

Veles Water Weekly Report

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VelesWater



WATER FUTURES MARKET ANALYSIS

Welcome to ***WATERTALK***

by Joshua Bell

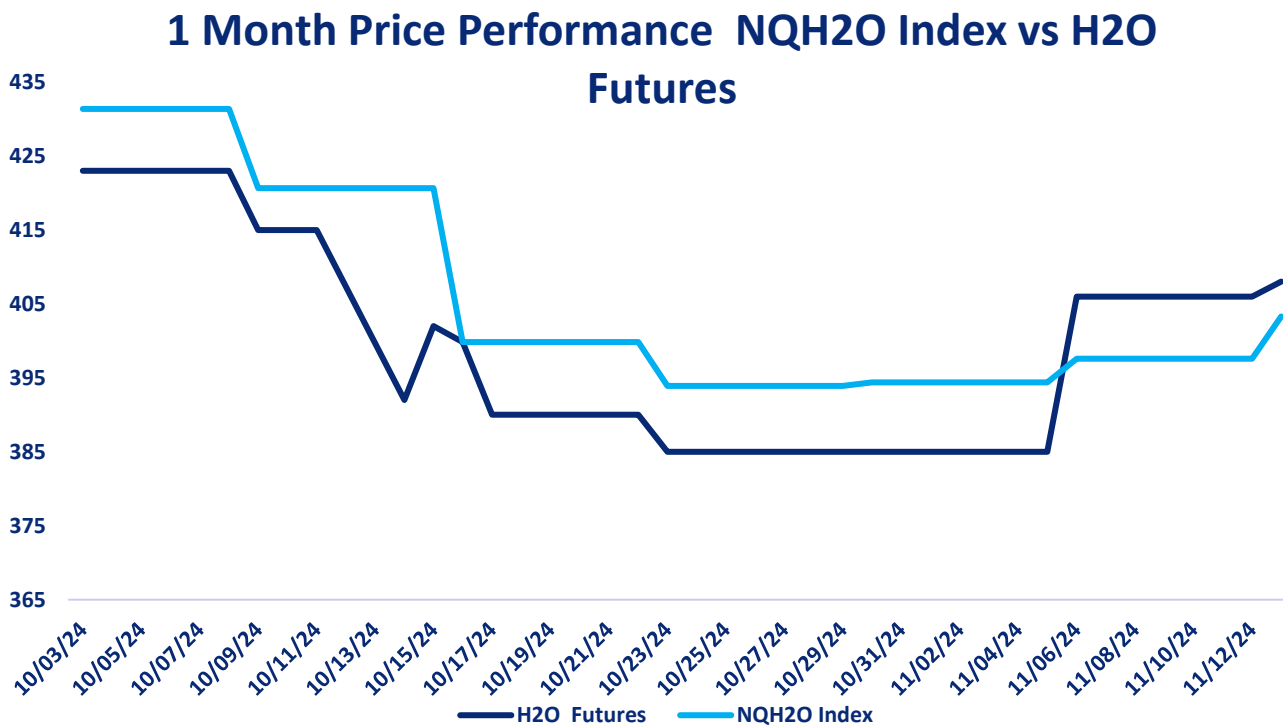
CLICK THE LINK BELOW

"A 2 minute technical analysis video of H2O futures"

<https://vimeo.com/1029547751?share=copy#t=0>



NQH2O INDEX PRICE vs H2O FUTURES PRICE



Price Chart Based upon Daily Close

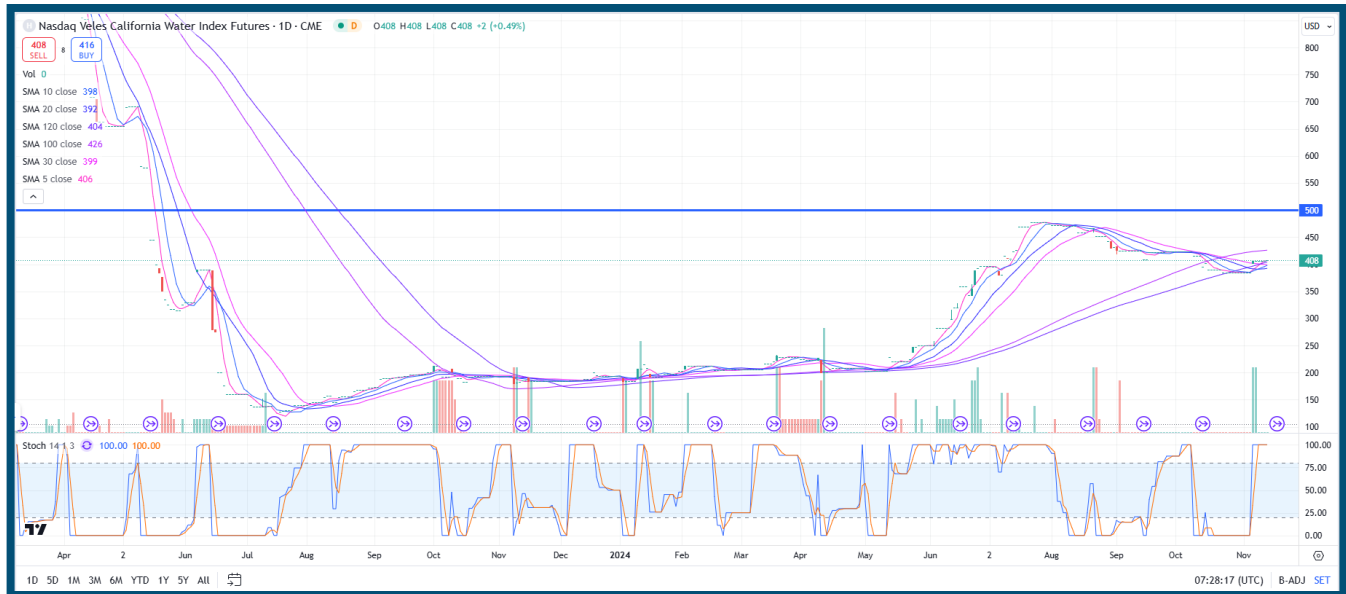
The new NQH2O index level of \$403.28 was published on November 13th up \$5.71 or 1.44% from the previous week. The November contract is considered the front month. The futures prices have closed at a premium of \$4.72 to \$8.43 versus the index over the past week.

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

Nov 24	408@466
Dec 24	398@432
Mar 25	423@491
June 25	460@495
June 26	525@605



H2O FUTURES TECHNICAL REPORT



Price Action

- **Current Price:** 408
- The price has increased by 0.49% in this trading session, indicating mild bullish momentum.

