

Veles Water Weekly Report

1. **WATERTALK**
TECHNICAL ANALYSIS BY JOSHUA BELL
2. NQH2O INDEX VS H2O FUTURES PRICE PERFORMANCE
3. NQH2O INDEX HISTORY
4. NQH2O INDEX AND H2O FUTURES VOLATILITY ANALYSIS
5. CENTRAL VALLEY PRECIPITATION REPORT
6. RESERVOIR STORAGE
7. SNOWPACK WATER CONTENT
8. CALIFORNIA DROUGHT MONITOR
9. CLIMATE FORECAST
10. WESTERN WEATHER DISCUSSION
11. **WATER NEWS**
 - I. CA WATER NEWS
 - II. US WATER NEWS
 - III. GLOBAL WATER NEWS

March 28th 2024

Authors:

Lance Coogan - *CEO*

Joshua Bell - *Research Analyst*

research@veleswater.com

+44 20 7754 0342





WATER FUTURES MARKET ANALYSIS

Welcome to ***WATERTALK***

by Joshua Bell

CLICK THE LINK BELOW

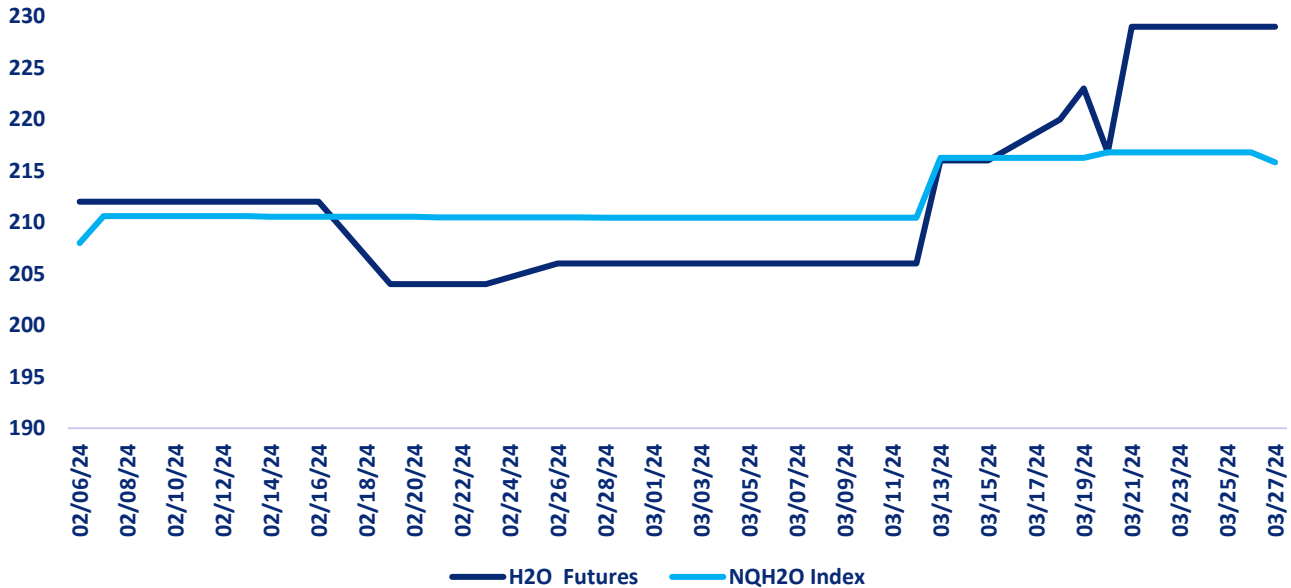
“A 2 minute technical analysis video of H2O futures”

<https://vimeo.com/928292518?share=copy>



NQH2O INDEX PRICE vs H2O FUTURES PRICE

1 Month Price Performance NQH2O Index vs H2O Futures



Price Chart Based upon Daily Close

The new NQH2O index level of \$215.84 was published on March 27th down \$0.96 or 0.44% from the previous week. The April contract is considered the front month. The futures have been closing at a premium of \$12.20 to \$13.16 versus the index over the past week.

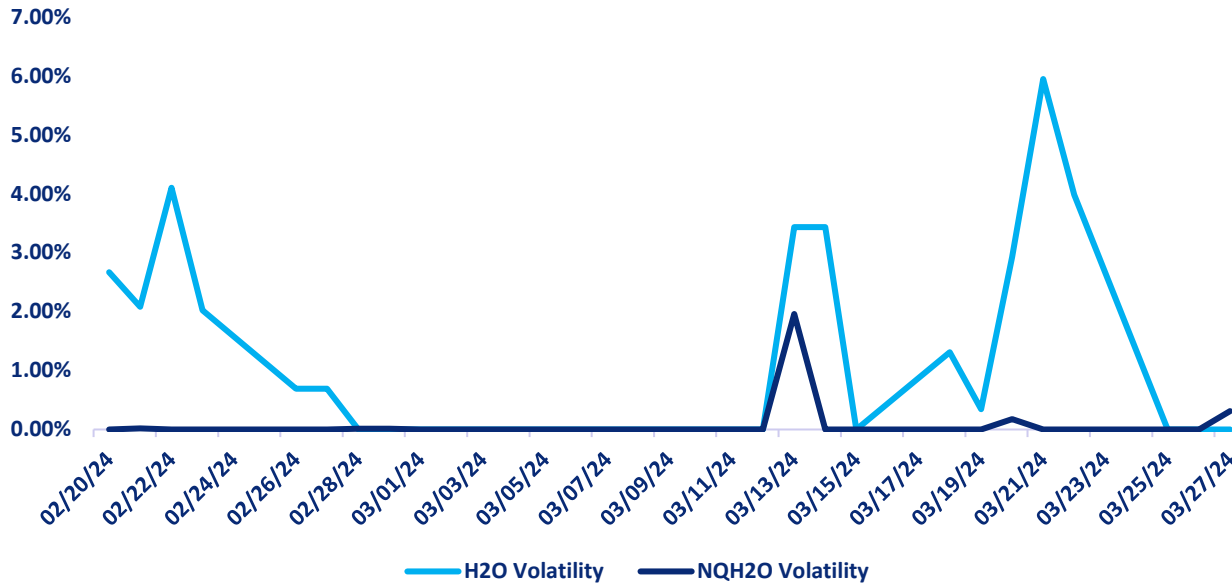
Below are the bid offer prices on different expiries being quoted in the market.

