations that will use treated wastewater for data center cooling from 20 to 120.

The company this week announced it will expand its use of water recycling to more than 120 locations in states and counties where the cloud giant has data center operations by 2030.

"By scaling our use of recycled water—water that has been previously used and treated—we expect to preserve over 530 million gallons of drinking-water supply in our communities throughout the US each year," the company said.

Though data centers typically reuse water by recirculating the same water through their cooling systems multiple times, it is often drawn from potable (drinkable) sources. As the water can collect bacteria and limescale, it is treated with chemicals, leaving it unsuitable for people to drink once it leaves the facility. Exactly how much drinkable water the data center industry uses is unclear, but estimated to be in the billions of gallons annually.

Today, Amazon uses recycled water instead of potable or drinkable water across 20 locations; 16 in Virginia and four in Santa Clara in California, and said it is now expanding those efforts to more places in Virginia, as well as in Georgia and Mississippi.

Amazon's active data center footprint today totals more than 100 facilities worldwide, with dozens more in development. The company operates more than 37 cloud regions and 117 availability zones worldwide, with at least four more regions and a dozen availability zones in development.

"We are deeply committed to being good members of our communities, and doubling down on preserving freshwater resources is one of the ways we can demonstrate that," said Kevin Miller, vice president of global data centers for AWS. "By significantly expanding our recycled-water infrastructure, we're aiming to advance technological innovation while still prioritizing environmental stewardship."

In 2020, Amazon said it had become the first data center operator approved to use reclaimed water with direct evaporative cooling technology in a project with Loudoun Water.

The reclaimed wastewater (i.e, sewage) used by Amazon undergoes a three-step treatment process that removes 99 percent of impurities. After the recycled water runs through the cooling system, it returns to the wastewater facility for another round of treatment so it can be used again.

In evaporative systems, hot air is pulled from outside and pushed through water-soaked cooling pads; water evaporates and cools the temperature of the air sent to the server rooms. The company says evaporative cooling systems can use up to 85 percent less

water than traditional cooling. AWS also uses free-cooling in some locations, such as Ireland and Sweden, which rely on cold outside air and use little or no water.

AWS has committed to becoming water positive – i.e. returning more water to communities than it uses in direct operations – by 2030. The company reached 53 percent of the way toward meeting this goal in 2024 – up from 41 percent in 2023.

“AWS’ new initiative will support communities by easing pressure on local water systems while meeting the needs of the rapidly growing AI economy," said Howard Carter, president of Water Environment Federation (WEF). "As part of our strategy to advance the circular water economy, the Water Environment Federation encourages public-private collaboration to drive innovative water solutions. AWS’s commitment to recycled water exemplifies how the private sector can work with communities to build a more resilient water future.”

Amazon says its facilities operate with an average of 0.15 liters of water per kilowatt-hour of water use effectiveness globally for AWS data centers

Google said 22 percent of Google's total data center water withdrawal (excluding seawater) was reclaimed wastewater and other non-potable water in 2023, and roughly one-third of the company's data center campuses used air cooling or non-potable water sources. The search giant has said its data centers use an average of 450,000 gallons of water per day, and has pledged to replenish 20 percent more water than it uses by 2030.

Microsoft has also promised to replenish more water than it uses by 2030. According to its 2022 sustainability report, the company is using reclaimed water at its data centers in San Jose, California; Quincy, Washington; Texas; and Singapore.

Meta has also said it would be water-positive by 2030.

Apple has previously used reclaimed water for its data center in Oregon. The company aims to replenish 100 percent of the fresh water used in corporate operations in high-stress locations by 2030, and has said it is using "a plant-based treatment method" to process cooling water in data centers with fewer chemicals.

Original Article: Data Center Dynamics by Dan Swinhoe

See which U.S. cities report 'forever chemicals' in drinking water

Water pouring from the faucets of at least 42 million Americans is contaminated with unacceptable levels of “forever chemicals,” according to a USA TODAY analysis of records the Environmental Protection Agency released June 2.

Per- and polyfluoroalkyl substances, or PFAS, are a family of chemicals engineered to be nearly indestructible. Studies have shown they can accumulate over time in human bodies, leading to certain cancers and other health complications.

Over the past two years, the EPA has collected complete sets of test results from about 6,900 drinking water systems, and thousands more are expected as the PFAS testing initiative continues another year.

USA TODAY's analysis of these systems with complete results shows nearly a quarter of large water utilities serving at least 100,000 customers exceeded limits the EPA approved last year on two chemicals: PFOS and PFOA.

Water systems in Fairfax County, Virginia, and San Juan, Puerto Rico – each serving more than 1 million customers – have now joined the list of utilities with test results that averaged over the limits in the EPA's latest data.

USA TODAY's analysis also shows that Tempe, Arizona, which provides water to more than 165,000 people, has joined that list. Multiple test locations there failed to meet the EPA standards. PFOS at one sample site averaged 55 parts per trillion (ppt), several times higher than the acceptable limit of 4 ppt.

Altogether, USA TODAY found 774 systems don't meet the limits for forever chemicals. Those utilities probably will need to install advanced filtration systems or find other sources of drinking water by 2031.

The deadline for systems to meet the water standards originally was set for 2029, but in May, the EPA proposed an extension and announced it intends to rescind limits on four other types of PFAS set under the Biden administration in 2024.

