Veles Water Weekly Report

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August 7th 2025

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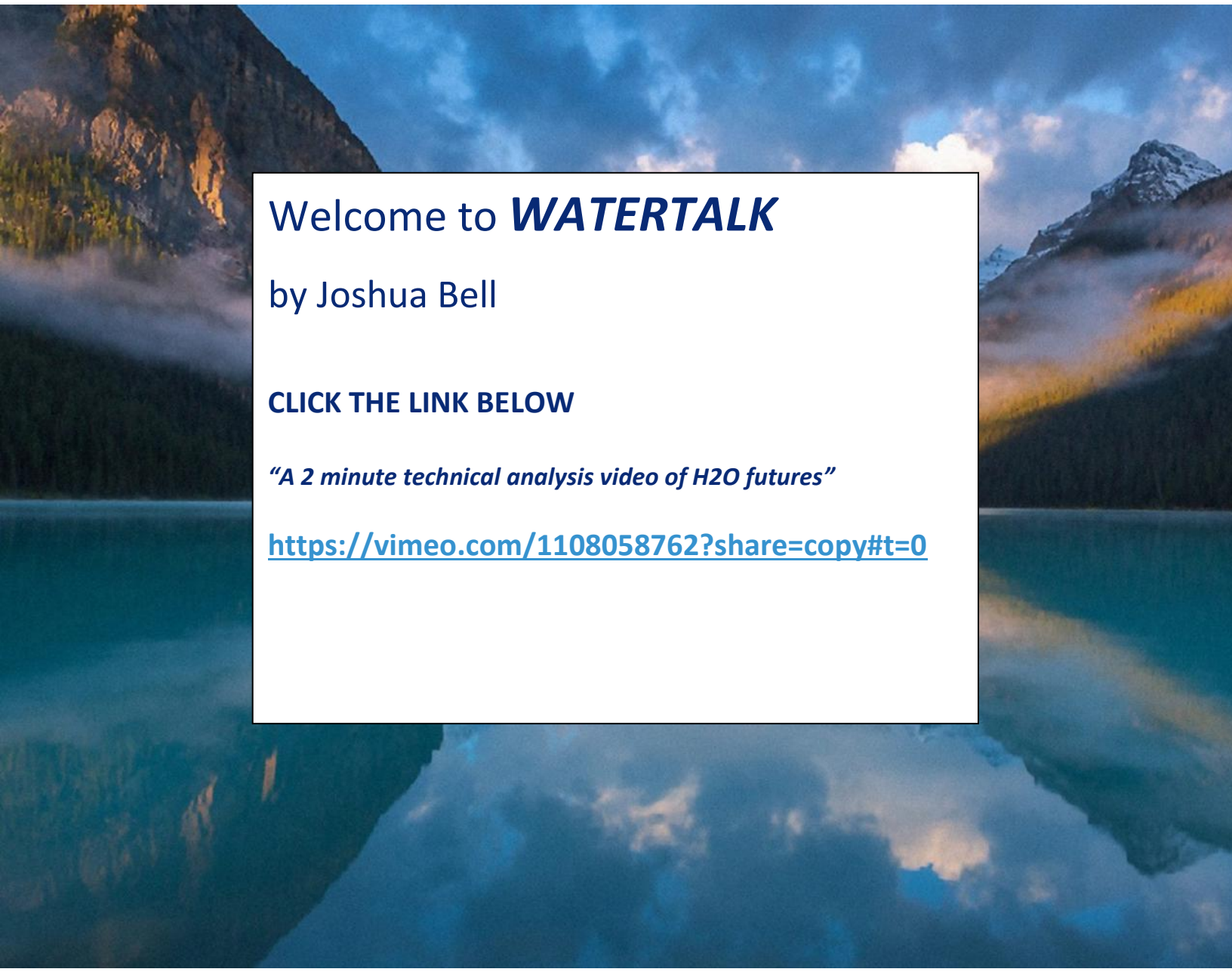
Veles Water

WATER FUTURES MARKET ANALYSIS



Welcome to ***WATERTALK***

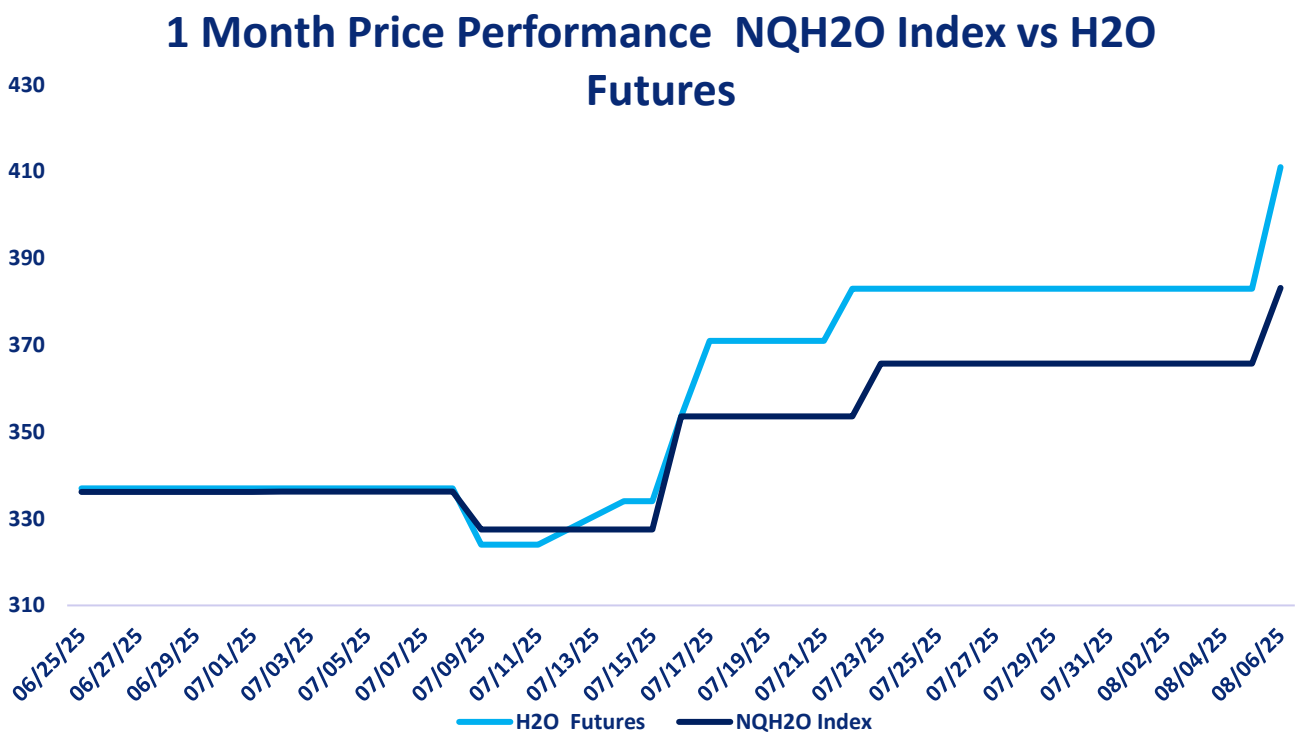
by Joshua Bell

CLICK THE LINK BELOW

"A 2 minute technical analysis video of H2O futures"

https://vimeo.com/1108058762?share=copy#t=0

NQH2O INDEX PRICE vs H2O FUTURES PRICE



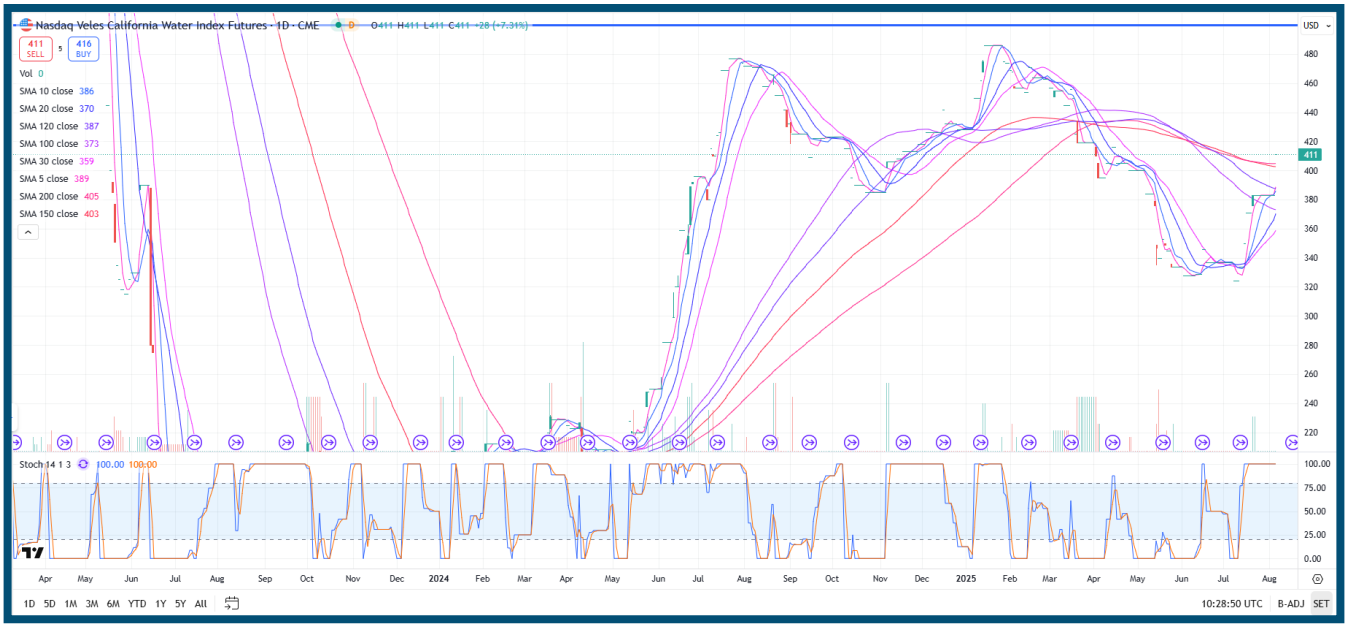
Price Chart Based upon Daily Close

The new NQH2O index level of $383.16 was published on August 6th, up $17.44 or 4.77% from the previous week. The August contract is considered the front month. The futures prices closed at a premium of $17.28 to $27.84 versus the index over the past week.

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

Aug 25	411@416
Sept 25	426@461
Dec 25	431@475
June 26	450@510

H2O FUTURES TECHNICAL REPORT



Current Price: **$411**
Session Change: **+7.3%**

Price Action

- The index has **rallied strongly from the recent low of ~$320**, gaining nearly **30%** over the past few weeks.
- Today's close at $411 is a significant breakout above key moving averages, indicating a **shift in market sentiment**.