Moving Averages (MA) Analysis

- **MA 5 (5-day Moving Average):** 406
 - The current price is slightly above the MA 5, suggesting short-term bullish momentum.
- **MA 10 (10-day Moving Average):** 398
 - The price is above the MA 10, indicating continued short-term bullish sentiment.
- **MA 20 (20-day Moving Average):** 392
 - The price is above the MA 20, showing strength in the short-term trend.
- **MA 30 (30-day Moving Average):** 399
 - The price is above the MA 30, suggesting that medium-term momentum is also bullish.
- **MA 100 (100-day Moving Average):** 426
 - The price remains below the MA 100, indicating that the long-term trend is still weak compared to recent sessions.



- **MA 120 (120-day Moving Average): 404**
 - The price is slightly above the MA 120, suggesting some improvement in the long-term trend, though it still needs to break above the MA 100 to confirm a stronger long-term recovery.

Support and Resistance

- **Immediate Resistance: 500**
 - This level has been tested multiple times and remains a key resistance point for a breakout.
- **Immediate Support: 408 (current price level)**
 - The current price may act as support, but if it declines below this level, the next significant support would be around the MA 100 at 426.

Stochastic Oscillator

- **Stochastic (K%: 100, D%: 100)**
 - The stochastic indicator shows that the market is in maximum overbought territory, suggesting the potential for short-term downward pressure or consolidation following the recent bullish momentum.

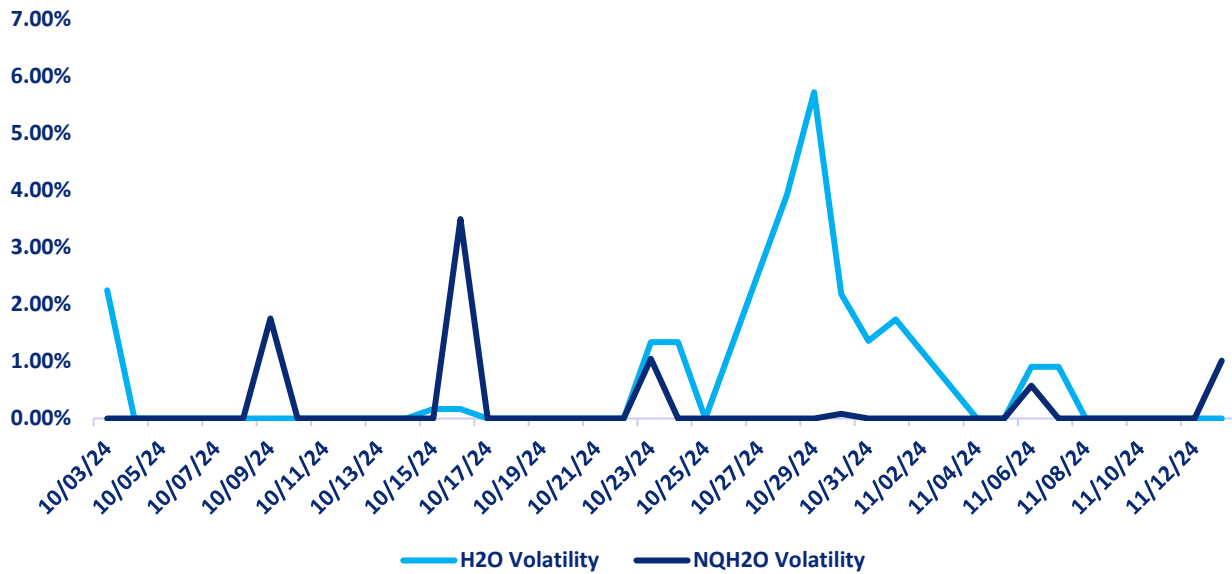
Summary

- The price is currently experiencing short-term and medium-term bullish momentum, as it sits above the MA 5, MA 10, MA 20, and MA 30.
- However, the long-term trend remains cautious, as the price is still below the MA 100, despite being above the MA 120.
- The stochastic indicator signals that the market is heavily overbought, which could indicate the possibility of a pullback or consolidation in the short term.
- Key levels to watch: Immediate support at 408 and resistance at 500. If the price continues to rise, a break above the MA 100 at 426 would be a positive long-term signal. Conversely, if the price declines, support around the MA 100 should be closely monitored.



H2O FUTURES AND NQH2O INDEX VOLATILITY ANALYSIS

Daily H2O Futures Volatility vs Daily NQH2O Index Volatility



DAILY VOLATILITY

Over the last week the November contract daily future volatility has been 1.74%.

ASSET	1 YEAR (%)	2 MONTH (%)	1 MONTH (%)	1 WEEK (%)
NQH2O INDEX	29.19%	5.25%	1.32%	0.62%
H2O FUTURES	N/A	8.98%	6.28%	0.49%

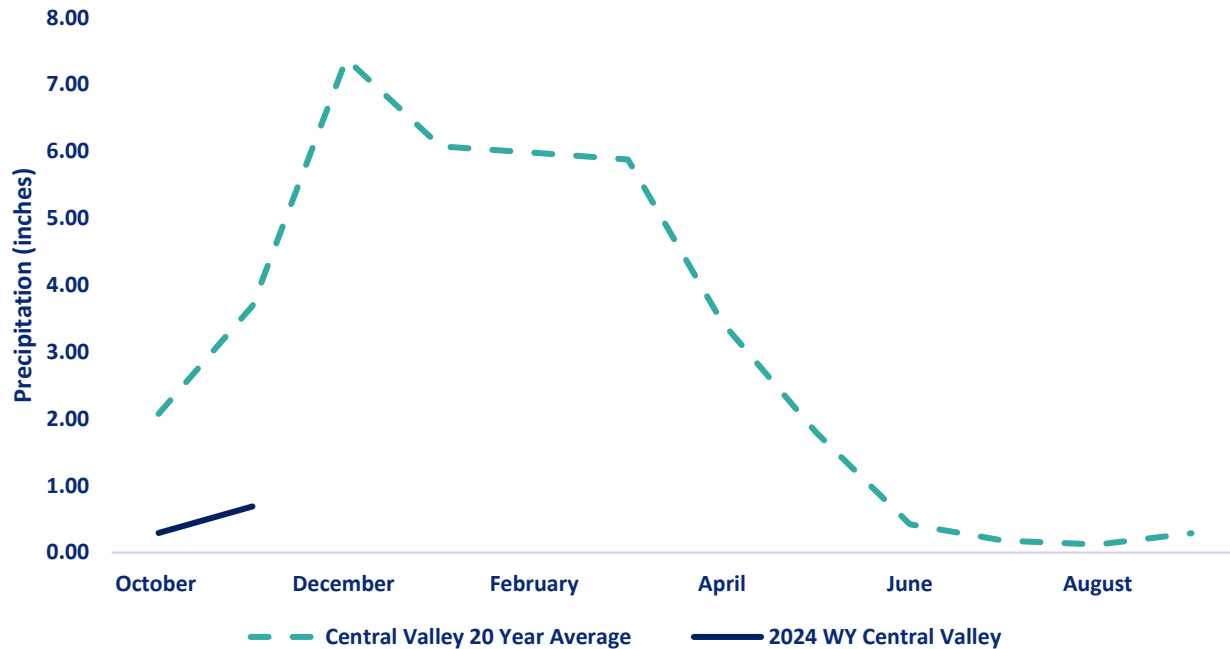
For the week ending on November 13th, the two-month futures volatility is at a premium of 3.73% to the index, down 1.71% from the previous week. The one-month futures volatility is at a premium of 4.96% to the index, down 1.56% The one-week futures volatility is at a discount of 0.13% to the index, volatility.