Apr 24	212@232
May 24	225@254
Jun 24	255@275
Jun 25	339@395



H2O FUTURES AND NQH2O INDEX VOLATILITY ANALYSIS

Daily H2O Futures Volatility vs Daily NQH2O Index Volatility



DAILY VOLATILITY

Over the last week the April contract daily future volatility high has been 5.95%.

ASSET	1 YEAR (%)	2 MONTH (%)	1 MONTH (%)	1 WEEK (%)
NQH2O INDEX	54.27%	3.40%	3.38%	0.69%
H2O FUTURES	N/A	10.90%	8.10%	5.63%

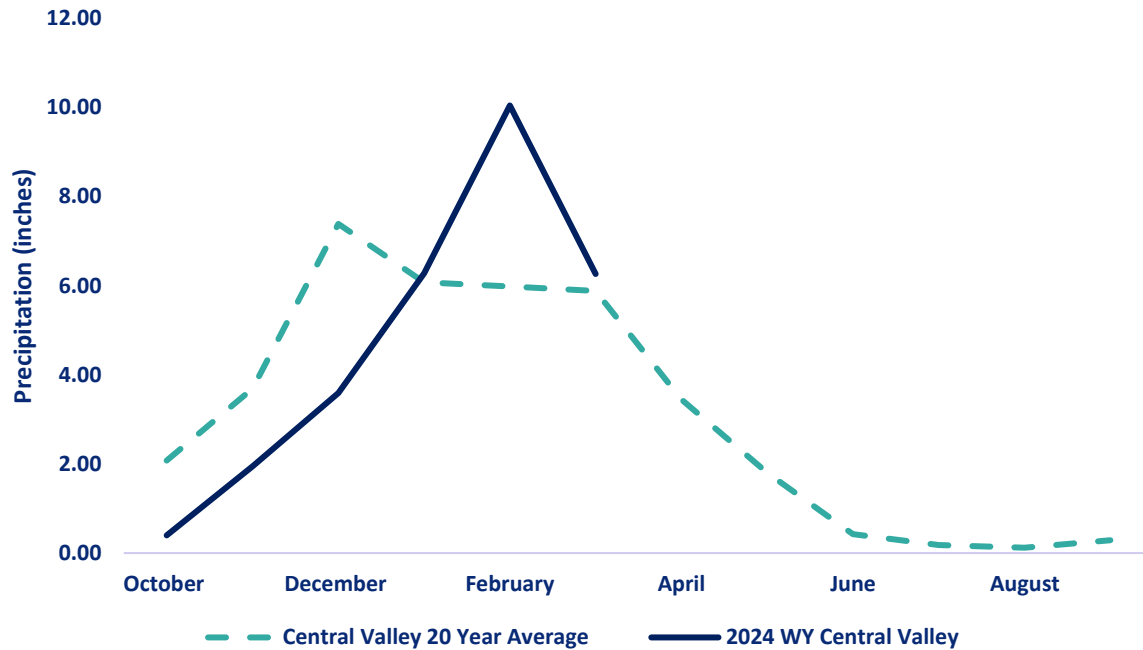
For the week ending on March 27th, the two-month futures volatility is at a premium of 7.51% to the index, up 2.83% from the previous week. The one-month futures volatility is at a premium of 4.73% to the index, 0.29% The one-week futures volatility is at a premium 4.94% to the index, up 2.86% from the previous week.

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



CENTRAL VALLEY PRECIPITATION REPORT

Central Valley Precipitation Index



enCentral

Valley average is calculated using data from 19 weather stations in the Central Valley, California.
Data as of 27/03/2024

STATION	MTD (INCHES)	WEEK ON WEEK CHANGE (INCHES)	% OF 20 YEAR AVERAGE MTD	2024 WYTD VS 2023 WYTD %	2024 WY VS 20 YEAR AVERAGE TO DATE %
SAN JOAQUIN 5 STATION (5SI)	6.26	1.55	107.38	185	82
TULARE 6 STATION (6SI)	4.42	1.19	111.87	215	82
NORTHERN SIERRA 8 STATION (8SI)	8.11	2.24	103.16	133	96
CENTRAL VALLEY AVERAGE	6.26	1.66	106.50	178	87