EPA Administrator Lee Zeldin said the delay was to provide "common-sense flexibility" to "support water systems across the country, including small systems in rural communities, as they work to address these contaminants."

Industry groups representing water utilities have sued the EPA, claiming the agency did not follow proper procedures when approving PFAS limits last year. Last month, Zeldin said rescinding the limits on the other four forever chemicals would ensure they "follow the legal process laid out in the Safe Drinking Water Act."

The lawsuit has been on hold since February to allow time for the new administration to review the limits. On June 4, the hold was extended through July 21 "while the United States determines the most appropriate course of action for this litigation in light of EPA's decision to reconsider portions of the challenged rule."

Advocacy organizations have denounced the EPA's proposed changes on forever chemicals. Melanie Benesh, vice president of government affairs for the Environmental Working Group, described the move as a "public health betrayal."

"Communities have waited decades for protection – now the EPA is pulling the rug out," Benesh said. "Science is clear: PFAS are dangerous even in tiny amounts. The agency must protect all Americans, not just from two chemicals, but from the entire class of harmful PFAS."

Original Article: USA Today by Austin Fast

Got water rights? Nevada wants to buy them but doesn't have the money

The driest state in the nation will create a program to buy back water rights and permanently retire them, but questions remain about where the money for it will come from.

Gov. Joe Lombardo, a Republican, signed Assembly Bill 104 and Senate Bill 36 last week. The companion bills only create the voluntary groundwater rights retirement program, rather than taking it a step further to appropriate state funds for it.

"This program serves as an effective tool for retiring groundwater rights, particularly in regions where demand exceeds supply," Josh Meny, a governor's office spokesman, said in a statement on Monday. "The approach adopted is both thoughtful and balanced."

The bipartisan success praised by conservationists and ranchers alike comes two years after a similar bill pushed by Sen. Pete Goicoechea, R-Eureka, failed to gain traction in the previous legislative session.

"The 'buy back of water rights' recognizes our changing and diversity of water needs," Assemblymember Natha Anderson, D-Sparks, said in a statement on Saturday. "These companion bills show what can happen when people trust each other enough to ask questions, disagree and come to consensus on important legislation."

According to science nonprofit The Nature Conservancy, more than half of Nevada's 256 hydrological basins are considered "over-appropriated." In other words, water users hold rights on paper to pump more water than the so-called "perennial yield," or the total amount of water the state engineer deems is physically available in the ground each year.

In the West, the so-called prior appropriation doctrine makes it so that the right to pump water is first come, first served. That means multigenerational ranchers often have the most senior water rights, giving them priority in times of shortage.

But last month, Nevada's financial shortcomings were on full display, with state legislators learning of a $191 million shortfall over the next two years, leaving little to no wiggle room for new budget appropriations.

The law creates a state account solely for the purpose of purchasing and retiring water rights, and permits the collection of private and public donations. Meny, the governor's spokesman, pointed to future legislative appropriations, federal grants and public-private partnerships as potential sources of funding.

"Its success is contingent upon the availability of future legislative funding and grants," Meny said.

Kyle Roerink, executive director of the nonprofit Great Basin Water Network, has long said a groundwater rights retirement program will work only if it can find a sustainable funding source.

"With this framework in place, we must now find funds to fill its coffers," Roerink said in a statement on Saturday. "Governor Lombardo's signature sends a signal that this program is worth the investment for stabilizing groundwater systems throughout the state."

Pilot program's success

While funding may prove a challenge, a pilot program underscored rural Nevada's immense interest in selling off water rights to the state in the name of conservation.

It helped the state engineer's only "critical management area," known as Diamond Valley, a small ranching community in Eureka County. So many water rights were retired, using American Rescue Plan Act funds, that pumping may be reduced by a third of the perennial yield of the basin, or the yearly amount of water that is usable.

Jake Tibbitts, the natural resources manager for Eureka County, said in a statement on Saturday that the accomplishment is proof of the potential of a statewide program.

"Through the strong interest and success of the groundwater retirement pilot project, I've seen firsthand how effective this tool can be in tackling the very issues these bills aim to solve," Tibbitts said. "Groundwater rights retirement offers a practical and more consensus-based path to managing water sustainably, without relying on conflict or litigation."

Original Article: Las Vegas Review Journal by Alan Halaly

Arizona approves new standards for pollutants in groundwater

The Governor's Regulatory Review Council has approved new aquifer water quality standards.

The standards are Arizona's legal safety limits for pollutants in groundwater. The changes include new or revised caps on seven contaminants like arsenic and uranium, which can harm human health at high concentrations.

If contamination exceeds those limits, the Arizona Department of Environmental Quality (ADEQ) can require corrective actions, like treatment, containment or cleanup.

According to ADEQ, more than 80% of Arizona residents rely on groundwater for drinking water, especially those in rural communities and private well households.

"This is a win for public health and Arizona communities that depend on groundwater for drinking water," said Trevor Baggiore, ADEQ Water Quality Division director. "We are proud to deliver on our commitment to modernize these standards to reflect the latest science and federal regulations."

They will take effect on Aug. 4.

Original Article: KJZZ by Bridget Dowd

With Colorado River negotiators in 'conclave' others outside looking in

Closed-door negotiations about the future of the Colorado River are at a standstill. The news of the day is that there's barely any news.

So, when more than 300 water experts got together for an annual conference last week, they had little to do besides wring their hands, listen for crumbs of news and talk about how they would do things differently if they were on the inside of those negotiations.