*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 the Central Valley, California.
Data as of 13/11/2024

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)	0.51	0.28	14.80	24	9
TULARE 6 STATION (6SI)	0.3	0.29	12.16	19	1
NORTHERN SIERRA 8 STATION (8SI)	1.26	0.26	24.37	36	30
CENTRAL VALLEY AVERAGE	0.69	0.28	18.68	26	0

RESERVOIR STORAGE

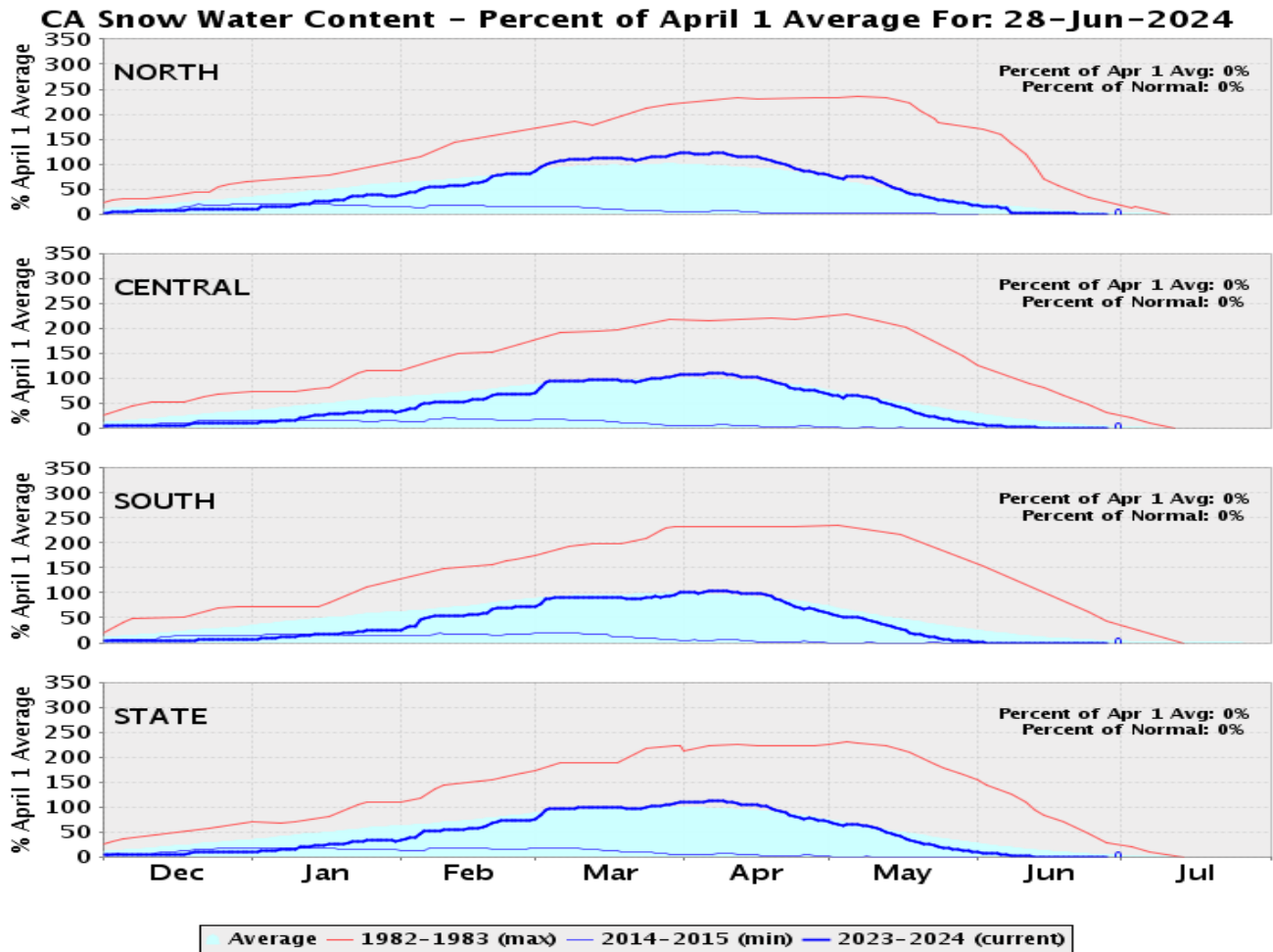
RESERVOIR	STORAGE (AF)	% CAPACITY	LAST YEAR % CAPACITY	*% HISTORICAL AVERAGE
TRINITY LAKE	1,601,469	65	50	113
SHASTA LAKE	2,538,497	56	69	104
LAKE OROVILLE	1,676,818	47	67	94
SAN LUIS RES	1,046,860	51	62	108

*% 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 2020. 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	0	0	0	0
CENTRAL SIERRA	0	0	0	0	0
SOUTHERN SIERRA	0	0	0	0	0
STATEWIDE	0	0	0	0	0