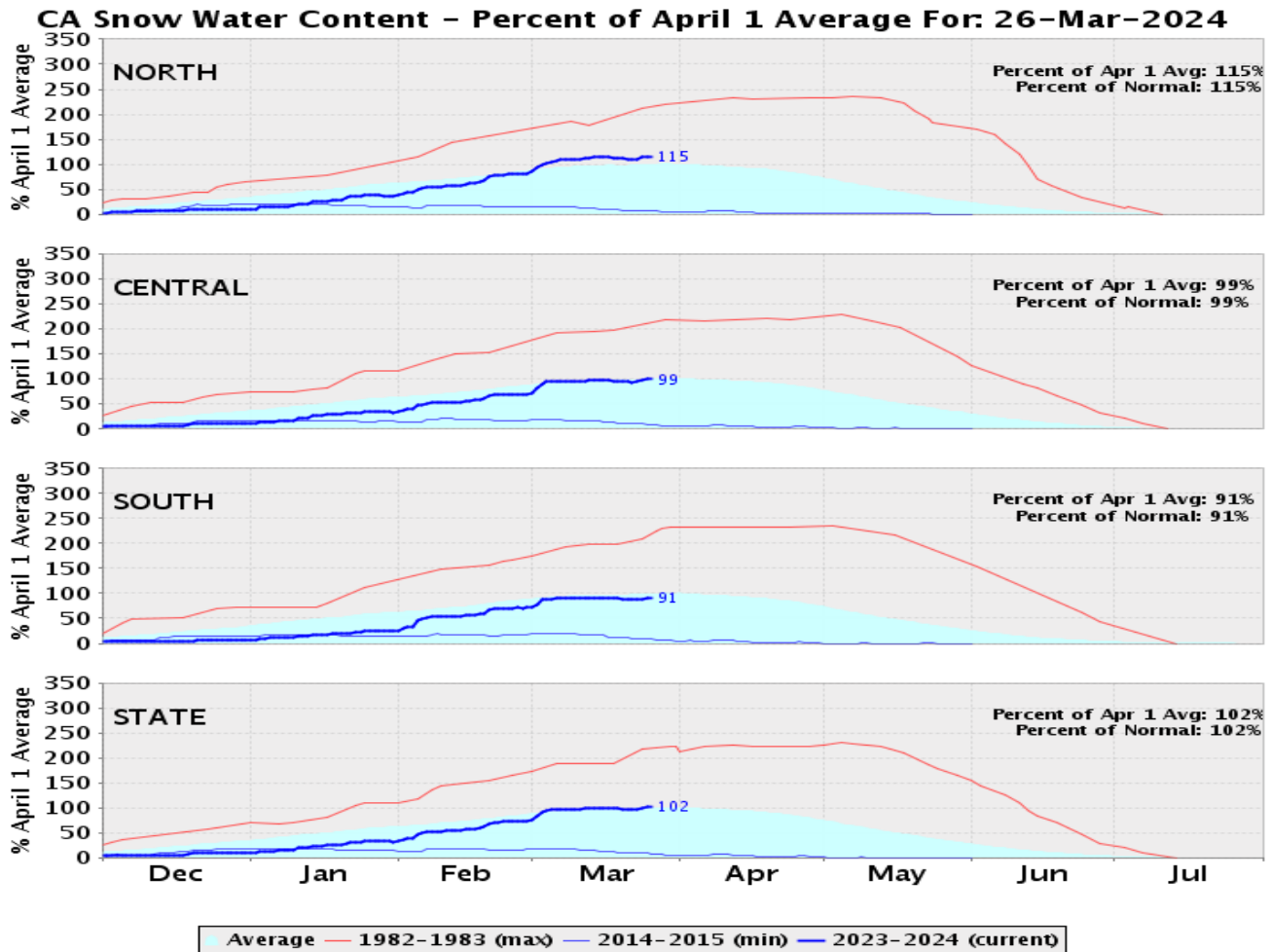
RESERVOIR STORAGE

RESERVOIR	STORAGE (AF)	% CAPACITY	LAST YEAR % CAPACITY	*% HISTORICAL AVERAGE
TRINITY LAKE	1,923,247	79	37	109
SHASTA LAKE	4,060,068	89	80	115
LAKE OROVILLE	3,068,014	87	82	125
SAN LUIS RES	1,474,536	72	96	85

*% 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](https://www.water.ca.gov/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	32	0.1	178	113	113
CENTRAL SIERRA	26.1	0.9	229	99	96
SOUTHERN SIERRA	20	0.8	258	93	90
STATEWIDE	25.9	1.3	231	102	99

*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.

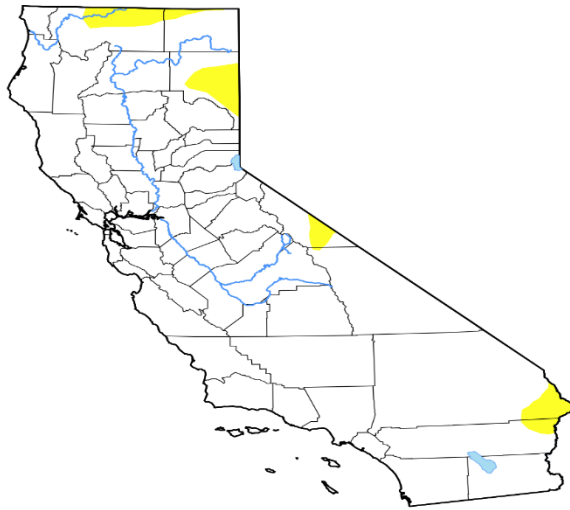
** April 1st is used as the benchmark as it when the snowpack in California is generally deepest. It has been used the benchmark date since 1941 by DWR and can be used to predict spring river flow.