"The current process to me kind of feels like the conclave," said Jim Lochhead, who formerly served as Colorado's top water negotiator.

Top policymakers caused a stir when they decided to skip the meeting at the University of Colorado, Boulder, withdrawing further into the shadows as tense talks about sharing water appear to be making little progress. The people excluded from those meetings — scientists, academics, tribal leaders, environmental advocates and others with a stake in the river — have been left waiting like the masses gathered in St. Peter's Square.

"We're waiting for the black smoke or the white smoke to come out of the seven-state negotiating room," said Lochhead, who once served as CEO of Denver Water and now works as an independent consultant.

On the other side of this Colorado River "conclave," seven state-appointed negotiators are trying to come up with a new set of rules for sharing water after 2026. They're under pressure to cut back on demand for water because the river's supply is shrinking due to climate change. Until they emerge with a new set of rules, farmers, cities and everyone else will be wondering if they will feel the sting of those cuts.

Across the Colorado River basin, those who depend on the river's water are making preparations however they can. Cities are spending big on technology that will help stretch out their water supplies if they're given less in the future. Tribes are trying to get a more formal role in river negotiations, so future water-sharing policies don't leave them behind like so many in the past.

Efforts like those have been underway for years now. But in Boulder, as top state negotiators keep their heels firmly planted in incompatible policy positions and an unpredictable federal government has yet to appoint a top official to oversee Colorado River matters, everyone else was left to marinate in the anxiety that will linger until a new set of rules is formed.

Looking to the past

With little information about the future, the talks in Boulder mainly focused on lessons from history.

Some of those lessons were relatively recent. For example, Lochhead pointed to talks ahead of a 2007 plan that saw more than seven people in the negotiating room, including federal government representatives who were able to push the states towards consensus. He said today's negotiations would benefit from a similar approach.

Other lessons were more than a century old. Tribal leaders advocated for the presence of Indigenous interests in today's talks. Were they included in previous discussions, said Lorelei Cloud, things might be different today.

"The past century has really shown that the exclusion of tribal voices has really led to this crisis that we're dealing with now in the basin," said Cloud, a member of the Southern Ute Tribe and the recently appointed chair of the Colorado Water Conservation Board. "If we had just honored tribal sovereignty from years back, even from the beginning, we probably would have had serious offers that provided solutions to what we're dealing with now. We wouldn't be sitting here talking about hindsight to foresight."

Patty Limerick, a historian and author whose work focuses on the American West, also brought lessons from more than a century ago when she told the story of a man named E.C. LaRue.

LaRue was a federal engineer who studied the river in the early 1920s. He urged his higher-ups to be conservative in their estimates about the amount of water in the Colorado River. They largely ignored LaRue, instead signing legal agreements that promised more water than the river, in most years, is able to provide.

If policymakers had listened to LaRue more than a hundred years ago, some say, those who rely on the Colorado River today would not be in such a crisis.

Limerick finished describing LaRue's tale and posed a question to the room.

"Is there a latter-day counterpart to E.C. LaRue to whom we should be paying attention?" she asked. "Is that person among us?"

Another speaker suggested that counterpart might be climate scientist Brad Udall. When he spoke shortly thereafter, his outlook was grim.

'Beyond awful' forecasts

Udall and other scientists have provided a rare, uncomfortable dose of certainty to Colorado River talks: The planet is getting warmer, the Colorado River is losing water, and cutbacks to water demand are unavoidably necessary.

He told the audience to "hold on to [their] seats" before describing the climate forecast as "beyond awful."

While his predictions are rarely rosy, Udall struck a more pessimistic tone than previous years, calling out fossil fuel companies and an "anti-knowledge president and his vile enablers" for attacking science and efforts to gird the nation against the harms of climate change, including water shortages.

"Not only are we in a really deep climate hole," he said, "We're continuing to dig and absolutely the last thing we need is the federal government undercutting our efforts to meet the water supply challenges in this basin."

What the feds said

Those in attendance looking for crumbs of information about negotiations from state leaders were left empty-handed. But one federal representative, perhaps surprisingly, dropped a few tiny ones.

The federal government has stayed relatively tight-lipped on Colorado River matters since Donald Trump returned to the White House. In the administration's early days, it paused funding for water conservation and infrastructure projects. It has yet to appoint a new commissioner for the Bureau of Reclamation, the agency which manages dams and reservoirs across the West.

With that role unfilled, the administration's highest-ranking official focused on Colorado River matters is Scott Cameron, a longtime federal official who currently serves as the Department of the Interior's acting Assistant Secretary for Water and Science.

Cameron said he's been meeting with state negotiators roughly "every other week for the last eight weeks" after his boss, Interior Secretary Doug Burgum, said he wanted the department's leadership to be "personally, intensely, and constantly" involved in discussions with the seven states. Cameron did, however, say he did not believe the states needed an external moderator to help break their deadlock.

"My impression is they really want a deal, they really want to find a path forward to working together, and I'm convinced that they're all sincere in that regard," he said.

Cameron also said he was "constantly" asking Reclamation's senior leadership to bolster the agency's staff on Colorado River matters as a way to "mitigate any unintended consequences of national level initiatives to reduce overall federal spending."

Original Article: KAWC by Alex Hager

New study shows huge groundwater losses along Colorado River

The Colorado River basin has lost huge volumes of groundwater over the past two decades according to a new report from researchers at Arizona State University. Researchers used data from NASA satellites to map the rapidly depleting resource.