*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. November 7, 2024**

Data valid: November 5, 2024 at 7 a.m. EST

Intensity

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

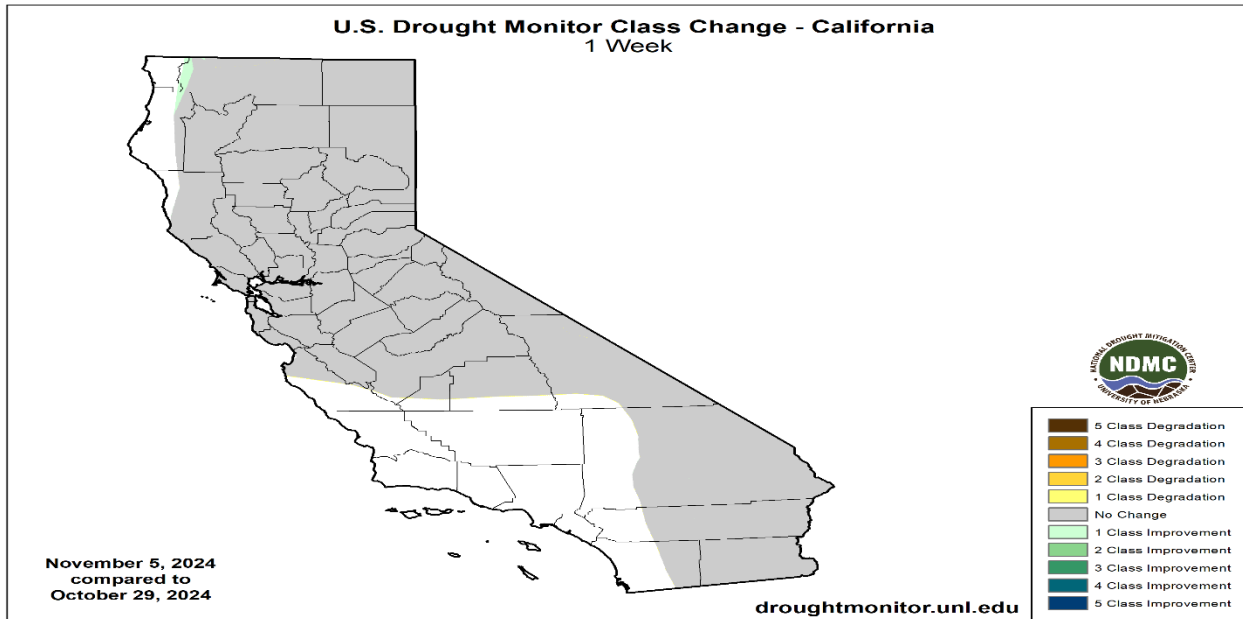
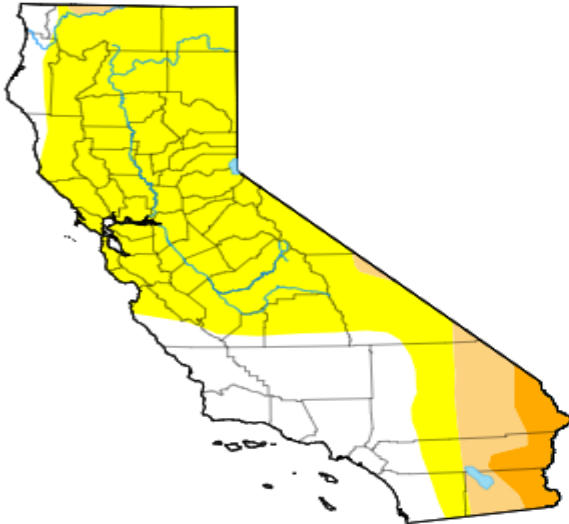
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[Brian Fuchs](#), National Drought Mitigation Center

Pacific Islands and Virgin Islands Author(s):

[Tsigeaye Tadesse](#), National Drought Mitigation Center



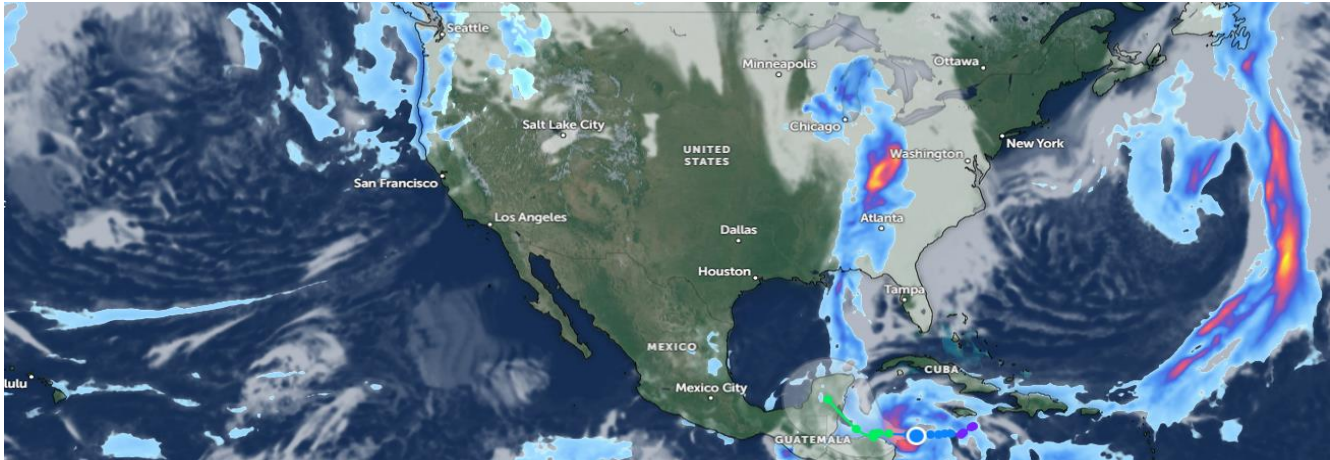
Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2024-11-05	25.53	74.47	12.26	4.30	0.00	0.00	91
Last Week to Current	2024-10-29	25.37	74.63	12.26	4.30	0.00	0.00	91
3 Months Ago to Current	2024-08-06	77.26	22.74	5.32	0.00	0.00	0.00	28
Start of Calendar Year to Current	2023-12-26	96.65	3.35	0.00	0.00	0.00	0.00	3
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	2023-11-07	94.04	5.96	0.00	0.00	0.00	0.00	6

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 some small precipitation activity in the northwest US. A clear southwestern US and Midwest. A strong line of storms over the eastern US stretching from the Gulf of Mexico to Canada, with some severe storm activity north of Atlanta moving eastwards.

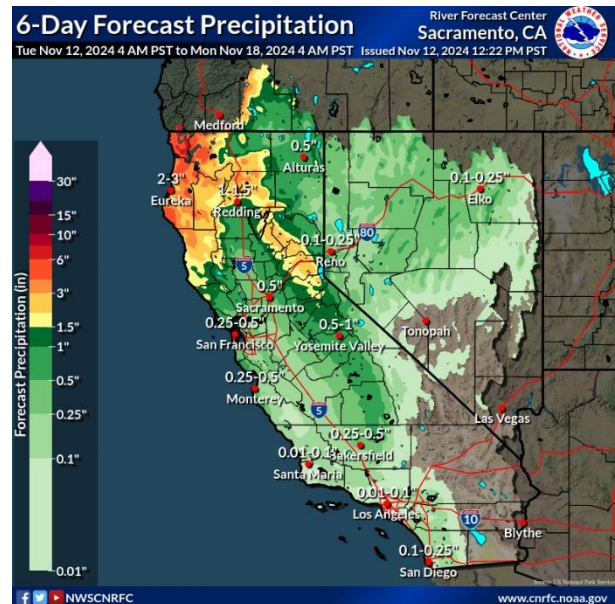


10 Day Outlook

Little to no change in the remnant shower activity at the beginning of the long term window as the large-scale trough begins to swing inland through Friday and into Saturday morning. A slight drying out on Saturday into Sunday before the next system begins to spread precipitation southward across the forecast region Sunday morning.