Moving Averages Overview

SMA	Value	Status
5-day	389	**Broken**
10-day	386	**Broken**
20-day	370	**Broken**
30-day	359	**Broken**
100-day	373	**Broken**
120-day	387	**Broken**
150-day	403	**Broken**
200-day	405	**Just Cleared**

- **The price has closed above the 200-day SMA**, which is a **bullish long-term signal**.
- This also completes a **clean sweep** above **all key moving averages**, short- and long-term — a **technical confirmation of trend reversal**.

Stochastic Oscillator

- **Stoch 14 1 3**: 100.00 (maxed out)
- This suggests the index is **extremely overbought**, often a **precursor to short-term consolidation or a pullback**.
- However, in a strong trend, overbought conditions can **persist for a while**.

Resistance Levels

- **$420–$430**: Prior support zone from Q1 2025, may now act as **resistance**.
- **$460+**: Next major resistance from the **2025 peak zone**.

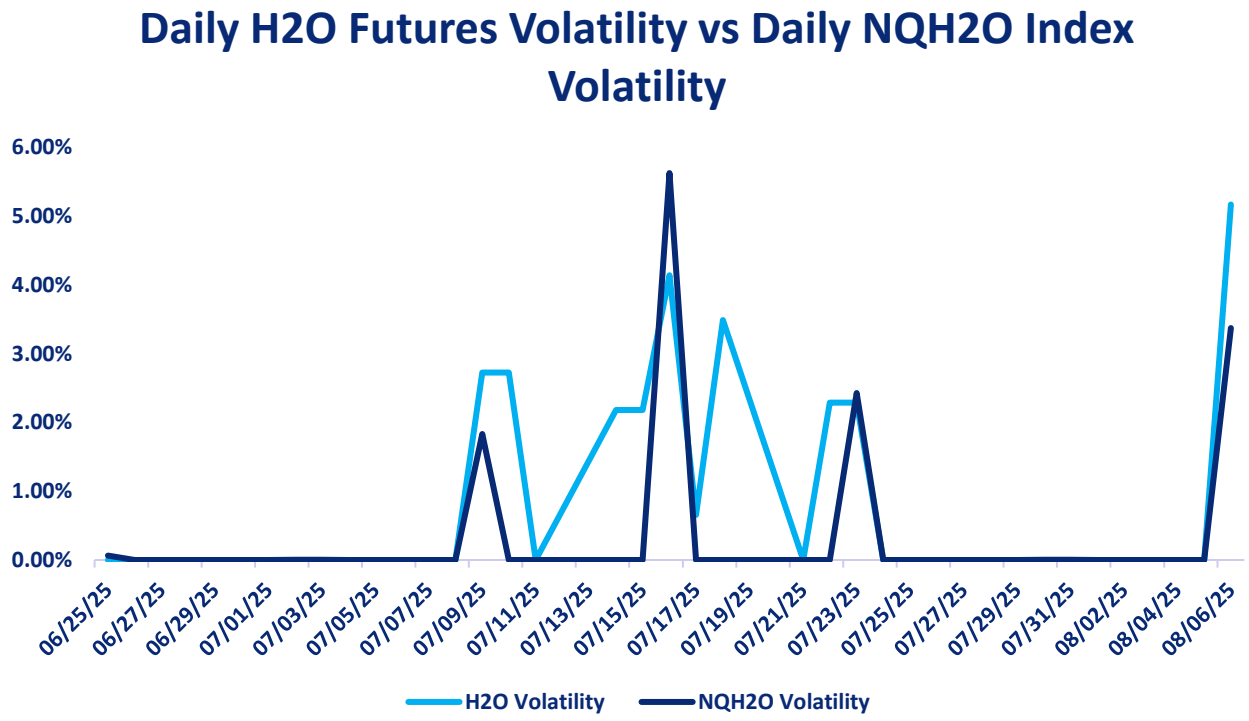
Support Levels

- **$405**: Now becomes immediate support (200-day SMA).
- **$387–$390**: Cluster of previous resistance (120-day and 150-day SMAs), could offer a bounce point if price dips.

Outlook

- The chart has **flipped bullish**.
- A **close above $420** would confirm a potential run back toward **$460+**.
- However, given **overbought momentum**, expect some **profit-taking or sideways consolidation** before the next leg up.

H2O FUTURES AND NQH2O INDEX VOLATILITY ANALYSIS



DAILY VOLATILITY

Over the last week the August contract daily future volatility has been 0%.

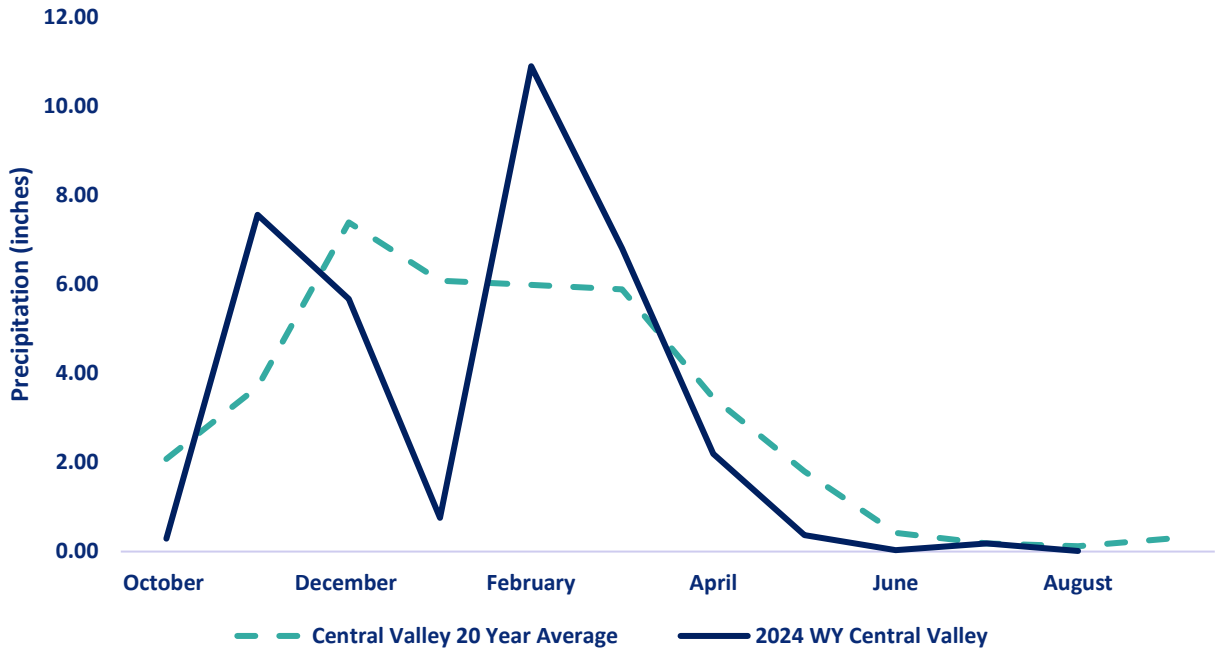
ASSET	1 YEAR (%)	2 MONTH (%)	1 MONTH (%)	1 WEEK (%)
NQH2O INDEX	**17.23%**	**8.86%**	**4.91%**	**4.76%**
H2O FUTURES	N/A	**14.07%**	**10.37%**	**7.31%**

For the week ending on August 6th, the two-month futures volatility is at a premium of 5.21% to the index, up 0.44 from the previous week. The one-month futures volatility is at a premium of 5.46% to the index, up 2.24%. The one-week futures volatility is at a premium of 2.55% 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 06/08/2025

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	83	78
TULARE 6 STATION (6SI)	0	0	0.00	81	82
NORTHERN SIERRA 8 STATION (8SI)	0.04	0.04	29.37	90	106
CENTRAL VALLEY AVERAGE	0.01	0.01	11.08	85	89

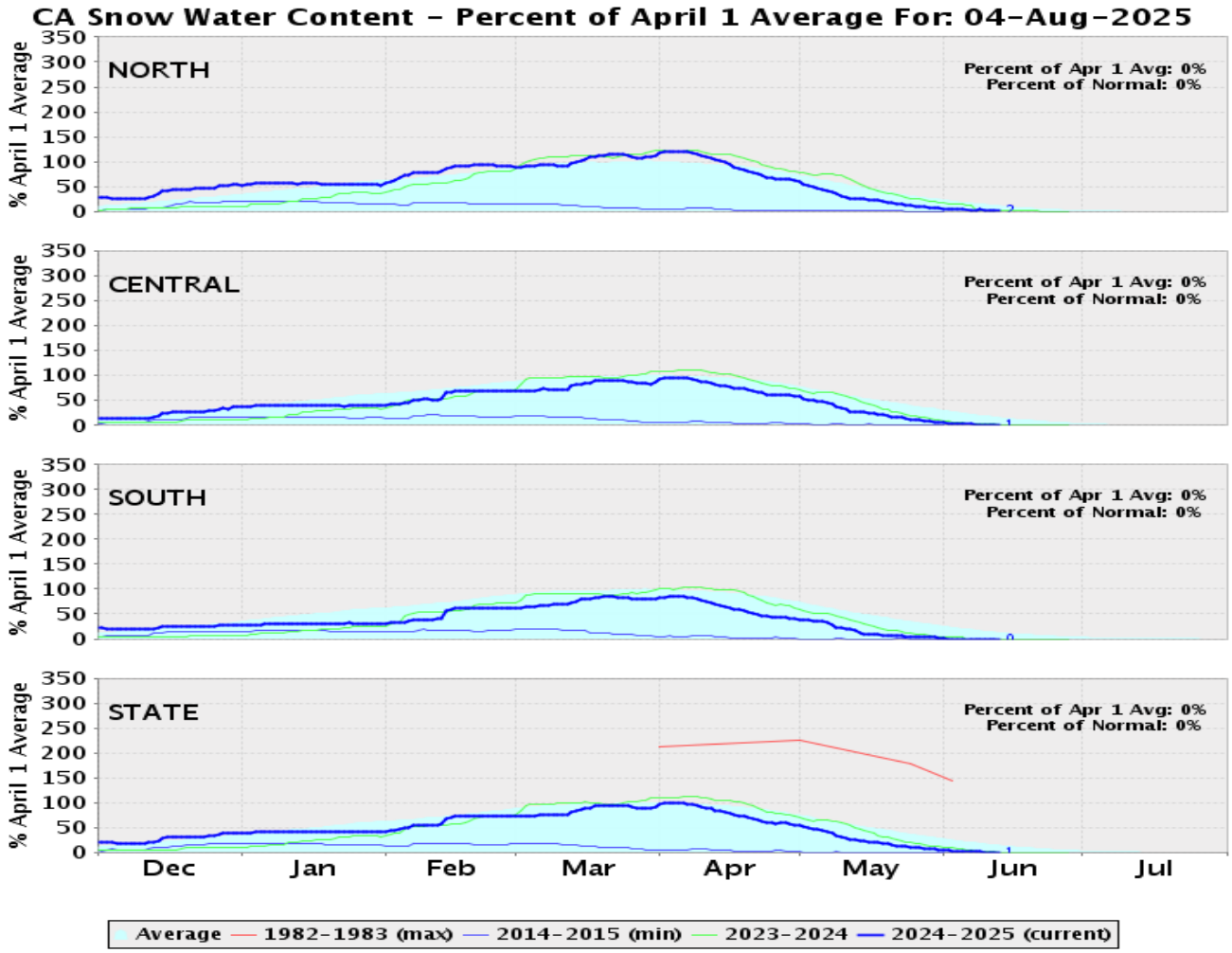
RESERVOIR STORAGE

RESERVOIR	STORAGE (AF)	% CAPACITY	LAST YEAR % CAPACITY	*% HISTORICAL AVERAGE
TRINITY LAKE	2,064,577	84	78	119
SHASTA LAKE	3,165,475	70	74	104
LAKE OROVILLE	2,668,961	78	79	115
SAN LUIS RES	781,855	38	43	90