The region, which includes seven western states, has lost 27.8 million acre-feet of groundwater since 2003. That's roughly the volume of Lake Mead, the nation's largest reservoir.

The findings add a layer of complication for the already-stressed Colorado River. As demand for its water outpaces supply, more users may be turning to groundwater instead, which is often less regulated than water from aboveground rivers and streams.

The majority of water conservation work throughout the Colorado River basin has been focused on cutbacks to surface water use. Some river experts say the focus should be broader.

Brian Richter analyzes water policy and science as president of Sustainable Waters. He was not an author of the study but says its findings show the need for a "holistic perspective" on water management from the region's leaders.

"It suggests that we have to become more aggressive and more urgent in our reduction of our overall consumption of water," he said.

The study found that groundwater losses in the Colorado River basin were 2.4 times greater than the amount of water lost from the surfaces of Lake Powell, Lake Mead, and a number of other smaller reservoirs that store Colorado River water. The study highlights agriculture's outsized water use in the Colorado River basin and said that industry could suffer some of the greatest consequences if the region keeps sapping limited water supplies.

Most of the losses happened in the river's Lower Basin states of Arizona, California, and Nevada. The study says Arizona's "Active Management Areas," which the state set up to regulate groundwater withdrawal, may have helped slow depletion.

Kathleen Ferris, an architect of Arizona's groundwater laws, said much more work is needed to protect groundwater.

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"We are not on track," said Ferris, who was not involved in the study. "We are way behind the eight ball, and I'm really sad that nothing seems to get done. We should have been thinking about this issue 25 years ago."

Ferris is now a senior research fellow at Arizona State University's Kyl Center for Water Policy.

As experts call for more robust groundwater management policies, Richter said this study presents a small silver lining: Scientists are producing better data than ever before, giving policymakers a better sense of the region's water problems.

"From a public policy standpoint, this is bad news," he said. "This tells us that it's worse than we thought, because now we understand what's going on underground as well. From a science perspective, this kind of study is good news, because it says that we are now much more capable of accurately describing a water problem like what we're experiencing in the Colorado River system."

Original Article: LAist by Alex Hager

GLOBAL WATER NEWS

India's $80 billion coal push threatens water access in dry zones

According to a Reuters report, India's aggressive push to expand coal-fired power generation — nearly $80 billion by 2031 — is compounding an already dire water crisis in the country's driest districts.

A majority of new coal projects are concentrated in areas already officially designated as water-scarce or under severe stress, raising concerns of future conflict between industrial operations and local communities over access to water.

One case illustrating the growing tension is Solapur in Maharashtra.
Once accustomed to receiving piped water every other day, residents now wait up to a week or more in peak summer.
This coincides with the commissioning of a 1,320 MW coal plant by state-run NTPC (NSE:NTPC) in 2017, which draws heavily from the region's limited water sources.

Sites chosen for land, not water

According to a power ministry document reviewed by Reuters, 37 of 44 proposed thermal plants are situated in water-stressed or water-scarce regions.
These locations were chosen due to the ease of land acquisition, despite challenges in accessing water.
Federal groundwater board officials and energy researchers confirm that land availability, rather than water access, is driving site selection.
The Solapur plant, for instance, sources water from a reservoir 120 km away, significantly increasing operational costs and the risk of water diversion or theft.
NTPC is involved in nine of the upcoming projects. The company claims it uses treated and reused water in its Solapur facility and follows national efficiency norms.
Yet, federal records from May 2023 rank the Solapur station among the country's least water-efficient.
India's thermal plants, on average, use twice the amount of water compared to global standards, as per data from the Centre for Science and Environment.
Solapur's low capacity utilisation further exacerbates inefficiencies, even as plant officials expect demand — and therefore water consumption — to rise.

Droughts already hitting output

The stakes are high. Since 2014, India has lost 60.33 billion units of coal power generation due to water shortages, equivalent to 19 days of supply at current levels.
The 2,920 MW Chandrapur Super Thermal Power Station, another major coal facility in Maharashtra, frequently shuts multiple units during weak monsoons. Despite this, Chandrapur is planning an 800 MW expansion, according to internal documents.
Notably, it has yet to identify a water source for the additional capacity, although coal supply arrangements have already been made.
Local tensions have flared in the past. During a 2017 drought, public protests in Chandrapur forced the redirection of power plant water to city residents.
Even so, plans to retire two old, inefficient units have been delayed by seven years following federal directives to maintain thermal capacity until the end of the decade.

Water stress deters growth

The pattern of water scarcity is discouraging local development. In Solapur, officials admit that poor water availability is negating the region's appeal to businesses.