Guidance continues to show large uncertainty in the overall timing and magnitude with this system into next week. Afternoon forecasts generally followed the NBM and WPC, pushing the start time of precipitation over the Smith Basin back slightly but increasing overall accumulations by a few tenths of an inch on Sunday and into Monday morning. Heaviest accumulations in the three-day window are focused over the North Coast with nearly 2 inches over the Smith Basin and up to 0.50 inches down to Sonoma County. Currently, the heaviest accumulations for the Sierra are up to 1.25 inches around the I-80 corridor and 0.50 to 0.76 inches elsewhere along the crest. Forecasts will continue to be adjusted as guidance is updated.

Map Ref: Zoom Earth





WESTERN WEATHER DISCUSSION

Precipitation was scattered over much of the West, with the greatest rain over the Pacific Northwest, where 200% of normal rain was recorded for the week in much of Oregon and Washington. Cooler-than-normal temperatures dominated the region with many areas of Nevada, Utah, and Arizona and into western Wyoming 6-9 degrees below normal for the week. Dryness continued to dominate much of Montana with abnormally dry conditions expanding to fill the rest of the state and moderate and severe drought expanding in the west. Abnormally dry conditions spread to the rest of central Utah while moderate drought and abnormally dry conditions improved over much of western Oregon and Washington. Some improvements were made over eastern New Mexico this week as a result of the continued wetter conditions.

Reference:

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



WATER NEWS

CALIFORNIA WATER NEWS

Cadiz to Purchase 180 Miles of New Pipeline Assets

Cadiz, Inc. (NASDAQ: CDZI) (the "Company" or "Cadiz") announced today that it has entered into an agreement to purchase 180-miles of steel pipe from the terminated Keystone XL Pipeline Project. The Company plans to use the steel pipe for the construction of a pipeline network connecting the Company's groundwater bank in the Mojave Desert to major water networks in the Southwestern U.S. The 180 miles of new steel pipe will be added to the Company's expansive portfolio of pipeline assets, including 220 miles of existing pipeline acquired by the Company from El Paso Natural Gas in 2021. The 180 miles of new steel pipe will be used to expand the Company's pipeline network creating the largest new groundwater bank in the Southwest. The Company plans to begin construction in 2025.

"Repurposing fossil fuel infrastructure to deliver clean water to underserved communities is core to our mission," said Cadiz CEO Susan Kennedy. "Securing this steel will enable the Company to bring this critical infrastructure online faster and more efficiently."

"It's inspiring to see that sometimes hope and history align. The steel from the Keystone pipeline has found a new purpose—now transporting what gives life to everything: water. I commend the Cadiz leadership for their vision of creating a better future for our children." Dave Archambault II, Former Tribal Chairman Standing Rock Sioux Tribe.

The Keystone XL crude oil pipeline project sponsored by Canadian company, TC Energy, was terminated in 2021 after the Biden Administration revoked a presidential permit which would have allowed the pipeline to cross the Canada-U.S. border. Approximately 200 miles of unused steel pipeline from the abandoned project is currently stored on land in North Dakota. After several months of diligence to determine the suitability of the 36" steel pipe for transportation of water, Cadiz determined the Keystone pipe was a perfect fit for the Company's groundwater banking project in the Mojave Desert (the "Mojave Groundwater Bank").

"Converting the Keystone from an oil pipeline to a water pipeline serving disenfranchised communities is the ultimate definition of environmental justice," said David Sickey, former Senior Advisor to the U.S. Department of Energy and former Chairman Coushatta Tribe of Louisiana.

In October, the Company announced it had entered into a letter of intent (the "LOI") with a non-profit investment fund ("Fund") for a prospective investment up to \$150 million for the construction, ownership, and operation of the Mojave Groundwater Bank. Under the terms of the LOI, the Fund along with other non-profit and public sector



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investors, including federally recognized Native American Tribes, will provide up to \$401 million of equity capital to acquire assets and fund the construction of facilities for the Mojave Groundwater Bank, presently estimated in the amount of \$800 million. The parties will coordinate to seek available grant funding for any remaining construction costs.

Original Article: [The Financial Times/ PR Newswire](#)

Storms will bring flooding rain and mountain snow to California and Northwest

A pair of potent storm systems known as atmospheric rivers are spreading rounds of rain and snow across the Pacific Northwest and Northern California over the next several days.

The first storm is already pounding the region. About 1 to 2 inches of rain has fallen west of the Cascade Mountains. Seattle has picked up around 1 inch, with Portland past half an inch. Atmospheric rivers are zones of concentrated moisture that can stretch thousands of miles. They assist in transporting warm air from the tropics toward the poles, often producing heavy flooding rain in their path.

As rainfall continues, river and urban flooding risks increase, along with storm intensity by the middle of the week. Coastal flooding is also in the cards, as is heavy snow in the mountains.

The Weather Service office serving the Portland region said a “stronger system arrives Tuesday night into Wednesday with more significant rain amounts, stronger south winds and beach hazards.”

Hazards will ultimately stretch from the Strait of Juan de Fuca — which lies between the state of Washington and British Columbia’s Vancouver Island — to much of the California coastline, then inland to the Cascades, Sierra and eventually the northern Rocky Mountains.

Original Article: [The Washington Post by Ian Livingston](#)

\$740 Million Is Approved for New Facilities

The Los Angeles Department of Water and Power Board of Commissioners late last month gave the green light to provide up to \$740 million for new water recycling facilities in the San Fernando Valley.

The funds will go toward the Groundwater Replenishment Program jointly run by the Los Angeles Department of Water and Power and the Los Angeles Department of Public Works, Bureau of Sanitation and Environment. The program, one of the largest potable water reuse projects in the state, centers around the city’s Donald C. Tilman Water Reclamation Plant in Van Nuys.



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The goal of the program is to boost the availability of recycled water within the city of Los Angeles, reducing the need for the city to rely on water imported from the State Water Project and the Colorado River.

Recycled water is a key component to meeting the local water supply goals outlined in the city's 2020 urban water management plan, the Los Angeles New Deal, and Los Angeles Mayor Karen Bass' Executive Directive 5, which all focus on reducing reliance on imported, purchased water, in favor of investing in local and sustainable water supplies.

This project around the Donald Tilman Water Reclamation Plant aims to produce at least 20 million gallons per day of purified recycled water that can reach more than 250,000 Los Angeles Department of Water and Power customers.

New facilities will include: an advanced water purification facility capable of producing 30 million gallons per day of purified water.