*% 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	0.5	0	18	18	2
CENTRAL SIERRA	0.2	0	6	6	1
SOUTHERN SIERRA	0	0	0	0	0
STATEWIDE	0.2	0	7	7	1

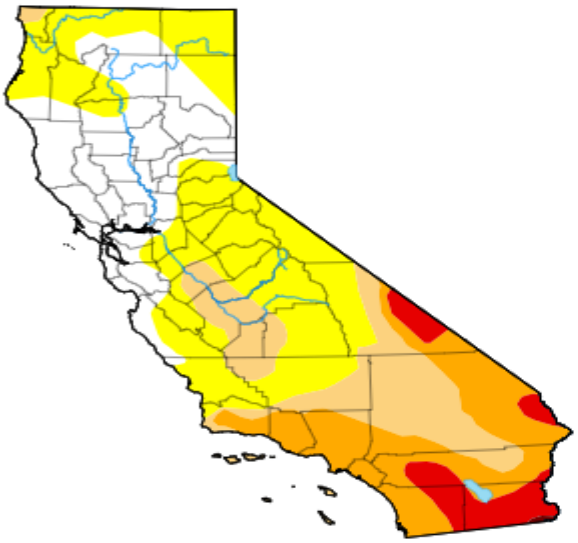
Snow Water Equivalent*, **or SWE**, is a commonly used measurement used by hydrologists and water managers to gauge the amount of liquid water contained within the snowpack. In other words, it is the amount of water that will be released from the snowpack when it melts. SWE has regional variance.**

**** 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. July 31, 2025

Data valid: July 29, 2025 at 8 a.m. EDT

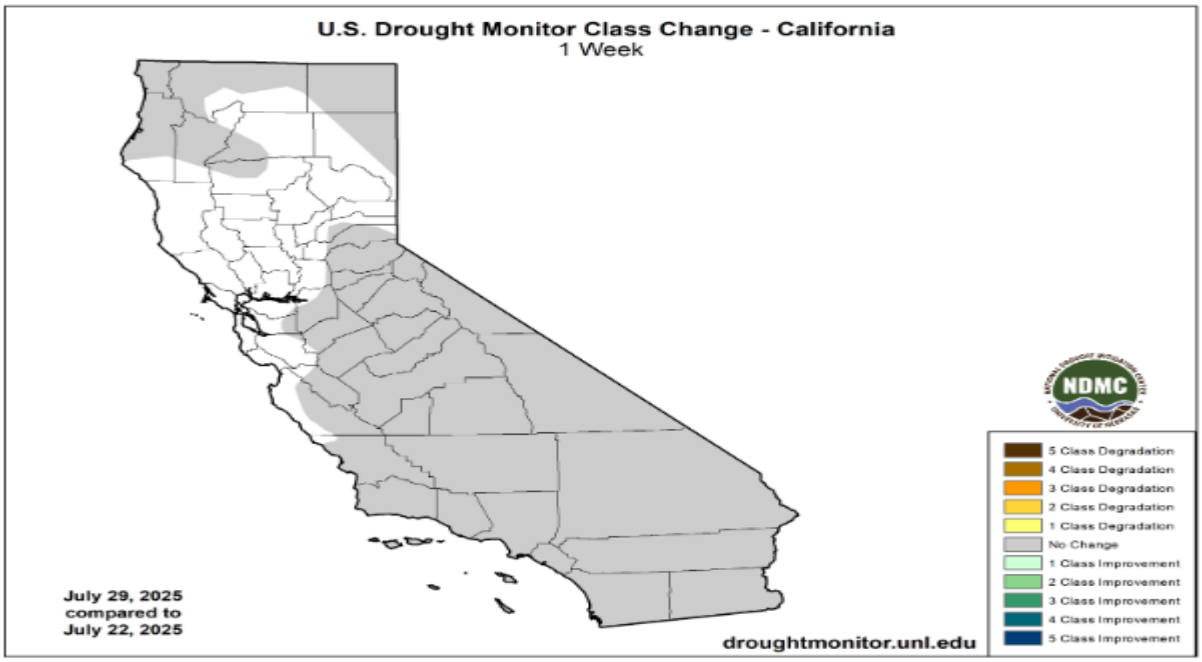
Intensity

- 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):
David Simeral, Western Regional Climate Center

Pacific Islands and Virgin Islands Author(s):
Rocky Bilotta, NOAA/NCEI

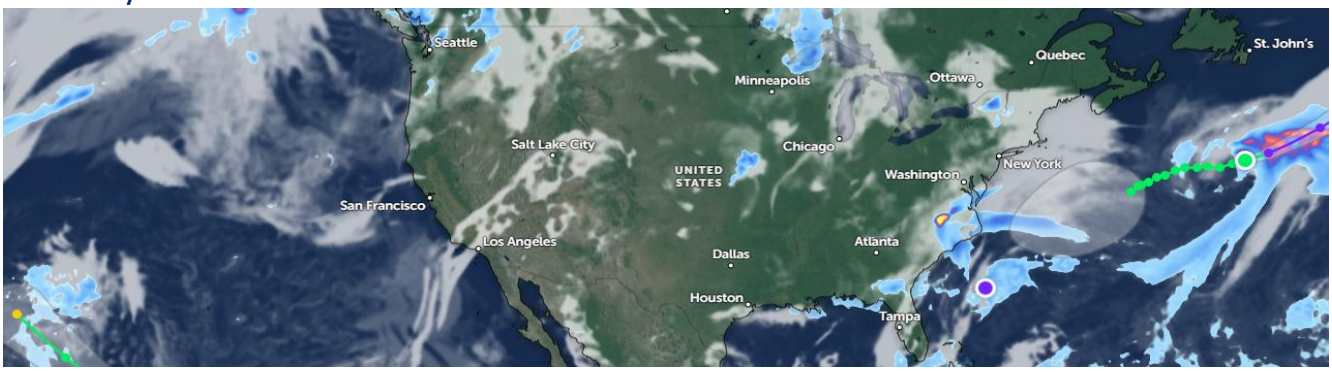


Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2025-07-29	23.98	76.02	39.56	23.01	5.90	0.10	145
Last Week to Current	2025-07-22	23.98	76.02	39.56	23.01	5.90	0.10	145
3 Months Ago to Current	2025-04-29	43.73	56.27	39.81	24.73	8.30	0.73	130
Start of Calendar Year to Current	2024-12-31	40.90	59.10	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	2024-07-30	78.78	21.22	4.44	0.00	0.00	0.00	26

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.

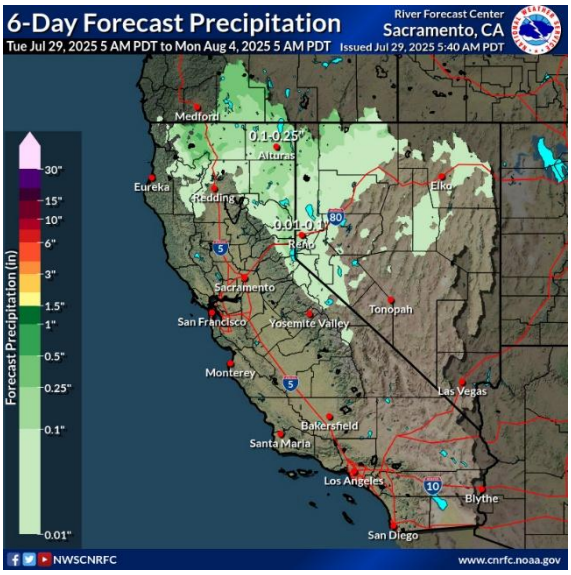
CURRENT SATELLITE IMAGERY

The satellite picture shows a mostly clear Continental US with a small storm west of Chicago and some storm activity exiting the east coast moving eastward. Tropical storm conditions off the coast of Georgia. Monsoon moisture flow stretching as high as Salt Lake City.



Map Ref: Zoom Earth

10 Day Outlook



CA sits between two upper lows this morning, one over the Pacific southwest of soCal and a larger low traversing the Gulf of Alaska. The gulf low also drags a large frontal system with 1" PW of moisture across the eastern Pacific. This system will lift northward as it approaches the west coast likely entirely missing CA in favor of the PacNW and BC later today into tomorrow. The smaller low to the southwest will head towards Baja arriving some time Thursday.

The combination of these systems will keep some troughing overhead for today along with instability. This means the slight chance of thunderstorms over parts of the Sierra and the Shasta Drainage.

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.

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

WESTERN WEATHER DISCUSSION

Out West, generally dry conditions prevailed over much of the region except for some isolated shower activity in northeastern California, northwestern Nevada, eastern New Mexico, eastern Colorado, and Montana. On the map, degradations were made across areas of the Pacific Northwest (Oregon, Washington, Idaho) and Intermountain West (Utah, Wyoming, Colorado). In the Pacific Northwest, streamflow activity continues to be well below normal levels across the Cascade Range of Oregon and Washington as well as in the mountain ranges of northern Idaho and western Montana. Similarly, poor surface water conditions were present in many streams and rivers of western Wyoming, Utah, western Colorado, central Arizona, and northern New Mexico. For the week, average temperatures were below normal across most of the region, with anomalies ranging from 2 to 10+ degrees F and the greatest departures observed across California and Nevada.