DROUGHT MONITOR

California

[Home](#) / California



Map released: Thurs. March 21, 2024

Data valid: March 19, 2024 at 8 a.m. EDT

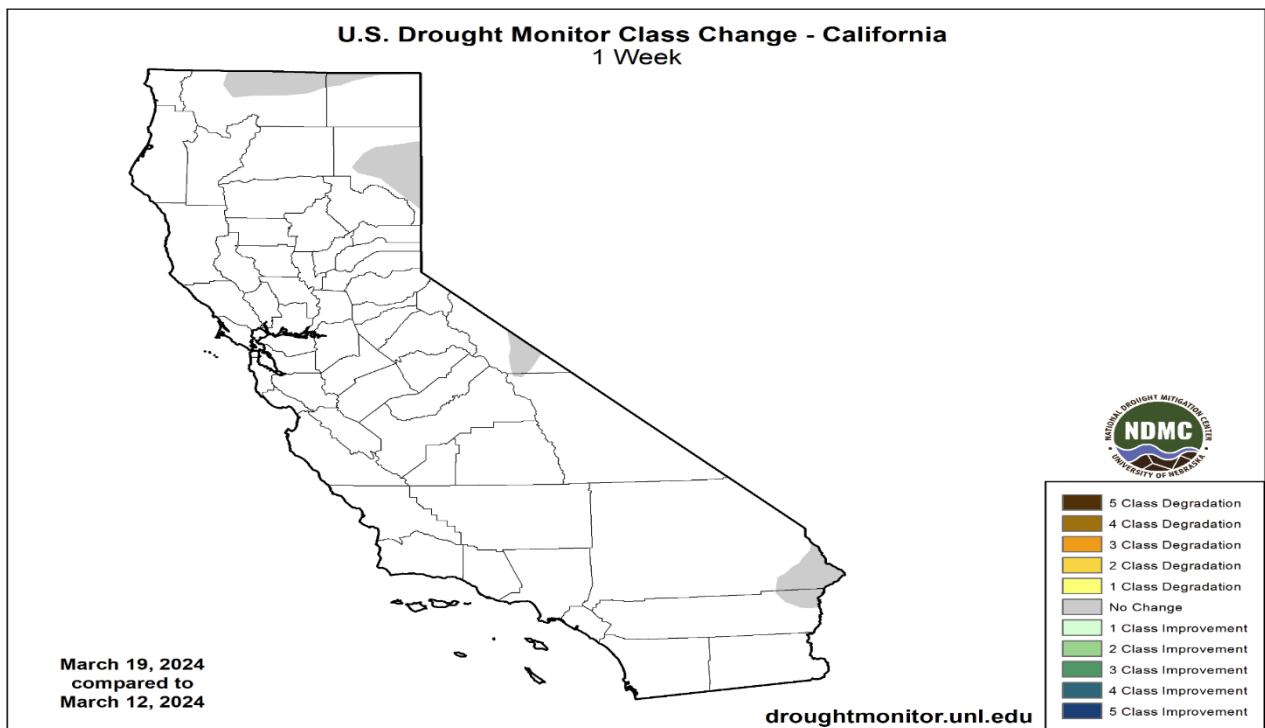
Intensity

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

Authors

United States and Puerto Rico Author(s):
[Brad Rippey](#), U.S. Department of Agriculture

Pacific Islands and Virgin Islands Author(s):
[Richard Heim](#), NOAA/NCEI



Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2024-03-19	95.46	4.54	0.00	0.00	0.00	0.00	5
Last Week to Current	2024-03-12	95.46	4.54	0.00	0.00	0.00	0.00	5
3 Months Ago to Current	2023-12-19	96.33	3.67	0.00	0.00	0.00	0.00	4
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	2023-09-26	94.01	5.99	0.07	0.00	0.00	0.00	6
One Year Ago to Current	2023-03-21	48.51	51.49	35.88	8.49	0.00	0.00	96

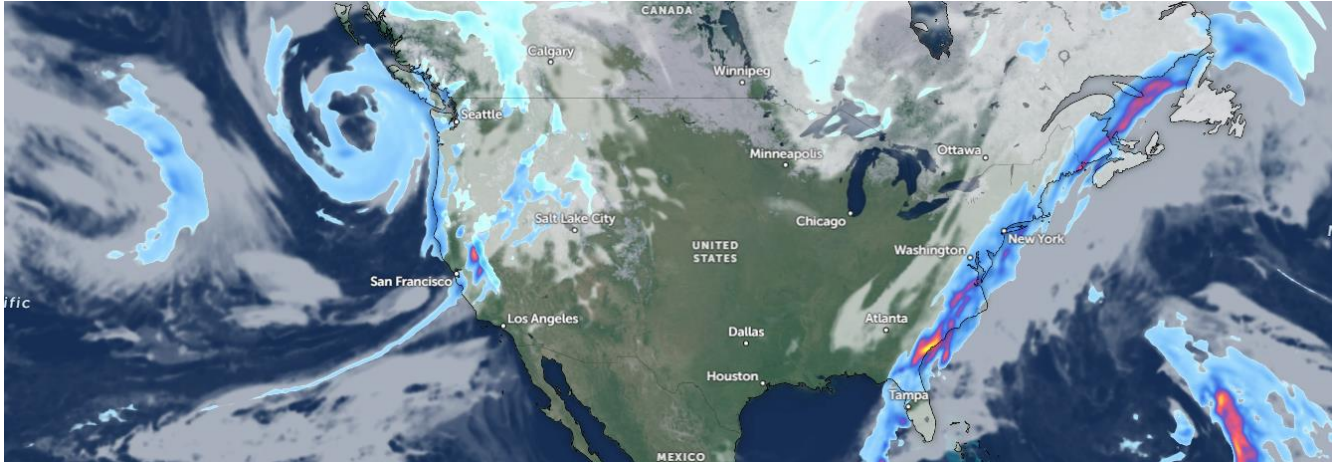
The U.S Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC.