A forthcoming state survey suggests that irrigation demand already exceeds supply by a third, leaving little room for new industrial usage.
Farmers near Solapur are hesitant to invest in borewells due to uncertainty about future water availability.
Meanwhile, NTPC's Solapur project, which cost $1.34 billion, continues to provide some employment and was politically supported for its economic promise.
Yet, water infrastructure in the district hasn't kept pace with population growth, contributing to the long waits for water supply.
The broader picture shows a growing collision course between India's energy goals and its finite water resources.
With the power ministry betting on coal to meet demand and renewables unable to fill the gap quickly enough, India's water-stressed districts could face increasing competition between human survival and industrial supply.
Original Article: Investing.com

Thames Water creditors offer up £5bn as part of emergency turnaround plan

Lenders to Thames Water have said they will provide £5bn in funding to the struggling utility, in an emergency turnaround plan that has quickly raised concerns from the water regulator, Ofwat, over potentially inadequate losses for debt holders.
The group of existing senior creditors to Thames Water, a band of more than 100 financial institutions, said their plan would inject £3bn of equity and another £2.25bn of debt.
However, they said their plan would reduce total debt levels at Thames, which is struggling under about £20bn of debt. In total, lenders would write off about £6.7bn of their loans to Thames and its parent company in an effort to reduce the huge load and in preparation for an eventual stock market listing.
Creditors admitted their plan hinges on a considerable leniency from Ofwat, the government's water regulator for England and Wales, over future fines for environmental failings.
The creditors have requested that Ofwat set Thames Water lower environmental standards – and even for it to let the water company off without fines for past breaches of its licences and permits.
The creditors will argue to Ofwat that the much-criticised leniency is necessary to avoid a "doom loop" of fines preventing recovery. The Guardian previously revealed that creditors are hoping for immunity for directors from prosecution for environmental crimes.

Thames Water has been on the verge of financial collapse for several years, after decades of underinvestment and dividend extraction left it with leaking pipes and treatment works falling apart, even as its debt mountain grew.
The company has desperately been seeking a way out of the turmoil without the government being forced to take control under a special administration regime (SAR), essentially temporary nationalisation.
The government is also opposed to stepping in unless there is a direct threat to water and sewerage services for 16 million customers in London and south-east England.
The creditors were forced to step forward with a rescue plan after the preferred bidder, the US private equity firm KKR, pulled out last week in a shock announcement. KKR is thought to have balked at the complexity of taking on Thames Water amid intense political scrutiny.
KKR's withdrawal will mean long-term control of Thames Water will sit with the group of about 100 creditors, ranging from big institutional investors such as Aberdeen, BlackRock, Invesco and M&G, to US hedge funds – such as Elliott Investment Management and Silver Point Capital.
It is widely acknowledged that creditors will have to write off a significant portion of existing debts to allow Thames to recover.
It is understood that the controlling senior creditors will write off £3.2bn from about £16bn of debt, with other lenders forced to write off about £3.5bn.
Senior sources at Ofwat told the Guardian there was concern over some of the terms of the creditor proposal, including whether it was possible for Thames Water to return to an investment-grade credit rating without controlling creditors writing off 30% to 40% of their debt – versus about 20% in their initial proposal.
One person said there was a "reality gap" between the creditor proposal and what the regulator thought would be necessary.
A spokesperson for the creditors said they would build a new Thames Water.
"The creditors' turnaround plan is designed to fix the root causes of Thames Water's problems, restore its balance sheet, rebuild customer trust and provide the financial investment and operational capabilities to fix the fundamentals of the business once and for all," the spokesperson said.
"The plan seeks to break from the patterns of the past by delivering customers' priorities and improved outcomes for the environment in the shortest possible timeframe."
An Ofwat spokesperson said it wanted Thames Water to "deliver a turnaround in its operational performance and strengthen its financial resilience to the benefit of customers".
"We have commenced a thorough review of the submission from the group of senior creditors. Our focus is on assessing whether the plans are realistic, deliverable and will bring substantial benefits for customers and the environment."

Original Article: Jasper Jolly and Anna Isaac

Budget includes $159.1 million in new measures to protect the state's environment

The 2025-26 State Budget includes $159.1 million in new measures that will help protect the state's environment, including saving an important wildlife hospital, maintaining the health of the River Murray and expanding a National Park at the centre of a World Heritage bid.

$4 million will be invested in a 26,000-hectare expansion of Nilpena Ediacara National Park, which forms part of a World Heritage bid for a section of the Flinders Ranges. Investment is also being made to ensure the state's most important natural resource, the River Murray, remains in good health for agriculture, tourism and the environment.

Environmental highlights in the 2025-26 State Budget include:

- $71.1 million over three years for River Murray constraints measures which remove barriers to the delivery of environmental water to floodplains and wetlands.
- $20.9 million over three years for councils to reduce the reliance on River Murray water by investing in alternative water resources and infrastructure.
- $14 million in 2025-26 for the continued replenishment of sand at West Beach and other Adelaide coastal areas.
- $7.6 million over four years from 2025-26 to support the volunteer wildlife rehabilitation sector, provide grants for veterinary support for injured wildlife and improve the health of South Australia's biodiversity.
- $5 million over four years to continue the delivery of the Great Artesian Basin Water Security Program, extending capping of uncontrolled bores and piping open bore drains to reduce water loss and recover groundwater pressure.
- $3.3 million over three years will be spent modernising the planning, forecasting and delivery processes for environmental water across the Southern Connected Basin.
- $2.4 million over four years for drainage and infrastructure upgrades in South Australia's South East to ensure the sustainability of the local community, emergency services, agribusiness and tourism industries.
- $1.7 million over three years for the ongoing position of Commissioner for the River Murray, who will continue to fight for essential outcomes to protect the river.

Original Article: Gov. South Australia

Water company shares fall after report says re-nationalisation would 'cost near zero'

Westminster's claims that nationalising England's privatised water industry would cost £99 billion are "nonsense", according to new think-tank research, which argues that the cost to the British taxpayer would be almost zero.