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

WATER NEWS

CALIFORNIA WATER NEWS

‘A sudden shift’ to Bay Area weather forecast is coming sooner than expected

Long-term outlooks from the National Weather Service’s weather prediction center previously projected the Bay Area wouldn’t see a warmup until mid-to-late August after an uncharacteristically drizzly July. Now, meteorologists say the region is about to face minor to moderate heat risk with temperatures peaking as soon as this Wednesday. Gusts of wind reaching up to 40 mph are also in the mix, potentially exacerbating fire weather concerns.

The upper level troughing of low pressure systems that prevailed last month are weakening, paving the way for the high-pressure ridging, or elongated areas of atmospheric pressure, the Bay Area typically sees during the summer months. Rising temperatures will follow suit, with Wednesday likely to be the hottest day of the week, Rick Canepa, a meteorologist for the National Weather Service’s Bay Area office, told SFGATE Sunday.

“A lot of people have been wondering when the heat is going to return,” Canepa said over the phone. “The sudden shift to hotter temperatures is definitely going to be more noticeable.”

Canepa noted that because daytime highs are running much cooler than they typically are this time of year, temperatures will return to what’s considered normal for the region, “far below any record highs.”

Closer to the coastline, temperatures will hover around the 70s, but you won’t have to go too far inland before the heat rises to the lower 90s, particularly in cities like Concord and Livermore and further south in the Santa Clara and Central valleys. Temperatures will remain about the same on Thursday and Friday, when moderate heat risk may continue to lead to heat-related illness for people sensitive to higher temperatures as well as pets and livestock, the weather service said.

High pressure over the surface of coastal waters is also driving the wind out of the Northwest toward the Bay Area, Canepa said. Most people will see wind speeds of 20 to 30 mph in the afternoon and evening hours on Sunday and Monday, but “gale force gusts” of up to 40 mph are expected along beaches and in localized areas like Altamont Pass, Point Reyes and the San Francisco International Airport, Canepa said. The weather service warned of “hazardous conditions” for small crafts at sea, especially Sunday and Monday.

Canepa said meteorologists are also monitoring an elevated fire weather threat Sunday afternoon and again later this week. While the windier weather pattern is forecast to

coincide with higher humidity levels, portions of the East Bay hills and Santa Lucia range are still of concern, especially as temperatures rise later in the week.
Original Article: SF Gate by Amanda Bartlett

Water Blueprint for the San Joaquin Valley urges federal action on water infrastructure

The Water Blueprint for the San Joaquin Valley today announced it has sent formal letters to both the San Joaquin Valley Congressional Delegation and U.S. Secretary of the Interior Doug Burgum, urging significant federal investment in California's water infrastructure. These letters underscore the urgent need to advance immediate and longer-term solutions to the Valley's growing water supply crisis and advocate for strategic investments that will protect agriculture, rural communities, and the environment.

The Blueprint's outreach follows the recent passage of the One Big, Beautiful Bill Act, which includes $1 billion in federal funding for specific types of water infrastructure investments —a critical first step toward addressing an estimated $12 billion funding need for projects of these types necessary to modernize California's water system.

Key Points from the Letters:

- **Acknowledgment of Federal Support:** The Blueprint thanked Valley lawmakers for securing $1 billion in the One Big, Beautiful Bill Act, recognizing it as a vital down payment on broader water infrastructure needs in California.
- **Call for Additional Investment:** The letters emphasize the need for further federal funding to support conveyance repairs on the Friant-Kern Canal, Delta-Mendota Canal, San Luis Canal, and California Aqueduct, as well as expanded water storage projects.
- **Economic and Environmental Urgency:** Citing the UC Davis study Inaction's Economic Cost for California's Water Supply Challenges, the Blueprint highlighted the potential loss of up to 9 million acre-feet of water annually by 2050, with projected economic damages of up to $14.5 billion and the fallowing of 3 million acres of farmland.
- **Appeal to Secretary Burgum:** The Blueprint urged the Department of the Interior to prioritize California's water infrastructure in federal planning and funding decisions, and to support collaborative, science-based solutions that benefit both people and ecosystems.

A Voice for the Valley

"The Blueprint represents a united voice for the San Joaquin Valley—farmers, water agencies, communities, and conservationists—working together to secure a sustainable water future," said Eddie Ocampo Chair of the Water Blueprint. "We are grateful for the

progress made, but we must keep pushing forward. The future of our region depends on it."
Original Article: Mavens Notebook/ Water Blueprint for the San Joaquin Valley

California harbour suffers close to $1 million in damage from tsunami waves

Crescent City — one of California's northernmost towns and Del Norte County's lone city — took a close-to-$1 million hit to its harbor after tsunami waves battered the North Coast earlier this week.
Harbormaster Mike Rademaker told SFGATE in a call that initial estimates put the damage from rough seas triggered by the 8.8-magnitude quake off Russia's coast at $100,000. Now, Rademaker said, "It's probably getting closer to $1 million."
A bowed and bent section of the dock at Crescent City's harbor is roped off with caution tape and signage, demarcating a hazardous area for recovery crews following the recent tsunami.
Crescent City Harbor District
Although tsunami warnings were issued for the entire West Coast and Hawaii late Tuesday night into Wednesday, most areas saw minimal impact. Crescent City was the exception. It recorded the highest tsunami waves in the continental U.S. — up to 4 feet — with powerful surges arriving just before dawn, lifting docks off their pilings and slamming the harbor.
Rademaker said the city is "probably bearing the largest brunt of … the entire United States impact."
Following the recent tsunami, parts of a structurally compromised dock at Crescent City's harbor are shown submerging, a stark visual of the ongoing damage and infrastructure failure.
Crescent City Harbor District
Crescent City isn't just prone to tsunamis — it's a bull's-eye. According to a 2008 Cal Poly Humboldt study, the town has "suffered more impacts from historic tsunamis than any other community on the west coast of the United States," with 31 events recorded since 1933. Offshore topography funnels wave energy straight into the harbor. One 2006 event, triggered over 3,500 miles away, tore through the small-boat basin with currents like a "river in flood," the researchers wrote.
Crescent City Harbor District's H Dock was built to take a hit, engineered with closely spaced pilings designed to disrupt and dissipate tsunami energy before it reaches the inner harbor. During Wednesday's surge, it did just that. The dock's decking lifted off its pilings and jammed in place before the structure failed completely, according to a Harbor District news release Wednesday.

The collapse caused visible sparking due to damaged wires. Harbor officials said H Dock "appears to have functioned as intended," sacrificing itself to protect the rest of the harbor infrastructure.
Original Article: SF Gate by Matt LaFever

Bill would make it easier to 'plant' solar panels on dry farmland. Great idea

On paper, it sounds like a perfect trade-off: Take unproductive farmland — much of it located in California's San Joaquin Valley — and replant it with acres of solar panels that can power hundreds of thousands of homes. Except there's a hitch. A lot of that farmland is tied up in long-term Williamson Act contracts, which entitle owners to big property tax breaks as long as they keep their acreage in ag or open space. Landowners can cancel their contracts prematurely, but they must pay a stiff penalty based on the value of their property. When the Maricopa Sun Solar Complex was built in Kern County several years ago, for example, the cancellation fee was nearly $800,000. The state Legislature came to a (partial) rescue in 2011 by passing SB 618, which cut the cancellation fee in half for farmers who want to transition to solar. To qualify for the break, however, applicants must prove that the soil on their land can no longer sustain farming. That program has not been a rousing success; over its first nine years, only three applicants pursued solar easements under SB 618, according to the state Department of Conservation. Now, another bill, AB 1156, would expand eligibility to include land that can no longer be farmed due to water shortages. The bill would also allow battery energy storage systems, but only if they're paired with solar panels. Williamson Act contracts would be suspended, rather than rescinded, so land owners would no longer have to pay a cancellation fee, although they would lose their ag land tax break. Property would be reassessed at fair market value, resulting in significantly higher property tax bills that would raise more revenue for local agencies. 'Little to no benefit for local communities' It's hard to see any downside to this legislation. If land isn't fit for farming and is too remote or otherwise unsuitable for much-needed housing development, using it to boost California's clean energy production makes sense. Yet there is opposition not just to this particular bill, but also to the very idea of converting farmland into solar production. Last month, the Imperial Irrigation District asked the county Board of Supervisors to prohibit any additional solar development on farmland in Imperial County. "More than 13,000 acres of Imperial Valley farmland have already been converted for solar energy development — projects that largely export electricity to urban centers like San Diego, providing little to no benefit for local communities," the irrigation district's Board of Directors said in a news release. This is a silly criticism coming from Imperial. Many of its landowners, who happen to be farmers with pretty secure futures thanks to senior water rights, now export crops to hungry urban

customers. There's nothing wrong with some lands growing electrons instead, thanks to the same hot sun. San Joaquin Valley faces water cutbacks Against this backdrop, California's Sustainable Groundwater Management Act — SGMA — looms large. It requires that water agencies adopt groundwater basin sustainability plans to prevent overpumping. For the San Joaquin Valley, that will likely mean taking more than 500,000 acres of irrigated farmland out of production, according to the California Public Policy Institute. "Some land probably won't survive as farms at all," The Sacramento Bee reported back in 2021. SGMA isn't the only challenge facing farmers. Labor shortages have taken a toll, especially with the Trump administration targeting undocumented workers for deportation. Certain crops have taken a beating. For example, with the demand for wine falling — partly due to health warnings about alcohol — some San Joaquin Valley vineyard owners are giving up on grapes; an estimated 30,000 acres are not being farmed, or only minimally cared for, according to The Fresno Bee. Economic diversification This all spells an uncertain future for those in the ag business who are barely hanging on. Solar development is a viable alternative for them, and AB 1163 would help ease the transition while imposing safeguards to protect the community. For one, the bill requires the state Department of Conservation to determine whether a parcel is eligible for a Williamson Act suspension, in consultation with the local groundwater agency. Also, every project would have to undergo environmental review, which could rule out properties with sensitive resources. Transmission capacity is another constraint; there is a limit to the amount of solar energy the grid can handle. Also, farming communities could get a boost tailored to meet their needs. The bill allows local agencies to require solar companies to enter into community benefits agreements that could include donations to local schools and parks, habitat restoration, infrastructure improvements, job training and other amenities. Bottom line: Solar development will not eliminate farming in regions like the San Joaquin Valley, but it can help agricultural areas diversify economically, while at the same time assisting the state in meeting its clean energy goals.