Dallas-based Jacobs Solutions Inc. has already been selected as the lead contractor for the project.

Construction is set to begin this month, with the project slated for completion by the end of 2027.

Original Article: [Los Angeles Business Journal by Howard Fine](#)



US WATER NEWS

Draft bill on water resource management authority circulated among states

A draft model bill proposing setting up of an Integrated Water Resources Management Authority which will be responsible for developing water security plans from villages to cities, groundwater management and floodplain management has been circulated to all states, a senior official said on Tuesday.

Rakesh Kumar Verma, Additional Secretary, Department of Water Resources said to achieve water security as part of the vision for Viksit Bharat, the government has proposed the Integrated Water Resources Management Authority (IWRM) at the state level, which will coordinate and integrate efforts of multiple water-related departments and agencies.

"A draft model bill has been circulated to all the states. This state IWRM authority, under the overall supervision of an IWRM council headed by chief minister, has been vested with various regulatory powers to set the direction of water sector development," he said at the inaugural session of the 10th Water Innovation Summit organised by the Confederation of Indian Industry (CII) and Triveni Water Institute.

"It will be responsible for developing water security plans from villages and cities to districts and state level, groundwater management, floodplain management and river conservation zones," he said.

The official said a new draft National Water Data Policy is another significant step in this direction.

The Ministry of Jal Shakti also has a national strategy for accelerating innovation in the water sector.

Original Article: [The Business Standard by Press Trust India](#)

U.S.-Mexico water agreement might bring relief to parched South Texas

The U.S. and Mexico agreed to amend a 1944 water treaty, which might bring some relief to South Texas farmers struggling with scarce water.

The International Water and Boundary Commission, a federal agency that oversees international water treaties between the U.S. and Mexico, announced Saturday that the two countries had signed a highly-anticipated agreement that will give Mexico more options to meet its water deliveries to the U.S. Mexico still needs to give the U.S. more than a million acre-feet of water.

South Texas farmers and ranchers have been devastated lately by low rainfall and Mexico falling behind on its deliveries to the region.

Under the 1944 international treaty, Mexico must deliver 1,750,000 acre-feet of water to the U.S. from six tributaries every five years, or an average of 350,000 every year. But



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Mexico is at a high risk of not meeting that deadline. The country still has a balance of more than 1.3 million acre-feet of water it needs to deliver by October 2025.

The new amendment will allow Mexico to meet its delivery obligations by giving up water that was allotted to the country under the treaty. It also allows Mexico to transfer water it has stored at the Falcon and Amistad international reservoirs to the U.S.

Original Article: [AP News by Berenice Garcia/ The Texas Tribune](#)

Texas cancels water permit hearing for Musk’s SpaceX launch site

Texas regulators canceled a public hearing this week on a pending wastewater permit for SpaceX’s Starbase launch site, which has sparked controversy over alleged harms to wetlands and the fragile ecosystem nearby.

The Texas Commission on Environmental Quality is considering a request from SpaceX to discharge treated wastewater into Texas’ South Bay, the southernmost bay in the state, from its launch site in Cameron County.

The company run by Elon Musk released tens of thousands of gallons wastewater, known as “deluge” water, during several rocket launches in 2023 and 2024 without proper authorization, polluting surrounding wetlands, according to an EPA order from this year. The company agreed to pay a civil penalty of \$148,378 and applied for the permit under the Clean Water Act in July.

The commission did not give a reason for canceling the meeting but said in a notice Friday that it would be rescheduled “for a later date.” It comes as Musk has emerged as an influential figure in President-elect Donald Trump’s orbit.

Original Article: [E&E News by Miranda Willson](#)

What will it take to end 3 decades of drought in Arizona?

Winter 2022-2023 brought record snowfall to Arizona's high country and above-average rainfall across much of the region. The drought-weary state may have breathed a sigh of relief as snowmelt refilled reservoirs and aquifers.

But that was one wet year in a long string of dry ones, and one good year won’t end a three-decade drought.

Arizona is dry, with or without drought. With just two rainy seasons — the summer monsoon and winter snowfall — the state has averaged about 12 inches of rain a year since measurements began in 1896.

But since 1994, the Southwest has experienced drier than normal conditions. Wet winters are followed by dry years, putting pressure on water supplies across the region. “Looking at these last 31 years, 21 of those have been dry and below the long-term, 12-inch average,” said Erinanne Saffell, Arizona’s state climatologist. “Ten of them wet, but they haven’t happened all in a row which makes it harder to come out of that drought.”



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Climate patterns like El Niño and La Niña can provide temporary relief or trigger short-term drought, but they are not strong enough to significantly alter long-term drought.

“We would need a surplus continuously where it would actually recharge our water supply,” she added. “It would be consistently having wet seasons and hopefully not being as hot.”

The Colorado River has declined in recent years, with decreased streamflows and lower water levels in Lake Mead and Lake Powell, the two major reservoirs that store the river’s water. Over 40 million people across seven states and Mexico rely on its water. The Salt and Verde rivers, managed by Salt River Project which delivers half of Phoenix’s water supply, have also experienced declines.

Original Article: [AZ Central by Hayleigh Evans](#)

Stuart’s mission to restrict data centers impacting Caroline water project

Caroline County officials were caught off guard last month when the Virginia Department of Environmental Quality [suspended the process for the county to obtain a permit to withdraw 13.9 million gallons of water](#) per day from the Rappahannock River.

The DEQ’s decision could extend the approval process well into next year or beyond.

The agency had tentatively approved the permit before a public hearing last month, at which dissenters came out in droves. Their concerns included the exercise of eminent domain on 11 acres of a farmer’s property on Tidewater Trail to construct a water intake facility.

But perhaps the biggest blow to the county’s efforts was the staunch criticism of the proposal by Sen. Richard Stuart (R-Westmoreland) and Del. Hilary Pugh Kent (R-Richmond County) who represent Caroline in the General Assembly.

Kent represents a portion of the county, including the town seat of Bowling Green, which is enduring a water crisis, according to a letter to town officials from the Office of Drinking Water’s Richmond Field Office.

Stuart said it’s his job to question county officials when a project they’re considering impacts citizens in other jurisdictions within his district.

Stuart, who’s on a quest to rein in data centers across the region, told the Free Press that the Virginia constitution makes it clear that natural resources are for the benefit and enjoyment of citizens — not large corporations that potentially require tremendous amounts of water and power to operate facilities.

Jeff Sili, who represents the Bowling Green District on the Caroline Board of Supervisors, told the Free Press recently that Stuart and Kent “should have done some research before speaking out against a permit which will be greatly needed for the future needs of our town residents and businesses.”



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County officials did not speak at the DEQ public hearing and have been mostly quiet on the project [since the board of supervisors approved it by a 6-0 vote in June](#). The silence is due to [pending litigation from Cory Garrett](#), the fifth-generation farmer whose land they obtained with hopes of building the water intake facility.