Common Wealth, an economic think-tank, said the figure often cited by ministers is based on inflated and misleading calculations drawn from water companies and their backers in the private sector.

The real cost, under UK law, would reflect the fair value of the assets – not the so-called "regulatory capital value" (RCV) that the government has repeated. "The true and fair value to bring water into public ownership is close to zero," the report said.

"The £99 billion headline figure is an invention of corporate lobbyists."

Pennon Group PLC (LSE:PNN, OTC:PEGRY) and Severn Trent PLC (LSE:SVT) shares are down 0.9% this morning, with United Utilities Group PLC (LSE:UU.) are down 0.7%.

The report, written for the think-tank by Ewan McGaughey, professor of law at King's College London, comes amid mounting public anger over soaring water bills, sewage discharges into rivers and seas, and the financial instability of companies such as Thames Water, which is burdened with £20 billion of debt.

According to Common Wealth, more than £85 billion has been paid out to shareholders since water was privatised in 1989, with bondholders receiving a similarly large sum. At the same time, infrastructure investment has stagnated, with no major reservoir built since privatisation and 35 sold off.

Water firms are now allowed to raise bills by 36% over the next five years under Ofwat's latest settlement – a move campaigners say will force households to pay for decades of underinvestment and financial engineering by private owners.

The think-tank argues that bringing water companies back into public hands through existing legal mechanisms – such as licence revocation or special administration for insolvency – would not require the government to pay shareholders or most creditors the inflated values suggested by the industry.

Instead, the law requires only "appropriate value" to be paid to secured creditors. Shareholders, who are last in the rank in insolvency proceedings when it comes to being paid, would typically receive nothing – particularly given the scale of dividends and financial extraction already taken out of the system.

The example of Thames Water was given, where shareholders have extracted £10.36 billion since privatisation and bondholders received £13.68 billion, and at the same time, the company faces an estimated bill of the same combined amount of £23 billion for infrastructure repairs and clean-up.

"There is no legal obligation to pay shareholders anything," Common Wealth stated. "Bondholders have already received excessive returns. The cost of public ownership is therefore limited to the administrative expense of appointing a special administrator."

Undermining the case for public investment

The £99 billion figure originates from a 2018 report by the Social Market Foundation – a think tank that Common Wealth notes was funded by Anglian Water, Severn Trent, South West Water and United Utilities.

That report relied on the RCV figure, which is used by Ofwat to regulate dividends and price controls but has no legal status in compensation calculations.

Market values, the report notes, are in many cases far below RCV. United Utilities' market capitalisation is currently £7.2 billion compared with a regulatory capital value of £13.8 billion.

A failed £4 billion bid for Thames Water earlier this year from private equity firm KKR contrasts with a regulatory value of £19.6 billion.

The wide gap between market and RCV, Common Wealth argues, shows that using the higher figure is "absurd" and reflects only an attempt to scare ministers away from serious engagement with public ownership.

Calls for the renationalisation of the water industry, which is a fully privatised sector only in England compared to around 90% of global urban water systems remaining publicly owned, have gained traction as environmental standards deteriorate and corporate financial mismanagement comes under greater scrutiny.

Other European cities, including Berlin and Paris, have reversed earlier moves to privatise water services, citing cost, performance and accountability concerns.

The report concludes that privatisation has resulted in a system that "funnels billions to shareholders and bondholders, starves infrastructure, and pollutes the environment".

With public ownership now widely supported by voters, the report said the legal and financial barriers are lower than the government claims.

"Water is a natural monopoly and a basic human right," said Common Wealth. "It should be run in the public interest – not as a financial asset for extractive investors."

Original Article: Proactive Investors by Oliver Haill

Saudi Arabia leads bold transformation to tackle water scarcity

Saudi Arabia is confronting one of the world's most urgent environmental challenges: water scarcity.

Faced with limited natural freshwater resources and a rapidly expanding population, the Kingdom is taking decisive steps to secure water availability for future generations.

Central to this ambitious transformation is a strategic focus on the "Three As" of water management: availability, accessibility, and affordability.

In recent years, Saudi Arabia has become a global leader in water desalination, investing heavily in cutting-edge technologies and large-scale infrastructure projects. These efforts are not only reshaping the nation's water landscape but also setting an example for other arid regions grappling with similar issues.

Speaking to Arab News, Tariq Nada, executive vice president of the Center of Excellence at ACWA Power, highlighted the Kingdom's dominant role in the water sector.

"The Kingdom's current desalinated water supply capacity stands at over 12 million m3/day with a target to reach approximately 20 million m3/day by 2030," Nada explained.

He further noted: "As of 2024, the Kingdom had committed $6.28 billion in ongoing projects focused on water distribution, water treatment plants, wastewater collection projects and wastewater treatment plants."

Nick Strange, principal at Arthur D. Little, pointed out Saudi Arabia's massive achievements over the past five decades.

"The country plans to more than double its desalination capacity to around 20 million m^3/d by 2030. New mega plants are under development in strategic locations including the Eastern Province, Makkah, Jazan and Madinah (regions). In parallel, the transmission network will also be expanded in scale and reach to accommodate the growing demand and new production hubs," he told Arab News.

Strange added: "However, the Kingdom is not relying on desalination alone. Recognizing the importance of water sustainability, Saudi Arabia is also accelerating efforts in wastewater treatment and reuse. Current treated water capacity is 6-7 million m^3/d, with approximately 30 percent being utilized."