Original Article: The Fresno Bee by The McClachy California Editorial Board

Troubled Sacramento water district dissolved amid safety failures, merger brings hope

A Sacramento agency that's been criticized by the grand jury for its poor operational and safety practices is now being dissolved.

The Del Paso Manor Water District has been in business since 1956, serving customers in the Arden-Arcade area. Now a new district is taking over.

A long list of problems needs to be fixed in the Del Paso Manor Water District: rusted and corroded underground pipes, contaminated water wells and fire hydrants with broken valves.

The utility serves about 3,000 homes and businesses. Many people there say they worry about their water supply.

"You never know. You could wake up one morning and it could be blown out," said homeowner Carl Kattenhorn.

But now a solution may be in sight. The Del Paso Manor District is being merged into the neighboring Sacramento Suburban Water District, which has big plans for improvements.

"We want to make sure that everybody in the region has access to quality, reliable water," said Greg Bundesen with the Sacramento Suburban Water District.

A top priority is replacing outdated underground pipes that are leaking and can't provide enough water for firefighting.

"There will be adequate supply to provide fire flows absolutely 100%," Bundesen said.

But that work comes with a cost, an estimated $19 million to replace 5 miles of water mains.

Ratepayers saw a 5% hike in their bills in July, and another increase is planned next summer.

"My bill has gone up almost double in ten years," Kattenhorn said.

But the district has also applied for a $16 million state grant to help offset the cost.

"That will definitely help with the infrastructure upgrades," Bundesen said.

Many new customers are hopeful that this merger will help provide more reliable water when they turn on their taps.

"The way that they've gone about it has been a very positive experience, so I have less concern now," homeowner Vicki Reedy said.

Sacramento Suburban is already starting to make repairs on broken fire hydrants, and they're offering new customers free home visits to check for leaks and water conservation rebates.

"My biggest fear is having a fire where they need this water and somebody loses their home," said Shawn Chaney, with Sacramento Suburban.

Original Article: CBS News by James Taylor

Farmers in west Fresno County groundwater agency to consider 200% pumping fee hike

A western Fresno County groundwater agency hopes to increase pumping fees by about 212%, from $8 per acre foot to $25 per acre foot, in a bid to avoid state intervention.

The Pleasant Valley Groundwater Sustainability Agency (GSA) board agreed at its July 29 meeting to put the proposed fee hike to a vote of its growers through a Proposition 218 election, which is required before increasing land assessment or pumping fees.

A hearing is scheduled for Oct. 28 where growers can protest the proposed increase.

If the pumping fee hike succeeds, the Pleasant Valley Water District, which also acts as the GSA, would reduce existing land assessment fees from $6 per acre to $3.25 per acre.
The money from the pumping fee is needed, according to GSA board members, to pay for a revised groundwater plan. The Department of Water Resources deemed the region's existing plan inadequate in February.
That determination kicked the GSA over to the state Water Resources Control Board, the enforcement arm of the Sustainable Groundwater Management Act (SGMA). If a new plan isn't approved by the Water Board, it could place the region into probation, which requires growers to pay extra fees and report extractions.

The new plan would cost $493,000 and take about 13 months, according to Amir Mani, a consultant with EKI Environment & Water engineering firm.
The GSA board voted 6-1 to hire EKI for the job.
Board member Craig Finster, voted no, citing the cost of adding another consultant as his reason. The district doesn't have dedicated staff, instead contracting with outside firms for engineering, administration and legal consulting.
Cost is a concern, agreed fellow board member Travis Millwee. But farmers will have to pay one way or another.
"Those costs are going to be incurred in the future anyway through this process if we don't go with EKI," Millwee said.
Following the GSA meeting, the Pleasant Valley Water District opened its meeting and announced that all of the district's seven board seats will be up for grabs at its next election, November 4, 2025.
Most of the current board members have held their positions since 2020, some since 2019. There are five four-year terms and two two-year terms. Candidates with the highest votes are appointed to the four-year terms first, then the two-year-terms.
The filing deadline is Aug. 8. Candidate forms can be accessed on the district's website.
The Pleasant Valley GSA is the largest of three GSAs in the Pleasant Valley subbasin, which covers about 48,000 acres west of Interstate 5 near Coalinga. The other two GSAs are the City of Coalinga GSA and Fresno County Pleasant Valley GSA Area.
Original Article: SJV Water by Monserrat Solis

California legislators issue dire warnings about National Weather Service cuts

Emergency hiring plans are underway in an effort to keep two Central Valley weather stations fully staffed in the wake of federal budget cuts.

The National Weather Service's Sacramento and Hanford offices have been operating for months with reduced staff. California legislators have issued dire warnings about the service reductions, calling the cuts "the beginning of a public safety crisis."
Hundreds of weather service employees have left the agency under cost-cutting orders from the Trump administration's Department of Government Efficiency.
Tom Fahy, the legislative director for the union that represents the National Weather Service, said that nationally, the agency is short 500 positions, in addition to the 600 employees who retired or took buyouts this year.
The vacancies mean offices are not maintaining 24/7 operations, with night shifts often being covered by other regional offices or left completely unstaffed, Fahy said. The Sacramento NWS office posted on social media in April that it would have "limited monitoring and posting" amid the cuts.
In May, climate leaders warned that the cuts could be catastrophic for emergency responses to floods, wildfires and severe storms.
That same month, five former directors of the National Weather Service published an open letter opposing cuts to the agency, which is part of the National Oceanic and Atmospheric Administration.
"Our worst nightmare is that weather forecast offices will be so understaffed that there will be needless loss of life," the letter stated.
Two months later, when deadly floodwaters inundated Texas, experts say staff shortages may have complicated forecasters' abilities to coordinate responses with local emergency management officials.
After the Texas flood, which killed at least 136 people, including more than three dozen children, state officials were critical of the National Weather Service, saying forecasts underestimated the rainfall. The White House has said that NWS cuts had no bearing on the agency's ability to forecast the storms.
Fahy, however, said the San Antonio office did not have two crucial positions staffed at the time of the flood on July 4: a permanent science officer and a warning coordination meteorologist. The staffers in those roles conduct trainings, implement technology and coordinate with the media.
Those types of open positions also plague Northern California. Fahy said in late July there were 11 vacancies among the 29 staff positions at the NWS's Sacramento office, including eight unfilled meteorologist roles. Three technical staff vacancies — an observing program lead, or OPL, an assistant electronic systems analyst and an administrative assistant — are also leaving gaps, he said.
California's elected officials have continued to call on Washington to reverse the cuts. In late May, U.S. Rep. Josh Harder and 22 other California congressional representatives sent a letter to the heads of the Department of Commerce and NOAA, urging the

reinstatement of terminated workers and the lifting of the federal hiring freeze for the state's National Weather Service offices.

"These service reductions represent the beginning of a public safety crisis with potentially catastrophic consequences if the NWS is unable to retain the staff necessary to maintain around-the-clock weather monitoring in California," the letter stated.

"Slashing staffing in half at the offices responsible for predicting wildfires, atmospheric rivers, and natural disasters is unacceptable, puts thousands of lives at risk, and does nothing to increase government efficiency."

More recently, California senators voiced their concerns as well. In a July 16 letter to the heads of Commerce and NOAA, Sens. Adam Schiff and Alex Padilla said the Sacramento and Hanford offices were the hardest hit by DOGE staffing reductions among California's six NWS stations. They said the Sacramento office has a 50% vacancy rate and the Hanford office has a 61.5% vacancy rate, one of the worst in the country.

"Understaffing has forced these offices to cut their hours of operation and limit forecasting and weather warnings," the letter stated. "The safety and lives of millions of Americans as well as the economic success of California depend on weather forecasts from the state's NWS offices. Protecting human lives from severe weather events is not a partisan issue, and it is important that the NWS has the workforce required to meet its core mandate to protect human life."

A spokesperson for the Sacramento office referred all questions regarding staffing to the weather service's public affairs department, which declined to answer how many positions had been cut. Instead, the department provided a statement attributed to Kim Doster, the communications director for NOAA.

"The National Weather Service continues to meet its core mission of providing life-saving forecasts, warnings, and decision support services to the public, our partners and stakeholders," the statement said.

The vacancies at the California offices coincide with peak wildfire season during the height of summer. Last year, more than 1 million acres burned across California. And while no major fires have erupted in San Joaquin County or the Central Valley this year, spot fires have been popping up for months.

It remains unclear whether staffing improvements may be on the horizon.

The National Weather Service in June announced plans to "stabilize" the department. Erica Grow Cei, a spokeswoman for the National Weather Service, said "a targeted number" of permanent positions would soon be advertised.

"NOAA leadership is taking steps to address those who took a voluntary early retirement option," she said in an emailed statement to Stocktonia.

Original Article: Stocktonia by L.M Boyd

Water deal that would aid Mountain View splits Palo Alto commissioners

After three years of negotiations, a coalition that includes Palo Alto, Mountain View, Menlo Park, Redwood City and about two dozen other cities is preparing to sign off on a revised deal with its water supplier, the San Francisco Public Utilities Commission.

The agreement between the Bay Area Water Supply and Conservation Association, which represents the 26 municipalities, and the SFPUC seeks to take some of the pressure off cities that have not bought their minimally required allotment thanks to conservation efforts and alternate supplies. This includes Mountain View, which has had to pay millions of dollars in penalties over the past 15 years for not meeting the purchase quotas, and which would see some relief in the amended agreement.

While Palo Alto's utility staff broadly supports the agreed-upon amendments, characterizing them as a concession from the SFPUC, the proposed contract ran into an unexpected roadblock at a June meeting of the Utilities Advisory Commission. Three of the six commissioners who were present at the meeting declined to support the changes, with two of them citing broader concerns about SFPUC's drought-planning process. After a heated discussion, the commission failed to agree on any recommendations. Next week, it will be the City Council's turn to consider the proposed contract changes.

Utilities Department staff argue in a new report that the proposed changes are "minor in cost and operational impact," with a particular benefit to Mountain View. One key change is the change to the "minimum purchase quantity" provision, which was created in 1984 and which applies to Mountain View, Sunnyvale, Milpitas and the Alameda County Water District, wholesale customers that import water from sources outside the SFPUC. Cities that don't meet the thresholds are still required to pay for the water they are not using.

Elizabeth Flegel, Mountain View's water resources manager, said that the city has adopted conservation measures over the past decade thanks to back-to-back droughts. While the city gets the vast majority of its water from the SFPUC, it also gets smaller shares from Valley Water, ground water and treated recycled water. It is also working with Palo Alto now to construct an advanced water purification plant on a San Antonio Road site. But because of these measures, Mountain View has consistently failed to meet its requirements and has had to pay for water it's not using.