Stuart said that if the county needs water for citizens, then it should modify the permit request to remove business needs and then he would support it.

However, Sili said that as part of the permitting process, the DEQ required that the county project business water needs in the Carmel Church area 30 years into the future, which is why commercial growth — particularly data centers — was mentioned in the permit application. Sili also noted that any data centers in Carmel Church, which he did not vote to support, will not need the permit to operate.

“I know some data center opponents have hung their hat on that denial of the permit,” Sili said. “But the approved and by-right data centers will be serviced by county water which lies in a different aquifer.”

Bowling Green’s water woes

In addition to facilitating business growth, county officials also stress the need for drinking water, particularly in Bowling Green, where, in August, town officials received a notice detailing violations of the Public Water Supplies law. The notice states that the town’s wells were over the legal limit for gross alpha emitters — or radioactive elements that release energy in the form of alpha particles when they decay. Those elements include uranium, thorium, radium, lead, radon or polonium.

In June 2023, radiological results from one well in the town showed 40 pCi/L for gross alpha emitters (15 is acceptable). Other wells and entry points in the Town Waterworks system ranged from 16-31 pCi/L.

On Jan. 18 of this year, results from two entry points showed a pCi/L of 26 and 30.

In March, the Office of Drinking Water (ODW) issued the town a Notice of Alleged Violations that two wells exceeded the Primary Maximum Contaminant Level for gross alpha emitters. Town officials met with the Office of Drinking Water and the University of Maryland Environmental Finance Center on April 29 to discuss the alleged violations and methods to bring the town back into compliance, as well as the funding required to do so.

In May, ODW and town officials met and discussed drilling a well to replace one of the wells in violation and analyzing water quality at the new well. After that, the next step would be determining treatment, pending funding available to the town.

Town officials were also instructed to submit to the ODW a Corrective Action Plan (CAP), under which the town must maintain compliance with regulations for two consecutive years to satisfy compliance. The town must submit quarterly reviews to the Richmond Field Office and a final report verifying that the CAP was completed.



Stuart said he was unaware of the water needs in Bowling Green but reiterated that the county should modify its permit application and perhaps ask for 5 million gallons a day instead of 13.9 million to support drinking water — not business growth.

“I absolutely, positively support getting the residents of Bowling Green water and the citizens of the county water,” Stuart said. “If they need it from the Rappahannock, that’s what we would do. They could do that fairly easily. All they have to do is modify their permit.”

Original Article: [Fredericksburg Free Press by Taft Coghill Jr](#)

A century-old practice allows people to use more than their legal share of Colorado River water. Researchers say it should stop.

For a few weeks each spring, Kathleen Curry, a rancher and former state lawmaker, gets to use more than her legal share of Colorado’s water. The extra water is vital for ranchers in her area, she said.

“Everybody puts on as much water as they can because they know, after the runoff is over, there won’t be enough,” said Curry, who raises cattle and hay in Gunnison County. But new research suggests taking that extra water away to help stabilize the overstressed Colorado River Basin.

When there’s an abundance of water, people can use more than their legal share thanks to a quirk of water law called the free river condition. The researchers, primarily from the University of Virginia, call the practice an archaic “loophole” that should be closed to properly manage the state’s water resources.

Colorado state officials are adamantly opposed to the idea, saying the free river condition is justified by the state constitution. Farmers and ranchers, like Curry, say closing the “loophole” threatens agricultural economies. But the prospect of shrinking water supplies in the Colorado River Basin could override ranchers and the state and bring an end to the free river condition in Colorado.

“Me, the social scientist, I feel like if water is scarce ... you want a water rights system that’s closed. You don’t want a loophole in it,” said Peter Debaere, an economist at the University of Virginia who contributed to a recent study on the free river condition.

The free river condition happens when there’s more than enough water to meet all of the demands on a river. It’s most common during spring runoff in May and June, when snowmelt swells Colorado’s rivers and streams.

For example, people might have the right to divert 50 cubic feet per second of water from a stream. When there is more than 50 cfs in the stream, it triggers the free river condition.

That’s when people with water rights can use more than their legal allocation because there is excess water available. People without water rights can also use water when the condition is in effect.



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Once the flows shrink below the total allocation, it ends. This is when a farmer might call a water official to place a “call” on the river, saying they’re not getting their legal allocation and requiring upstream users to cut back or stop using water.

What does free river water use look like?

The researchers stumbled on the free river condition when they were studying water scarcity in the Colorado River Basin, Debaere said.

They looked at a decade of water data for one region of Colorado, known to water wonks as Division 5. The region follows the Colorado River from its headwaters near Grand Lake down to where it crosses the Colorado-Utah border near Grand Junction.

The researchers did not calculate the excess water use under free river conditions in the three other divisions on the Western Slope, which are part of the Colorado River Basin. In 2017, people diverted about 87,600 acre-feet more than the legal allocations in Division 5, according to the study published in [Water Resources Research](#). Of that, about 21,400 acre-feet was used and lost for good. The rest eventually ran back into rivers and streams.

One acre-foot roughly equals the annual water use of two to three households.

The 21,400 acre-feet that typically disappears from Division 5 could instead flow downstream to Lake Powell, one of the main storage reservoirs for the Colorado River, the researchers said. Powell’s storage is at a third of its capacity after recently hitting historic lows.

Or, Colorado could stop the free river condition as a good faith effort in the ongoing negotiations over the future management of the Colorado River, the researchers said. It would show the six other basin states that Colorado is doing its part to help balance water use in the basin.

Ending the free river condition might also be a less impactful way of saving water than other methods, like paying farmers not to plant crops, the researchers said.

Original Article: [The Colorado Sun by Shannon Mullane](#)



GLOBAL WATER NEWS

South Africa Economic Hub to Fasttrack Steps to End Water Crisis

- Rand Water has warned that Johannesburg may run out of water
- Steps to be taken include increasing teams to fix water leaks

South Africa's commercial hub Johannesburg will take a series of steps to improve water supply and stop its taps from running dry, the country's water minister said.

The city will improve revenue collection to increase the funds available for maintenance and provide better incentives for water to be used efficiently, Pemmy Majodina told a briefing Monday in Johannesburg.

Original Article: [Bloomberg by Ntando Thukwana](#)

Malaysian state Selangor proposes \$1.4bn underground tunnel project to tackle flood risks

The Selangor government in Malaysia has advanced a proposal to create an underground tunnel system with an investment of MYR6bn (\$1.36bn) to channel rainwater overflow from Kuala Lumpur.

Through the project, the Selangor government aims to reduce flood risks for both the capital's western areas and parts of the Malaysian state.