VELES WATER WEEKLY REPORT

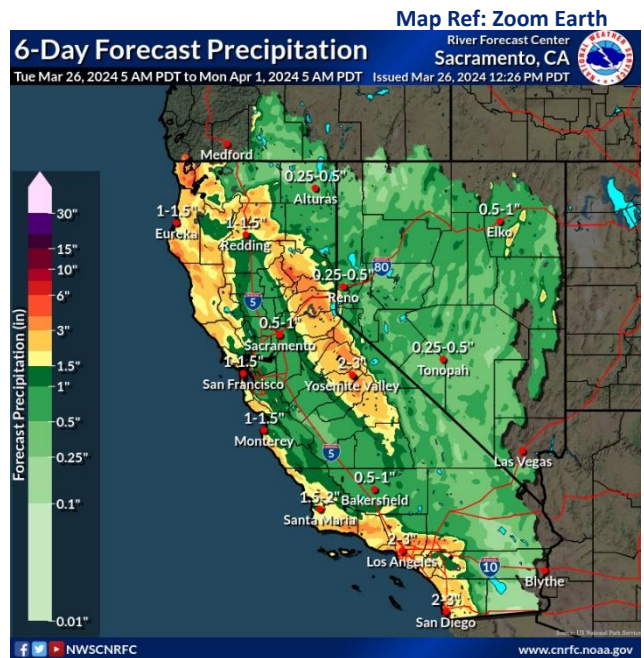
CURRENT SATELLITE IMAGERY

The satellite picture shows a Pacific frontal system hitting the Western Canadian and Northwest US coastline moving eastwards bringing precipitation to these areas and into the Rockies. We are expecting precipitation in the LA and Central Valley areas over the weekend. The central US is clear and there is a line of storms along the east coast moving in a northeasterly direction. There is no monsoon activity at present.



10 Day Outlook

Not much change to the forecast thinking compared to this morning. Expect a vertically-stacked low to move south off the CA coast later Fri through the weekend and eventually across southern CA early next week, while a frontal system and associated moisture plume spread precipitation across the region. Models are a bit more consistent in showing heavier amounts across the transverse ranges of southern CA and vary regarding precip amounts down into SW CA. With the 19 UTC NBM not quite available yet at the time the forecast was created, the latest forecast represents a blend of the 13 UTC NBM and WPC, which resulted in overall higher amounts for portions of southern CA as well as NE CA/NW NV and slightly lower amounts for portions of the central and northern CA coast. Freezing level forecasts were largely unchanged.



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



WESTERN WEATHER DISCUSSION

Late-season precipitation in the Southwest contrasted with the arrival of record-setting warmth in the Northwest. The Southwestern precipitation, including high-elevation snow, resulted in some generous reductions in drought coverage, especially in parts of Arizona, Colorado, and New Mexico. Meanwhile, warmth appeared in the Northwest, where Quillayute, Washington, set a monthly record with a high of 80°F on March 16. Quillayute's previous record, 79°F, had been set on March 20, 2019.

Reference:

Rocky Bilotta, NOAA/NCEI

Ahira Sanchez-Lugo, NOAA/NCEI



WATER NEWS

CALIFORNIA WATER NEWS

Bureau of Reclamation Increases 2024 Central Valley Project Water Supply Allocations Statement

Last Friday, the Bureau of Reclamation announced an increase in Central Valley Project 2024 water supply allocations. After below average precipitation in January, Reclamation announced an initial water supply allocation for the CVP on Feb. 21. Mid to late February storms have since improved hydrological conditions particularly for Northern California, allowing for a more robust water supply allocation.

"Thanks to the improved hydrology, we are pleased to announce a bump in water supply allocations for the Central Valley Project," said California-Great Basin Regional Director Karl Stock. "While the series of storms in Northern California improved the water supply outlook, a number of factors, particularly anticipated regulatory constraints throughout the spring, continue to limit the water supply allocation for south-of-Delta agriculture."

In recognition of recent efforts to develop a south-of-Delta drought plan, Reclamation is reserving approximately 83,000 acre-feet of water currently in San Luis Reservoir that will contribute to a drought reserve pool and is not considered as a volume of water available for this year's water supply allocations. Additionally, approximately 185,000 acre-feet of rescheduled water from the 2023 water year, also stored in San Luis Reservoir, is not included in the 2024 water supply allocation.