The combination of minimum purchase requirements and drought measures "have really put Mountain View in a pickle," Flegel said during a presentation at the July meeting of BAWSCA.

"It has resulted in us being charged $15 million for water that our customers simply couldn't use because of the toggling on and off of drought requirements, conservation mandates and, even next year, we're being required to purchase certain amounts."

Under the proposed amendments, an individual city would not be penalized for failing to meet its minimum requirements provided that the four wholesale customers collectively meet their overall minimum allotment. It also creates a transition year after a drought period before the penalties kick in, with the understanding that customers will continue to conserve water even when the urgency is lessened. And it reduces the quantities of water that these cities need to purchase, setting the amount at 80% of the average purchases from the most recent four non-drought years.

Other amendments would revise the drought plan, slightly increasing required water cutbacks for wholesale customers. In Palo Alto, a moderate drought would require customers to reduce water usage by 18% (currently, it's 16%) while a severe one would require a cutback of 28% (up from 22% in the current contract).

Karla Dailey, assistant director of the Utilities Department, said that the utility already has drought measures in place that would achieve these reductions if needed, including a prohibition on using potable water on driveways and sidewalks.

"From our customer standpoint, they would not see any difference between old formula and new formula," Dailey said.

The amendments, she said, are a good thing for Palo Alto. They remove a disincentive that some cities may have when it comes to water conservation measures that would benefit the entire region. They also support Palo Alto's neighbor and close partner on water infrastructure. Staff expects that adjusting the provision for minimum purchase quantities may raise water rates for the customers in the system by between 0.13% and 0.72%.

"It ensures our neighbors aren't charged for unused water," Dailey said.

Original Article: Palo Alto Online by Gennady Sheyner

An empirical analysis of demand for water rights transfers and leases in western water markets: a simultaneous approach

Water demand continues to increase in the western U.S., straining existing (and forecasted future) supplies. Water transfers – through either the sale of water rights or contractual leases of bounded duration – are now a well-established means of reallocating water to the highest economic benefit. Water is not a typical commodity, however. Significant variability in price across different geographic locations reflects differences in hydrologic conditions, demand and supply, and infrastructure development. These differences will persist even in well-functioning markets due to high transportation costs and user interconnectivity. While sufficient data now exist to describe market activity and price trends, no study has yet performed a rigorous analysis that fully accounts for contract type (whether water rights transfer or lease) and price endogeneity. We fill this gap by estimating a simultaneous system of demand equations for rights transfers and leases that accounts for supply drivers of price determination.

As one might anticipate, the demand for leases is more elastic than the demand for water rights. Accounting for contract type and price endogeneity provides a more accurate estimation of water's market value in different locations across the western U.S. Ignoring either issue leads to significant biases with policy implications.
Original Article: https://www.researchgate.net/publication/394132785_An_empirical_analysis_of_demand_for_water_rights_transfers_and_leases_in_western_water_markets_a_simultaneous_approach

US WATER NEWS

Lawsuit Challenges Arizona Water Agency for Rubberstamping Massive Benson Housing Development

The Center for Biological Diversity and the San Pedro 100 sued Arizona Department of Water Resources Director Tom Buschatzke today for failing to review and revoke the designation guaranteeing a 100-year water supply for the 28,000-home Villages of Vigneto development in Benson.
The Benson homes would rely on groundwater that's no longer available based on court rulings in 2023 and 2024. The groundwater feeds the nearby San Pedro River, the last free-flowing desert river in the Southwest, essential for millions of migratory songbirds and many endangered species. Arizona law requires that new developments guarantee a sufficient water supply for at least 100 years.
"The Villages of Vigneto development has always been predicated on the mirage of unavailable water," said Robin Silver, a co-founder of the Center. "It's hard to believe that we now need to file a fourth lawsuit against the state because officials continue refusing to protect the San Pedro River."
The Arizona Department of Water Resources was required to review the Benson development's water supply designation by July 14, 2023. It has failed to do so.
San Pedro River streamflow during the dry times of the year is already diminishing, as evidenced in three hydrology studies — Prucha (2016), Eastoe (2017) and Meixner (2018) — showing that Vigneto groundwater pumping will violate federal reserved water rights and will damage the San Pedro Riparian National Conservation Area.
Today's lawsuit is the fourth challenging Gov. Katie Hobbs and Buschtzke for various actions failing to protect the San Pedro River.
The Hobbs administration designated the Willcox area an Active Management Area and is considering similar protections for Gila Bend.

Despite increasing signs of San Pedro River demise, including decreasing streamflows, the administration has refused to take action to protect the groundwater basin from over-pumping.
Original Article: Center for Biological Diversity

New report highlights concerns over water, power usage in data centers across the West

For years, officials in Nevada have courted the tech industry as a way to diversify the state's economy.
And now it appears, they could get their wish in the form of data centers. The facilities used to power AI and store the exponentially growing amount of digital data have sprung up across the West.
However, some are concerned that the amount of water and power they use could increase strain on drought-stricken areas. Those concerns were outlined in a report from the nonprofit Western Resource Advocates, pointing to policies it says states and utility commissions should consider to better regulate an emerging industry it warns could devastate natural resources.
Original Article: KNPR by Paul Boger

EPA Grants Yurok Tribe Authority to Develop Water Quality Standards

The EPA has approved the Yurok Tribe's request for authority under the Clean Water Act to develop water quality standards for rivers and streams on its lands.
"This action recognizes the Yurok Tribe's capability to protect water resources that are vital to cultural practices, public health, and local ecosystems," the agency said in a statement.
With this approval, the Tribe can establish water quality standards for its Reservation, which will be subject to EPA review and approval before taking effect. These standards will help guide decisions on water protection and management.

"The Yurok Tribe will now be able to develop standards that reflect both scientific criteria and the Tribe's priorities for protecting fish habitat and ceremonial uses," EPA officials said.
According to the agency, granting this authority "advances tribal self-determination and environmental protection" by allowing the Tribe to oversee the health of surface waters on its lands under the Clean Water Act.
Original Article: Environmental Protection by Stasia DeMarco

Maryland American Water Files Rate Request Driven by $22 Million of Investment Over Last Seven Years

Maryland American Water filed a request today with the Maryland Public Service Commission (PSC) for new rates, reflecting $22 million of water system investments since the company's last rate request. The request reinforces the company's commitment to replacing aging infrastructure and continuing to provide high-quality water service in compliance with environmental regulations for the benefit of customers.

"Our commitment to long-term investments in our water systems helps ensure we deliver the high level of service our customers deserve and expect," said Laura Runkle, President of Maryland American Water. "These ongoing investments are vital for providing safe, clean, reliable and affordable service to the communities we serve and demonstrate our dedication to the public health and safety of those communities."

In today's filing, Maryland American Water's proposed rates include a two-tiered rate structure, with lower rates for the first 2,000 gallons to promote affordability for lower-usage customers. If the company's proposed two-tiered rates are approved, the monthly water bill for residential customers in the Town of Bel Air using 2,000 gallons per month would increase by approximately $6, and customers using 4,000 gallons per month would see an increase of approximately $29. Monthly water bills for residential customers in the company's Severn District would increase approximately $20 per month. The company's last rate adjustment was in 2019.

Maryland American Water also offers bill paying assistance programs that include payment plans, budget billing and, for income-eligible customers, the company's H2O Help to Others customer assistance program. More information can be found by clicking the Customer Assistance Program link under Customer Service & Billing on the company's website.

The proposed rates are a request only and are not final until authorized by the PSC, which conducts a thorough review of the company's financial and operational data. Once a final decision has been made, customers will receive information regarding new rates in the mail and on the company's website. New rates are not expected to be effective until March 2026.

Customers can participate through written comments, attendance at public comment hearings, and consumer advocacy organizations that participate in the proceedings. For more information on the company's rate proposal and to learn how customers may participate in this process, visit marylandamwater.com and select "Your Water Rates" under the Customer Service & Billing menu.

Original Article: The Financial Times

GLOBAL WATER NEWS

Bridging the water finance gap as climate impacts bite

When it comes to corporate exposure to nature risk, water has to be the most salient. Agriculture uses 70% of the world's freshwater, opens new tab, but it is also critically important to sectors ranging from textiles to pharmaceuticals and semiconductors.

For many years companies took for granted that water would be available in sufficient quantities for whatever they wanted to do. That perception, however, has started to change as the impacts of climate change – from droughts to catastrophic floods to changes in rainfall patterns – start to make themselves felt on water supplies, infrastructure and business operations around the world. Water risks now feature prominently in the World Economic Forum's annual Global Risks Report, opens new tab.

At the same time demand is increasing, in part from new sources, such as the data centres that help to drive the AI revolution. There is also growing concern about pollution from substances such as PFAS forever chemicals, and over-exploitation of reserves.

In the U.S., the Ogallala Aquifer, which runs from South Dakota to Texas, provides a quarter of the water used in U.S. agriculture, irrigating fields that produce $7 billion of crops a year. But water levels in the aquifer have dropped precipitously thanks to drought and abstraction by farmers.

"There's either too little or too much," says Alison Gilbert, water stewardship lead at consultancy Anthesis. "Companies are having to deal with scarcity, floods and poor quality as well as growing regulatory and reputational risks. And they recognise that they need to do something about it."

Recognition, however, is not necessarily translating into action. At COP16 in Cali in October, Nature Action 100, the investor-led initiative to engage with companies deemed systematically important in stemming nature loss, reported in its inaugural benchmark assessment, opens new tab that while over two-thirds disclose a commitment to protect nature, only one had done a comprehensive materiality assessment of nature-related dependencies, impacts, risks or opportunities.

There are a number of initiatives specifically aimed at helping companies report on and manage their water use, including CDP's water disclosure programme, the Taskforce for Nature-related Financial Disclosures and the Valuing Water Finance initiative at sustainable investment advocacy group Ceres.

Ceres' water lead, Kirsten James heads up the latter initiative, which involves more than 100 investors responsible for $17 trillion in assets engaging with some of the world's largest water users.

For Stefan Erasmus, it's a step in the right direction in ensuring that he maximizes production while protecting the environment.