Saudi Arabia's approach includes deploying advanced, energy-efficient technologies such as reverse osmosis systems and integrating renewable energy sources into desalination and wastewater treatment plants.

Meanwhile, the reuse of treated wastewater is gaining momentum as part of a wider push for sustainable resource management.

Public-private partnerships have been instrumental in driving this transformation, accelerating investments and expediting the development of critical infrastructure.

Nicolas Boukhalil, PwC Middle East's energy, resources and sustainability deals leader, emphasized the benefits of opening the sector to international competition.

HIGHLIGHTS

• Saudi Arabia is poised to make major strides in water infrastructure, innovation, and resource management — key to securing supplies, boosting the economy, and advancing Vision 2030.

• Saudi Arabia's approach includes deploying advanced, energy-efficient technologies such as reverse osmosis systems and integrating renewable energy sources into desalination and wastewater treatment plants.

"These partnerships are introducing new technology, improving efficiency, and making water more affordable for homes, businesses, and farmers alike. The result: a more sustainable financial model that eases pressure on public budgets and supports long-term economic growth," he said.

He also stressed the importance of distribution networks, stating, "Producing water is only half the battle, getting it where it's needed is just as critical. That's why major investments are also going into water transmission networks, storage reservoirs, and smart management systems."

Hani Tohme, partner and Middle East and Africa sustainability lead at Kearney, shed light on the current wastewater situation.

"Saudi Arabia treats over 6.5 million cubic meters of municipal wastewater each day, yet only around 25 percent of that is reused, with wastewater network coverage reaching approximately 65 percent," he said.

The National Water Strategy aims to boost treatment and reuse significantly by 2030 — targeting treatment of up to 10 million cubic meters daily and reuse rates of 70 percent.

Tohme explained: "This enables groundwater preservation, supports industrial and agricultural reuse, and reduces dependency on energy-intensive desalination — which still provides 60 percent of urban water supply today."

Enhancing water security

Saudi Arabia's expansion of desalination and water purification is a cornerstone of Vision 2030, reinforcing national water security and the Kingdom's broader transformation goals.

Nada from ACWA Power sees investment in advanced desalination as a critical response to water scarcity that also promotes economic growth through job creation and industry development.

"Since its inception, ACWA Power has consistently been an early adopter of new technologies, in full cooperation and collaboration with the full ecosystem, led by KSA Water offtaker, SWPC, achieving 87 percent reduction in specific power consumption over the last decade. This commitment to innovation is reflected in the company's ongoing efforts to integrate sustainable and cost-effective water solutions," Nada said.

From Arthur D. Little's perspective, these initiatives boost economic diversification and elevate Saudi firms globally.

Tariq Nada, executive vice president of the Center of Excellence at ACWA Power

"For businesses, this presents significant opportunities across engineering, clean technology, and supply chain localization — while for the nation, it reinforces

resilience, global competitiveness, and leadership in addressing one of the 21st century's most pressing challenges: the sustainable management of water," Strange explained.

PwC also notes the alignment between the Kingdom's water strategy and Vision 2030's goals of economic diversification and sustainability.

"As global demand for desalination and sustainable water solutions rises, Saudi Arabia has the tools, talent, and ambition to become a world leader in water technology, creating new revenue streams while solving a shared global issue," Boukhalil said.

Kearney's Tohme emphasized the wastewater sector's growing role in attracting private investment.

"For businesses, this creates significant opportunities in EPC contracting, localization of technologies including membrane technologies, operations and maintenance, and treated water offtake agreements, particularly in industrial zones and giga developments," he said.

Evolution of water purification

In 2025, Saudi Arabia is poised to make major strides in water infrastructure, innovation, and resource management — key to securing supplies, boosting the economy, and advancing Vision 2030.

Highlighting upcoming developments, Nada said: "In 2025, we anticipate an increased integration of renewable energy, with water desalination plants increasingly powered by solar energy and battery energy storage systems, further reducing their environmental impact and operational costs."

He added: "We also expect to see a rise in the deployment of advanced membrane technologies, where next-generation membrane technologies will improve the efficiency and effectiveness of RO plants, reducing energy consumption and increasing water recovery rates."

Nada also pointed to the role of digital technologies: "Digital technologies, such as AI, including machine learning, (will) enable real-time monitoring, optimization, and predictive maintenance of water purification plants."

Kearney's Tohme foresees three major shifts by 2025. He expects accelerated deployment of decentralized purification plants in underserved and remote areas, adoption of digital twins and predictive maintenance technologies to reduce operational costs and non-revenue water, and the strategic integration of treated water into agriculture and district cooling systems.

He concluded: "These trends are not just technical — they enhance Saudi Arabia's economic resilience by separating water supply from climate stress."

Original Article: Arab News by Reem Walid

Welsh Water invests record amount of £629m in its water and wastewater networks

Dŵr Cymru Welsh Water invested a record £629 million in its network, a 31% year-on-year increase to maintain and improve its assets, according to the company's financial results for 2024-25.

The company said the largest capital investment programme in its history drove improvements and ensured that it was in a strong position to deliver on its largest ever investment programme and improved service targets required for the new 2025 to 2030 investment cycle.

These projects include replacing the treatment process at Cardigan Wastewater Treatment Works, improving sites at Eign and Rotherwas in Hereford, upgrading the wastewater network within Usk, increasing capacity at Bangor Beach Road wastewater pumping station and investment to renew and upgrade the water network at Trap and Llandyfan in Carmarthenshire.