Based on current hydrology and forecasting, Reclamation is announcing the following increases to CVP water supply allocations:

North-of-Delta Contractors

Irrigation water service and repayment contractors north-of-Delta are increased to 100% from 75% of their contract total.

South-of-Delta Contractors

Irrigation water service and repayment contractors south-of-Delta, including Cross Valley Contractors, are increased to 35% from 15% of their contract total.

M&I water service and repayment contractors south-of-Delta are increased to 75% of historical use or public health and safety, whichever is greater, up from 65% of historical use.

Friant Division Contractors

Friant Division contractors' water supply is delivered from Millerton Reservoir on the upper San Joaquin River and categorized by Class 1 and Class 2. The first 800,000 acre-feet of available water supply is considered Class 1; Class 2 is considered the next amount of available water supply up to 1.4 million acre-feet. Class 1 is increased to 65% from 60%; Class 2 remains at 0%.



VELES WATER WEEKLY REPORT

All other allocation amounts announced on Feb. 21 remain at 100%.

As the water year progresses, changes in hydrology, actions that impact operations, and opportunities to deliver additional water will influence future allocations. Water supply updates and past year's allocations are posted on Reclamation California-Great Basin Region's website.

Original Article: [Sierra Sun Times](#)

With snowpack at normal, what's the hold up with Ag water allocation?

The frustration for farmers continues to grow after recent news of recent water allocation numbers.

The Bureau of Reclamation has announced a 35 percent federal allocation for Central Valley Project recipients, as the California Department of Water Resources has allocated 30 percent of State Water Project requests.

Fresno Co. farmers disappointed after water allocation results

The news comes as the snowpack in the Sierra Nevada sits at or near normal.

While it is an improvement to February's number of 15 percent allocation for both state and federal recipients, farmers argue that with the current water year allocations should be far greater.

"A 35 percent water supply isn't enough for all of our crops," said Joe Del Bosque of Del Bosque Farms.

Del Bosque, who we met at his farmstand just off Interstate 5 in Western Fresno County, says he and other farmers were extremely disappointed with the recent numbers. He tells me with the current snowpack, and recent, and potentially incoming storms, the allocation should have been higher.

"Getting precipitation and so forth and the reservoirs being above average, we were hoping to get about 45 percent to 50 percent. Maybe that was not realistic but that's kind of what we needed," he said.

Del Bosque's farm grows a variety of crops. Those include his almonds and well-known melon program with cantaloupes, honeydews, and watermelons. However, he says if the allocation figures don't climb it will hurt more than farmers.

"We're going to have to cut back our acres and we're going to have to leave some acreage fallow. That means we're going to leave some land unplanted," said Del Bosque, whose operation has been in business since 1985. "That hurts us as a farmer, it hurts our employees, it hurts the communities."

One potential reason for the allocation shortfall, according to the California Department of Water Resources, is the potential impacts that could be felt on threatened and endangered fish in the Sacramento-San Joaquin Delta.

The Delta works to move water from Northern California to the southern part of the state. Much of that water moves through the San Joaquin Valley. With endangered and



VELES WATER WEEKLY REPORT

threatened species found near a State Water Project pumping facility in the south Delta, the pumps that work to move that water south have been significantly slowed.

Del Bosque told me he had heard that the impact could be seen for months to come. As a result, he wants the state and federal government to reassess their current protocols.

"We have to look at those metrics and see if there's some way that we can find a little flexibility in the system to see if we can still protect the fish but get a little more water through," he said.

We did reach out to the Bureau of Reclamation and the California Department of Water Resources, but we did not hear back in time for this story.

Original Article: Yahoo News by Ben Morris

Back-to-back storms to soak West Coast, trigger flood threat in California

March came in like a lion across Southern California and is set to go out in a similar fashion as an atmospheric river storm aims at the region by the end of the week with the potential for flooding rain.

It'll be the second storm to strike the West Coast this week. A first storm will roll through the Pacific Northwest late Wednesday into Thursday. Widespread rain will cover the Interstate 5 corridor, with 6-12 inches of snow possible in the higher elevations of the Washington and Oregon Cascades. For the lowlands, Seattle in Washington and Portland in Oregon have received less than half of their average rain for March, so this rain will be welcomed and get them closer to average.

The rain and snow will wind down across the Northwest and northern Rockies on Once that storm moves out, a strong area of low pressure will develop off the Northern California coast on Friday and spend the entire weekend meandering off the coast, slowly sliding south toward Los Angeles.

This storm will tap into some tropical moisture, generating an atmospheric river storm that will spin heavy rain into Central and Southern California Saturday and Sunday.

As much as 1-3 inches of rain will fall up and down the coast, with the flood threat peaking on Saturday across Southern California, including the Los Angeles Basin and San Diego area.

NOAA's Weather Prediction Center is already placing much of Southern California in a Level 2 out of 4 risk for flash flooding on Saturday.

Up in California's Sierra Nevada mountain range, a few feet of snow will add to the snowpack, which now sits at 101% of average statewide.

"This has been one of the most remarkable snowpack recoveries we have seen in modern history in California," the FOX Forecast Center said. "The statewide snowpack was a mere 28% of normal on Jan. 1 and 53% of normal on Feb. 1, before the storm train kicked into gear."



VELES WATER WEEKLY REPORT

Southern California is expected to dry out early next week as the storm track instead returns to the Pacific Northwest.