”Investors are concerned about the water risks in their portfolios. They see that water crises are increasing in scope and scale. At the same time, companies are at very different stages of their water stewardship journeys,” says James.
”Many companies have looked at the risks in their own operations but are pretty much ignorant about the risks in their supply chains and the water footprint of their suppliers. … You can do all the work inside your own fence line and still not have enough water.”
She says water risks reside along companies’ entire value chain. ”For example, there is a lot of focus on the water consumption of data centres in the tech industry, but the sector is also affected by disruptions in the semiconductor supply chain and also at the miners that provide the raw materials for chips.”
One company that isn’t taking water for granted is PepsiCo, the beverages and snacks producer. ”Water is a key ingredient for our agricultural raw materials and a central pillar of our sustainability strategy,” says David Grant, senior director for global climate and water solutions at the company.
Besides exceeding targets to improve water efficiency by 25% from 2015 levels by 2025 and to cut water use in agriculture by 15%, PepsiCo is also one of a number of companies with an ambition to have net-positive water impact (NPWI).
The concept was developed by the CEO Water Mandate, opens new tab, and aims to ensure that a company’s contributions towards a healthy water basin exceed their impacts, with a focus on availability, quality and accessibility.
During a session at Climate Week New York, PepsiCo’s vice president, global sustainability, Roberta Barbieri, explained how the company is working with The Nature Conservancy to quantify the ”stacked benefits” of investing in replenishment of watersheds, beyond just saving water.
In one project in Guatemala, TNC used bio-acoustics to get a baseline measure of insect species in that part of the watershed, identifying them by the fluttering of their wings. It will go back in a year’s time to see what impact PepsiCo’s work has had on insect populations.
In another project, in a watershed that provides water to the city of Phoenix, Arizona, PepsiCo worked with TNC to help local farmers convert from growing water-thirsty alfalfa to barley, which needs less water, and is grown at a time of year when there is greater availability.
The farmers have increased their revenue stream because a local distillery is buying the barley and malting it for use in the local craft brewery.
Original Article: Reuters by Mike Scott

What will it take to unlock investment in water infrastructure?

Water is becoming a significant geopolitical risk, as scarcity and unequal access to water contribute to rising political tensions. When demand exceeds supply, competition over

transboundary rivers, reservoirs and aquifers intensifies, adding pressure in already fragile regions.

However, when access to water is managed equitably and transparently, it can become a powerful catalyst for socioeconomic growth, cooperation and peacebuilding, fostering cross-border collaboration and contributing to long-term stability.

On 14 July 2025, in Geneva, Switzerland, more than 30 senior water sector leaders gathered for a high-level workshop hosted by the World Economic Forum and led by its Centre for Global Industries.

This dialogue brought together water utilities, technology providers, financiers and policymakers to achieve consensus around challenging misconceptions about water systems, identify best practices and define strategic industry priorities in the lead-up to global milestones, including the World Economic Forum Annual Meeting 2026 in Davos, Switzerland, the UN Water Conference and the UN Climate Change Conference.

Against this backdrop of global collaboration for resilient and equitable water systems, focus also fell on how to mobilize investment in water infrastructure, highlighting the evolving role of the water value chain as a sector undergoing deep transformation.

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Although water is foundational to nearly every aspect of the economy and daily life, it is seldom prioritized for action.

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From these discussions, three takeaways emerged that must be at the forefront of all global workstreams and conversations surrounding water and resource management.

1. Showcase urgency and socioeconomic impact

The workshop provided a timely opportunity for sector leaders to reflect and align on a new perspective: water must be recognized as both a strategic asset to invest in and an environmental and operational issue. It is, after all, critical to economic growth and geopolitical stability.

Traditionally, government spending and development finance flow first to “urgent needs.” Although water is foundational to nearly every aspect of the economy and daily life, it is seldom prioritized for action. This mismatch has led to chronic underinvestment, despite rising demand for water and growing climate risks.

Water is critical to health, climate resilience and economic prosperity, but often lacks the crisis framing that drives rapid allocation of funds. Making the case for urgency around water resilience and its subsequent socioeconomic impact is now a critical first step to closing the investment gap.

The paradox is that water supports everything from agriculture to energy to digital infrastructure, but remains largely invisible in global investment strategies.

Despite being essential to nearly all industries, water firms rank low in global revenue and market capitalization. The World Bank cites a $7 trillion investment gap, while OECD

data shows tariffs cover only 70% of water service costs, with public funds making up the rest.

Meanwhile, the World Water Council reports that blended finance for water and sanitation makes up just 5% of transaction volume and under 1.5% of mobilized commercial finance.

Without a shift in how water is perceived, policy and financial attention will continue to lag behind need.

What's more, the socioeconomic value of water is vastly underappreciated. Each dollar invested yields at least $2.50 in output and stimulates sectors such as construction, services and manufacturing, according to an elaboration of Acea Research & Studies on the 2021 Organization for Economic Co-operation and Development Inter-country Input-output tables.

It also shows that socially, water infrastructure is a job creator, generating more than 16 jobs per $1 million invested**.** Recognizing water as an urgent and high-return investment is, therefore, key to driving transformation.

2. Define the market and the actors

A clear sizing of the water investment market, its focus areas and key actors are essential to mobilizing public and private capital and driving priority investments that deliver the highest socioeconomic and climate returns according to regional needs.

This is especially important as water infrastructure companies are increasingly intersecting with emerging sectors, opening new investment pathways beyond traditional models.

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With a sharp view of what works and why, the water sector can shift from being an overlooked enabler to a key driver of sustainable growth, innovation and resilience across the broader economy.

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From decentralized circular water solutions for the real estate sector, to artificial intelligence-optimized cooling systems, water is becoming a lever of competitiveness even for non-traditional players.

These examples highlight a growing imperative: collaboration between water and non-traditional water actors can unlock innovative business models and attract additional sources of capital.

This is already happening, for example, between Ecolab and Microsoft for enhanced data around water to aid sustainable practices and between Acea and Intesa Sanpaolo for research, infrastructure financing and talent development.

Similarly, the multi-utility model – where a single company manages multiple essential services under one governance structure – integrating water, energy and gas services, offers a compelling opportunity to drive cross-sector synergies, boost access to capital,

attract top talent and accelerate technological adoption, all while strengthening ties with local communities.

3. Articulate clearly global best practice

Without reliable data on water consumption, particularly for industrial and agricultural use, policymakers cannot easily devise data-driven frameworks for water resilience.

At the same time, the urgent need for infrastructure investments, driven by ageing systems, climate resilience and rising demand, makes it imperative to create a regulatory environment that fosters investments, innovation and the right partnerships in the water sector.

Companies in the water value chain can play a critical role in identifying and sharing global best practices as well as developing bankable projects promoting standardized business models.

By clarifying what drives success and reducing ambiguity and fragmentation in the sector, they help guide policymaking, modernize regulatory frameworks and establish more predictable conditions for investment.

To build on these efforts and attract capital at scale, there is an increasing need to create dedicated financial instruments tailored to the specific risks, timelines and returns of water infrastructure projects.

A new narrative for the water sector

The Geneva workshop marked a critical step in rethinking water systems and reframing the case for their investment, stressing that it is now more urgent than ever.

With a sharp view of what works and why, the water sector can shift from being an overlooked enabler to a key driver of sustainable growth, innovation and resilience across the broader economy.

To support this shift, the Forum will lead efforts to assess the market for water investments, identify key enablers of smart policies and financing and surface global best practices across the entire water value chain.

This work will provide an initial snapshot of the infrastructure investment gap across geographies, outline priority solutions and lay the groundwork for a standardized investment toolkit to help scale water resilience.

Original Article: World Economic Forum

United Utilities Water Finance issues €500m bond with no stabilization

United Utilities (OTC:UUGRY) Water Finance PLC has completed the issuance of a €500 million bond without any market stabilization measures, according to a post-stabilization notice released Monday.

The 10-year notes, guaranteed by United Utilities Water Limited, carry a 3.750% coupon and will mature on August 7, 2035. The securities were issued at a price of 99.509%, with

a spread of 112.3 basis points over the German government benchmark bond (DBR 2.6% Aug-2035).

Deutsche Bank AG (ETR:DBKGn) London, which served as one of the stabilization managers alongside Barclays (LON:BARC), J.P. Morgan, Goldman Sachs, and Mizuho (NYSE:MFG), confirmed that no stabilization activities were undertaken during the offering period. Stabilization refers to market interventions that can help maintain the price of newly issued securities.

The bonds have been assigned the International Securities Identification Number (ISIN) XS3144971127.

The announcement follows a pre-stabilization period announcement dated July 31, 2025. According to the press release statement, the securities have not been registered under the United States Securities Act of 1933 and are not being offered for sale in the United States.

United Utilities Water Finance PLC serves as the financing vehicle for United Utilities Water Limited, which provides water and wastewater services in the United Kingdom (TADAWUL:4280).

Original Article: Investing.com

Ganga river quietly loses over 50% of its water without us knowing. Here's how

A new study from the Indian Institute of Technology (IIT) Roorkee has revealed new insights into the hydrology of the Ganga River, shedding light on its summer flow and water loss dynamics as it leaves the Himalayas.

Led by Professor Abhayanand S. Maurya, the research emphasises how the mighty river loses over half of its volume every year without anyone noticing it.

The team also discovered that groundwater, rather than glacial melt, is the primary source sustaining the Ganga's summer flow across the plains.

the journal Hydrological Processes, the study analysed two decades of extensive field data, challenging prevailing narratives driven largely by satellite observations of North India's groundwater crisis.

Contrary to fears of widespread aquifer depletion, the research found that the central Ganga plain's groundwater system remains surprisingly stable. This stability is evident in the consistent output measured from thousands of shallow hand pumps, suggesting a robust and resilient underground water network still actively feeding the river.

As the Ganga flows out of the Himalayas and into the plains, its volume notably increases by nearly 120 percent thanks to this reliable groundwater input. However, the research also uncovers a major and often overlooked issue: more than 58 percent of the river's water evaporates during the hot summer months.

This tremendous loss highlights the critical role of evaporation in diminishing the river's flow and underscores the urgency of addressing water conservation along the river basin.

The findings carry significant implications for water resource management in the region, especially concerning aquifer recharge and tributary revival.

The study calls for renewed focus on restoring tributaries feeding the Ganga and efforts to enhance groundwater recharge, ensuring continued flow during critical dry periods.

In an era where climate change and human activity increasingly threaten water resources, this research not only redefines the understanding of Ganga's hydrology but also provides a scientific basis for sustainable river basin management.

As Professor Maurya points out, safeguarding the underground water system is essential to maintaining the health and heritage of one of India's most vital rivers.

Original Article: India Today

North got over 50% of 2024, 2025 project allocations- Nigeria

Director-General of the Budget Office of the Federation, Tanimu Yakubu, has affirmed that over half of the capital budget for 2024 and 2025 was allocated to projects and programmes in the North.

Former governor of Kano State, Rabiu Kwankwaso, and ex-Secretary to the Government of the Federation (SGF), Baba hir Lawal, had accused President Bola Tinubu's administration of marginalising the North in infrastructure development.