The underground tunnel project, which awaits federal approval, was submitted to Deputy Prime Minister Fadillah Yusof, who also oversees energy transition and water transformation initiatives.

The concept draws from flood management systems in Japan, particularly those used in Kawasaki and Saitama, where excess water is channelled into underground tunnels. Selangor's infrastructure and agriculture committee chairman, Izham Hashim, said that his recent visit to these cities demonstrated the model's effectiveness in controlling urban flooding.

He described the Japanese system as an example of a sustainable long-term solution to flood challenges in Malaysia, reported Utusan Malaysia.

Izham, has been quoted by the publication, as saying said: "During my visit to these two Japanese cities, I found it to be very effective and a viable long-term solution for flood management in this country."

This tunnel system proposal aligns with Selangor's broader Water Master Plan, an ongoing study into viable flood prevention solutions.

Izham explained that local rivers are often overwhelmed by high volumes of rain, which this infrastructure project seeks to address. He highlighted that the tunnel project would protect not only Selangor from floods but also Kuala Lumpur, emphasising its dual benefits for both regions.



The project's significant cost requires approval and funding from the federal government, Izham said. He cited frequent flooding in the Klang Valley region as an ongoing issue that necessitates urgent, innovative solutions.

Izham stated that there is a desire to resolve the problem promptly, given the increasing frequency of floods, and emphasised the need to consider various solutions to address the issue.

Original Article: [Tunnels and Tunneling by Swagath Bandhakavi](#)

New report: “An Ocean of Potential” exists for Blue Carbon finance, an essential yet largely untapped climate mitigation strategy

Analysis published by Ecosystem Marketplace and the Katoomba Group finds there is vast potential for investment in coastal and marine habitats to stem degradation and maximize the potential of these ecosystems to mitigate climate change.

These Blue Carbon (BC) habitats sequester carbon at high rates—even higher than terrestrial forests, by some estimates. However, these critical ecosystems are also highly degraded worldwide. Significant investment will be required to conserve and restore them, both in terms of scaling up existing projects and expanding efforts to new geographies.

“The Blue Carbon space is still emerging with lots of potential to address both the climate and biodiversity crises. I remain optimistic about the variety of finance streams already at our fingertips to catalyze and expand conservation and restoration of Blue Carbon ecosystems,” says Tundi Agardy, the report's author and Founder and Executive Director of Sound Seas.

“At present, there is global demand from the private sector and countries looking to include Blue Carbon in their nationally determined contributions,” says Agardy. “Getting these groups on the same page may be what is needed to drive up supply.”

Key findings from the report:

- BC remains a small, “boutique” slice of the overall voluntary carbon market, comprising less than one percent of overall credit transactions per year. Most demand comes from corporates and investors purchasing credits, as well as governments interested in BC for national climate policy. Current supply constraints include high upfront costs and a lack of available verifiers.
- However, BC credits are also sold at a significant premium over current carbon market rates, a reflection of steep initial project costs and the space's niche appeal to buyers who are attracted to the multiple environmental and social benefits of BC projects.
- A large variety of revenue streams and technical support for marine conservation and restoration already exist, such as “blue bonds” that can support marine conservation and restoration. Carbon markets can also channel additional private



sector finance to help realize BC's potential, so long as carbon finance is carefully planned and executed with social, environmental, and economic sustainability in mind.

- Opportunities to scale BC finance include using terrestrial REDD+ as a framework to shift from small-scale demonstration projects to jurisdictional approaches and catalyzing public and private investments via development banks and multilateral agencies.

“We are at a critical juncture in our transition to a nature-positive economy,” says Michael Jenkins, Forest Trends Founding President and CEO. “Protecting and restoring our coastal and marine habitats is an essential part of this work. The research in this report is critical to raise awareness of Blue Carbon’s unique potential and inspire nature-positive action.”

Original Article: [Ecosystems Marketplace by EM Staff](#)

Thames Water board split over two competing deals to save it from insolvency

Thames Water’s board is split over two competing deals from its lenders aimed at saving the UK’s biggest water supplier from going insolvent.

Two classes of creditors, group A bondholders and group B bondholders, are offering high-interest £3bn rescue packages intended as a liquidity lifeline while the company burns through cash and seeks to restructure its debts.

Thames is labouring under an unsustainable £15bn debt burden after years of paying hefty dividends as well as fines for pollution scandals. Its shareholders, which include the UK academics’ pension fund and international investors from China, Canada and Abu Dhabi, have labelled the company “uninvestible” and refused to put in more money.

That has left Thames heading for a painful restructuring deal that is expected to wipe out shareholders and see its lenders seize the company – or it be forced into temporary state ownership.

The choice of debt deal is crucial as it could feed into the terms by which new equity investors sign up to take on Thames. The successful group would ultimately have a greater say over who takes control of the water company that serves 16 million customers in London and the Thames valley.

Group A represents £12bn of Thames’ debt, v a much smaller junior debt pile held by group B. Group A includes controversial US hedge funds Elliott Partners and Silver Point, as well as some well-known UK fund managers such as M&G group, and wants to charge Thames annual interest of 9.75% – plus relatively high fees, particularly if the debt is repaid early. Group B lenders would charge interest at a lower rate of 8% with significantly lower fees and different conditions. Both camps insist on having “super senior” status – ranking above the A bonds in the event of a default.



VELES WATER WEEKLY REPORT

While Thames's chairman, Sir Adrian Montague, has already said it intends to proceed with the group A deal, its board was split on Friday over which deal is best after the group B offer emerged last week, people familiar with their thinking said. It is understood that a committee of the board at Thames – rather than a full board meeting – was convened to debate their merits.

“We have a very clear duty to consider not just survival but sustainability of finances. I'm not convinced the right emphasis has been put on that by some on the board. That includes the chairman,” one person close to the deliberations said.

“The group A offer was sought as an emergency measure. But, like most emergency measures, it comes with major downsides. If there's an offer which can leverage more investment in the long term, that's serious,” the same person added.

Some board members have argued that the A deal offers the “clearest path” to raising fresh equity under a short time frame with consent of creditors, the people said. Others have argued that B lenders are offering much better terms for lifeline funding. They also argue that group A's proposal is aimed at “making the likes of Elliott kingmakers if not king” more than it is intended to secure the company's future, the same people added.

A source close to the group A proposal said: “The facility that Thames Water announced to the market followed weeks of constructive and intensive negotiations with the company and will be financed by a broad range of creditors including pension funds, insurance funds and banks who lend across the UK infrastructure sectors.”

They added that the group A proposal also allows Thames to draw on emergency reserves stabilising the company while court processes take place to allow the deal to progress.

If both deals were to fail, Thames could fall into a form of temporary re-nationalisation known as a special administration regime.

Original Article: [The Guardian by Anna Isaac](#)



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