Welsh Water also said it continues to be amongst the sector's top performing companies for customer trust and satisfaction, which it says is a symbol of the dedication of its workers across Wales and Herefordshire. The company also saw improvements on leakage, internal and external flooding incidents and its performance against the Drinking Water Inspectorate's Compliance Risk Index.

The company has acknowledged that these improvements will need to be maintained and accelerated as the company seeks to improve its Environmental Performance Assessment rating from 2 stars to 3 stars, move out of Ofwat's 'lagging company' categorisation and respond to the Drinking Water Inspectorate's Transformation Programme.

During the last twelve months, the company has also continued not only to invest to mitigate the impact of climate change, such as extreme weather, by building the UK's largest spillway at Llyn Celyn dam in north Wales but it has also had to manage the impact of two of the most difficult operational incidents it has faced in decades. A temporary 'boil water' notice was issued in November due to damage caused by Storm Bert to the Tynywaun Water Treatment Works in the Rhondda Valley, and in January, a burst of a strategic water main under the Afon Ddu river caused a supply interruption affecting 40,000 properties in the Conwy area.

Welsh Water's focus on improving river water quality was reflected with 231km of rivers improved in 2024-25. The company has been working in collaboration with other bodies including Nutrient Management Boards to support improvements in Special Areas of Conservation rivers.

To fund its record investment requirements over the next 5 years , the company confirmed in February that it was necessary to increase the average household bill for 2025-26 by 27%, and acknowledged the increased burden this would put on

customers. The company also confirmed that it is providing financial assistance to a record 153,000 customers of its most vulnerable customers who struggle to pay their water bills.
Original Article: Water Magazine

Institutional failures caused $700m water project flaws – W'Bank

The World Bank has blamed weak institutional capacity at the sub-national level for the failure of Nigeria's $700m Sustainable Urban and Rural Water Supply, Sanitation and Hygiene Programme.
The programme, which aims to increase access to water, sanitation, and hygiene services and strengthen sector institutions across participating states, has recorded limited progress nearly four years after approval.
The bank disclosed this in its latest Implementation Status and Results Report for Nigeria's WASH Programme-for-Results, dated June 3, 2025.
According to the report, a mid-term review conducted in late 2024 identified that "delays in budget allocations and programme execution [were] due to a lack of understanding of the Programme-for-Results instrument among state-level decision-makers."
It added that the poor grasp of the PforR structure had slowed implementation, especially infrastructure-related activities.
In response to these challenges, the programme was restructured in February 2025 to revise key disbursement-linked indicators and introduce scalability aligned with the 2022 global Policy, Institutional, and Regulatory framework and Nigeria's national sanitation strategy.
However, performance remained below expectations. Out of a revised commitment of $670.21m under the programme, only $93.59m had been disbursed as of May 2025, representing just 14 per cent of the total fund.
The World Bank rated progress toward the development objectives and overall implementation as "moderately unsatisfactory." Despite a target of 6.1 million people to be reached with basic drinking water by 2027, only 58,585 had benefited so far.
The bank attributed the shortfall to delays in procurement and poor planning by the states. "The number initially reported by the states for verification was 83,580 people… The shortfall in achieving the desired targets can be attributed to the delayed commencement of the procurement process by the states," it stated.
Only four states, Delta, Ekiti, Gombe, and Katsina, submitted results for verification in the second year of the programme. Among them, Katsina accounted for the largest share, with 36,835 beneficiaries.
The report also revealed dismal results in sanitation infrastructure. Katsina was the only state to submit results under the sanitation indicator. However, "out of the 86

sanitation facilities that were reported by the state, only one fully adhered to the stipulated standards and requirements," the report said.

Institutional WASH facilities in schools and healthcare centres also performed poorly. Although 43 facilities were submitted for verification, only 22 met the required standards.

"The lag was due to the late start of the procurement process in some of the states and the late understanding of the design specifications for institutional WASH facilities," the bank explained.

Further breakdown showed that only 18 urban and four rural facilities were verified across Ekiti, Gombe, and Katsina.

In terms of capacity development, the report noted that State Programme Implementation Units were established in all seven participating states, and 98 per cent of the required staff had been recruited.

However, systemic challenges persisted. For instance, different accounting systems across states hindered financial reporting. The bank observed, "The PIUs are using different accounting software, making it extremely difficult for the reports to be consolidated."

Although gender-based violence committees and grievance redress mechanisms were in place, other performance indicators remained poor.

None of the newly created engineering or technical roles had been filled by women, and leadership roles for women in WASH community groups remained anecdotal and often limited to financial positions such as treasurers.

The performance indicator on access to improved sanitation facilities in urban areas remained at zero, and no results were recorded for community-wide sanitation efforts such as open defecation-free verification.

"There has been a lot of confusion regarding this DLI and no state so far (even those declaring entire LGAs ODF) has achieved any results under it as of Programme Year 2," the bank noted.

Despite ongoing works in states such as Kaduna, Ekiti, and Plateau, the World Bank warned that the programme risked falling far short of its objectives if state-level capacity issues were not urgently addressed.

It also rated political and fiduciary risks as "high," while maintaining an overall risk rating of "substantial." The programme, which became effective in January 2022, is expected to close by June 2027.

Original Article: Punch by Sami Tunji