Chairman of the Board of Trustees (BoT) of the Arewa Consultative Forum (ACF), Bashir Dalhatu, also claimed Tinubu had neglected the region.

Reacting to the claims, Yakubu said the Federal Government is committed to the development of Northern Nigeria.

He said the narrative of northern marginalisation is "unfounded," adding that the Tinubu administration is strategically mobilising resources to ensure balanced regional development and national progress.

"Contrary to politically motivated narratives, Northern Nigeria is not on the margins; it is at the heart of federal investment priorities," he said.

"Over 50% of the capital budget for 2024 and 2025 is traceable to projects and programmes in the North when major national trunk infrastructure and water basin investments are properly accounted for," Yakubu added.

He said the government has invested in key infrastructure projects, including the dualisation of the Abuja–Kano expressway and the N12.1 trillion Sokoto–Badagry superhighway, a 1,068-kilometre cross-regional road project, with N3.63 trillion already approved for initial phases in Sokoto and Kebbi states.

The DG said the government's initiatives include Kano–Maradi standard gauge railway, the Zungeru–Kano power transmission line, and the expansion of airport runways in Katsina, Maiduguri, and Kaduna.
Original Article: The Guardian by Anthony

$60.8 million towards securing water needs in remote First Nations communities

The Albanese Government, through the National Water Grid Fund, will invest $60.8 million for six new First Nations water infrastructure projects across remote Australia.
Announced by the Prime Minister at the 25th annual Garma Festival, the projects will improve essential town supplies to support liveability and water security in remote First Nations communities, supporting a further 9,000 people on Country.
The six projects, funded by the Albanese Government, are:

- $18 million for the Woorabinda water supply improvement (Queensland)
- $14.3 million for the Galiwin'ku network upgrade and water quality planning strategy (Northern Territory)
- $13.7 million for the Gove Peninsula water supply upgrade phase 2 (Northern Territory)
- $6 million for the Halls Creek water security upgrade (Western Australia)
- $5.1 million for the APY Lands water supply revitalisation (South Australia)
- $3.7 million for Securing critical human water needs for self-supplied remote First Nations communities (South Australia)

Each project will be co-funded by state and territory governments, with the Gumatj Corporation providing a funding contribution to the Gove Peninsula project.
Several of these commitments build upon previous National Water Grid Fund construction, planning and science investments to ensure long-term and evidence-based outcomes.
These projects will enable the economic empowerment of First Nations people through employment and training opportunities, tourism initiatives and housing development, as well as support environmental protection and climate resilience.
Minister for the Environment and Water, Murray Watt said the Albanese Government is committed to bringing water security to our remote First Nations communities.
"Everyone across Australia deserves access to clean and reliable water, regardless of where they live. Communities should be able to trust what's coming out of their taps. Better water means better health and better life outcomes.
"That's why we're continuing to invest in projects that will deliver critical water infrastructure projects in remote First Nations communities.
"We know living and practising culture on Country is important, and projects like these will ensure First Nations people can remain close to family and community.

"We will continue to work with our state and territory partners and First Nations organisations and representatives to Close the Gap on water security."
The total National Water Grid funding towards First Nations community projects now stands at more than $191 million for 42 projects, supporting more than 100 First Nations communities across 6 jurisdictions (New South Wales, Queensland, Western Australia, South Australia, Tasmania and the Northern Territory).
The Albanese Government's $150 million National Water Grid Fund commitment to provide safe and reliable water in First Nations communities has now been surpassed by this investment package.
These projects also support progress towards Closing the Gap Target 9b, which focuses on equitable essential services in communities.
Original Article: Minister for the Environment and Water

How the UAE is redefining global water trade by turning scarcity into strategy

Faced with extreme scarcity, the UAE is turning constraint into opportunity, using its logistics muscle, regulatory agility and investment firepower to become a regional hub for aquatech, desalinated exports and water technology innovation, according to a study released by the Dubai MultiCommodities Centre (DMCC).
"While the direct international trade of physical water remains relatively limited, its broader significance in global commerce is growing. Physical water trade typically occurs via pipelines, tankers or bottled water. The UAE, for instance, imported over 94 million litres of bottled water in 2023 – mainly from Switzerland, Saudi Arabia and Turkey – while positioning itself as a regional re-export hub through its logistics network," the free zone said in its latest report – The Future of Trade.
31 Dec, 2023
Abu Dhabi Sheikh Zayed Festival fireworks
With more than 40 per cent of its potable water derived from desalination, the UAE is one of the world's most advanced users of non-traditional water sources. Over Dh7.3 billion (nearly $2 billion) has been allocated to the development of new desalination facilities.
Michael Rutman, co-CEO of Baynunah Watergeneration, said the UAE is well-positioned to shape the future of water trade and technology. "With its geostrategic location, logistics capabilities and forward-looking leadership, the country is rapidly becoming a nucleus for aquatech innovation and export. We see the United Arab Emirates as a very big launch pad for disruptive innovations," he said in the report.
"We see it as a gate to the world."
It is estimated that two-thirds of the region's water originates from outside its borders.

"The UAE is focused on diversifying import sources and building robust logistics systems to ensure supply security. Imports of high water-footprint products – ranging from wheat to bottled water – enable the country to conserve desalinated freshwater for sustaining critical, high-value industries, ranging from AI and logistics to green energy and food manufacturing," said DMCC.

As water stress intensifies, countries are increasingly relying on virtual water trade – importing water-intensive goods such as crops, semiconductors and bottled water – to safeguard domestic supplies. By 2100, it is estimated that virtual water flows are projected to increase fivefold, transforming trade strategies and exposing new geopolitical dependencies, said The Future of Trade report published by DMCC.

Shortage of funds

Globally, water markets remain poorly governed and underfunded.

Most investment still comes from public sources, and few countries assign water a meaningful price. Without better regulation and financial innovation, from tradable rights to tokenisation, water will remain a neglected threat in global trade and development strategies.

The World Bank estimated that up to $7 trillion (Dh25.7 trillion) must be mobilised by 2030 to meet the Sustainable Development Goal of clean water and sanitation for all. Yet current annual investments fall short by hundreds of billions, with more than 90 per cent of funding coming from public sources, it said.

"Private capital remains hesitant, discouraged by long payback periods, regulatory complexity, and modest financial returns. Bridging this financing gap will require a shift in how water is valued and governed. One promising approach is the financial reclassification of water as a tradeable asset, unlocking capital flows and incentivising more responsible use," DMCC said.

Original Article: Khaleej Times by Waheed Abbas

China is building the world's biggest hydropower dam. Why is India worried?

On the eastern rim of the Tibetan plateau, China envisions a future powered by the roaring waters of the Yarlung Tsangpo, also known as the Brahmaputra. The river will be the site of a mega dam — the world's most ambitious to date — that promises to bring clean energy, jobs, infrastructure and prosperity to the region.

Construction on the world's largest hydropower dam began on Saturday, according to Premier Li Qiang, who called it the "project of the century".

But the project is not just about electricity and economic benefits – the stakes are far higher. Regional security, ecological stability and the future of one of Asia's great rivers all hang in the balance.

How big is the mega dam?

The dam will be situated in the lower reaches of the Yarlung Tsangpo, where a section drops 2000 metres (6562 feet) over a 50km (31 miles) stretch, creating immense hydropower potential. The dam is reportedly located in Medog, a remote county in the city of Nyingchi in the Tibet autonomous region.

When completed, the project will overtake the Three Gorges Dam as the world's largest hydropower dam. It could generate three times more energy with five cascade hydropower stations – an estimated annual capacity of 300 billion kilowatt-hours (kWh) of electricity, more than Britain's total annual power output.

It is estimated to cost about 1.2 trillion yuan (US$167 billion), dwarfing many of the biggest infrastructure undertakings in modern history at about five times the cost of the Three Gorges Dam and even more expensive than the International Space Station.

Why is it important?

The project was first announced in 2020 under China's five-year plan as part of a broader strategy to exploit the hydropower potential of the Tibetan Plateau, with feasibility studies dating back to the 1980s. Beijing authorised the dam's construction in December 2024.

China is the world's top hydropower producer, but it "is fast running out of rivers to dam", which makes the Yarlung Tsangpo "the final frontier" for large-scale expansion, according to Trivium China, a China-focused research firm.

The Chinese Government sees the project as a national strategy with major significance for Tibet's development and China's clean energy targets.

By tapping into the river's vast hydropower potential and integrating surrounding solar and wind resources, China aims to establish a clean energy hub in the region, stabilising the grid while reducing reliance on coal. This aligns with Beijing's green energy goals and 2060 carbon neutrality targets, according to state media.

The project is also expected to boost local employment, infrastructure and livelihoods in Tibet while prioritising ecological protection through rigorous geological surveys and environmental monitoring, according to official media.

"Beyond energy security, policymakers likely also have state-building on the mind. The mega dam will anchor an unprecedented wave of industrial and infrastructure investment in Tibet – deepening Beijing's control over the politically sensitive region," Trivium China said on its website on Monday.

What is at stake, and why is India anxious?

The Yarlung Tsangpo flows south into India, where it becomes the Brahmaputra River, then flows into Bangladesh. Both South Asian nations have raised concerns about downstream implications of a water conflict, which could potentially affect millions of people who depend on the river for agriculture, fisheries and daily consumption.

The river flows through Arunachal Pradesh, known in China as Zangnan – a territory claimed by both China and India. New Delhi views the project as a possible means for

Beijing to project power and exert control over water resources for strategic and economic advantage. India fears the potential weaponisation of water by China, which could use the dam to cause floods or induce droughts.

Earlier this month, Arunachal Pradesh Chief Minister Pema Khandu described the mega dam project as a ticking “water bomb” and said downstream Indian waters could “dry up considerably” once the dam was completed.

Observers have also raised concerns about population displacement and risks to one of the richest and most diverse environments on the plateau. Chinese authorities did not disclose how many people were likely to be displaced.

Tibetan groups have reportedly noted the presence of sacred sites along the river.

China asserts that the project has undergone rigorous scientific evaluation and will not adversely affect the environment, geological stability, or water resource rights of downstream countries. Beijing has also emphasised that it will not try to benefit at the “expense of its neighbours”.

The area where the dam is being built sits atop the Indian-Eurasian tectonic boundary, a seismically active zone, making it prone to earthquakes and leaving little margin for engineering error. Experts said it could take at least a decade to build the dam because of the technical challenges. The dam is expected to begin operations in the 2030s.

Original Article: Pearls and Irritations by Meredith Chen

Note the attachment is not an inducement to trade and Veles Water does not give advice on investments.