Original Article: [FOX Weather by Scott Sistik](#)

How Business and Government Might Solve the Freshwater Crisis— Together

Does the public sector need the private sector's help to address the freshwater crisis? That's the controversial thesis of Stanford law and environmental social sciences professor Barton "Buzz" Thompson's provocatively titled new book: *Liquid Asset: How Business and Government Can Partner to Solve the Freshwater Crisis*. (Buzz is also a member of the PPIC Water Policy Center's research network.) We sat down with him to hear more.

How is the private sector currently involved in water?

The private sector is already involved in water in many ways, some more controversial than others. The private provision of water and water marketing are the most controversial because they impact how water is allocated—who gets it, and who doesn't. But the private sector also provides new technology to reduce the cost of important processes like recycling or desalinization. And many private companies, which are the largest consumers of water, have adopted corporate water stewardship programs to reduce their water footprint.

We think of the Sustainable Groundwater Management Act (SGMA) as a public program, and it is. The legislature passed the law, and public agencies are implementing it. But if you look carefully, you'll see private handprints all over SGMA's success. The private sector has been instrumental in SGMA's passage, its implementation, and dealing with its impact.

Philanthropic foundations helped lay the groundwork that led to SGMA's passage, and they've funded development of new data and modeling tools. Private consultants provided the scientific and technical knowledge needed for implementation. Nonprofit organizations like the Environmental Defense Fund (EDF) and The Nature Conservancy have helped monitor SGMA's implementation to make sure it's meeting the law. They've also helped develop local groundwater markets and programs to help transition some farms to other land uses, including the Multibenefit Land Repurposing Program.

Why did you decide to write about this topic now?

I've worked in the water sector for about four decades. It's clear that water crises are growing and multifaceted, whether it's climate change, aging infrastructure, or groundwater overdraft. The public sector, populated by dedicated, smart officials, is struggling to meet all these challenges. The more I looked at the public sector, the more I realized it needs the private sector's help.

For instance, cities would love to do more water recycling, but for a lot of cities that would require new pipes and digging up streets, which people don't like. Epic Cleantec



VELES WATER WEEKLY REPORT

in San Francisco has developed modular equipment to recycle water on-site so you don't have to dig up the street. A lot of small water suppliers—frequently for low-income communities—are having a hard time financing new infrastructure. Nonprofit organizations like Water Finance Exchange and Moonshot Missions try to match small water suppliers with financing.

Where the public sector struggles, private entities can try to help. But the public sector needs to be willing to reach out, and the private sector needs to realize it can't contribute without the public sector.

What are some of the changes you're advocating, and why?

We need new technologies to solve current challenges, but we face a technological deficit in the US: we're not getting new technologies out and adopted quickly enough. Places like Singapore have made a lot of progress on issues like desalination and recycling by working with the private sector. Singapore funds innovation and allows businesses to use public infrastructure to test new technologies. These technologies have become an export industry, adding \$2 billion to Singapore's economy and employing 14,000 people. Government needs to develop regulations that encourage the development of new technologies and work with private companies to test and adopt them.

But government also must ensure that private companies aren't negatively impacting the public interest in water. The petroleum industry creates immense amounts of produced water—for instance, in the Permian basin, for every barrel of oil, you produce about four barrels of water. Companies recycle that water for reuse, the government's role is to ensure that the reuse is safe, as California has done with the use of produced water in Kern County agriculture. That's a key role of government—policing the private sector to protect the public interest.

What disincentivizes engagement between the public and private sectors?

The public sector is inherently conservative, and it should be when it comes to freshwater. If your iPhone malfunctions, it's an inconvenience. If the system that supplies water to San Francisco malfunctions, that could be a public health crisis. But in many cases, it's too conservative. Governmental agencies just don't have the same incentive to embrace new, creative ideas as the private sector.

The public sector is also highly fragmented. Many small utilities don't have funds to replace current infrastructure, and frequently they have no R&D program, which is where you'd typically interact with the private sector. They can't invest in new technologies. That makes it hard to take advantage of what the private sector has to offer.

The energy sector operates very differently—it's dominated by private companies that are developing new technologies and implementing them with public support. Between 2001–14, governments in the US provided about \$8 billion of funding to develop new



VELES WATER WEEKLY REPORT

energy technologies; in the water field, it was \$28 million. If we want to know how to solve water challenges, we can look at what the energy sector has done.

What gives you hope?

I've taught a class at Stanford on "The Business of Water" for seven years, bringing in dozens of companies working in water. Their enthusiasm, dedication, and creativity give me confidence that, with the public sector, they can help solve key water challenges.

Original Article: [PPIC by Sarah Bardeen](#)

Facing SGMA challenges, Kings County stares down water pumping fees

The Mid-Kings River Groundwater Sustainability Agency is looking to impose a pumping fee of nearly \$100 per acre-foot.

Mid-Kings River GSA is comprised of the Kings County Water District, the City of Hanford and Kings County.

The big picture: The GSA is proposing a pumping fee maximum of \$95 per acre-foot.

This comes after the State views that the region has not made enough progress through the Sustainable Groundwater Management Act (SGMA).

The state wants agriculture and industrial water pumpers to cut back or m=pay to mitigate the impacts on other users.

The state could move to put the subbasin in probation if it does not feel confident in local groundwater management, and could completely take over operations in 2025.

The backstory: SGMA was passed in 2014 and governs how agencies in critically overdrafted areas achieve groundwater sustainability.

It also requires local agencies to form GSAs to develop and implement groundwater sustainability plans in order to avoid undesirable results and mitigate overdraft within 20 years.

Original Article: [The Sun by Daniel Gligich](#)



US WATER NEWS

Heat and drought are sucking US hydropower dry

The amount of hydropower generated in the Western US last year was the lowest it's been in more than two decades. Hydropower generation in the region fell by 11 percent during the 2022–2023 water year compared to the year prior, according to preliminary data from the Energy Information Administration's Electricity Data Browser — its lowest point since 2001.

That includes states west of the Dakotas and Texas, where 60 percent of the nation's hydropower was generated. These also happen to be the states — including California, Nevada, Arizona, and New Mexico — that climate change is increasingly sucking dry. And in a reversal of fortunes, typically wetter states in the Northeast — normally powerhouses for hydropower generation — were the hardest hit. You can blame extreme heat and drought for the drop in hydropower last year.

This is all feeds a vicious cycle

This creates a vicious cycle: drought reduces the amount of clean energy available from hydroelectric dams. To avoid energy shortfalls, utilities wind up relying on fossil fuels to make up the difference. That leads to more of the greenhouse gas emissions causing climate change, which makes droughts worse.

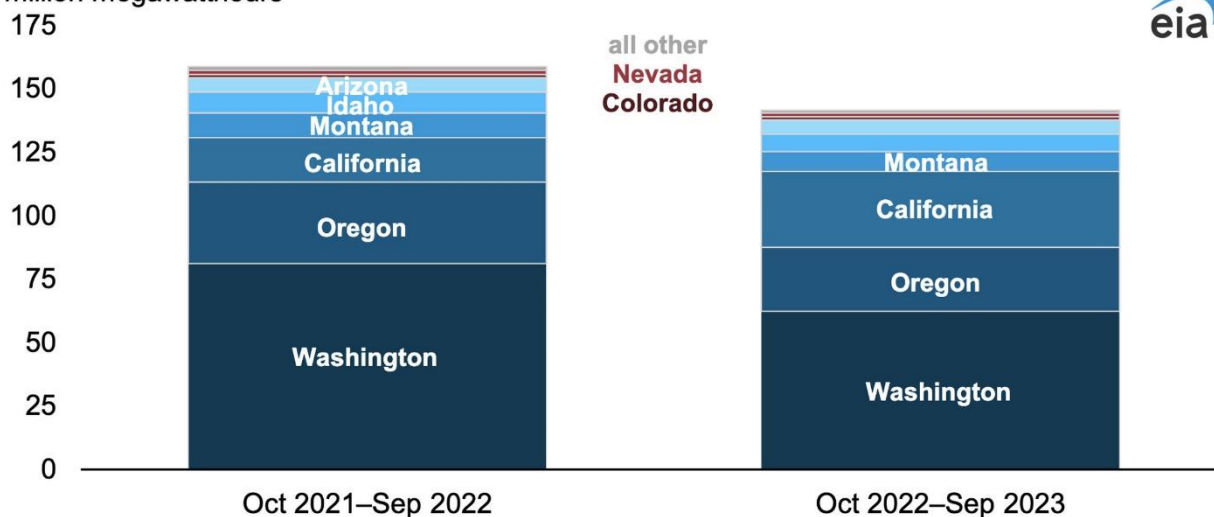
Heat was another problem in the Western US during the last water year, which starts over in October in order to account for both winter snow and summer rain. Temperatures rose a startling 30 degrees Fahrenheit above normal in the Pacific Northwest during a May 2023 heatwave.

Western states typically rely on slowly melting snowpack for water during dry summer months, but much of that snowpack vanished with the heat in May. That left the Northwest with below-average water supply for the rest of the water year. Hydropower in Washington and Oregon fell by at least 20 percent during the last water year. Combined, the two states normally make up 37 percent of the nation's hydropower capacity.

California, in contrast, experienced a bit of a reprieve from a megadrought that has plagued the Southwest for some two decades. A series of atmospheric river storms in 2023 were a double-edged sword, dropping record amounts of snow and rain in parts of the state while also causing disastrous flooding in communities more accustomed to dry weather. But while hydropower production rose in the Golden State last year, it's forecast to fall again this year.



Western U.S. hydropower generation by state and water year (2021–2022 and 2022–2023)
million megawatthours



Data source: U.S. Energy Information Administration, Electricity Data Browser

Western US hydropower generation by state and water year. Image: US Energy Information Administration

The Energy Information Administration expects 12 percent less hydropower production across the Western US in 2024 compared to the previous year. And whenever there’s less hydropower, there’s usually more pollution from gas and coal-fired power plants that ramp up generation to fill in the gaps.

We saw that happen on a global scale in 2023. Energy-related greenhouse gas emissions across the world increased by 410 million metric tons last year, roughly equivalent to adding the pollution from more than 1,000 new gas-fired power plants. Why? Drought created an “exceptional shortfall” in hydropower — especially in the US and China, the countries that produce the most planet-heating pollution. That alone was responsible for 40 percent of the rise in global emissions last year, according to the International Energy Agency.

Original Article: [The Verge by Justine Calma](#)

Lake Powell is about to get a boost. How much will it help?

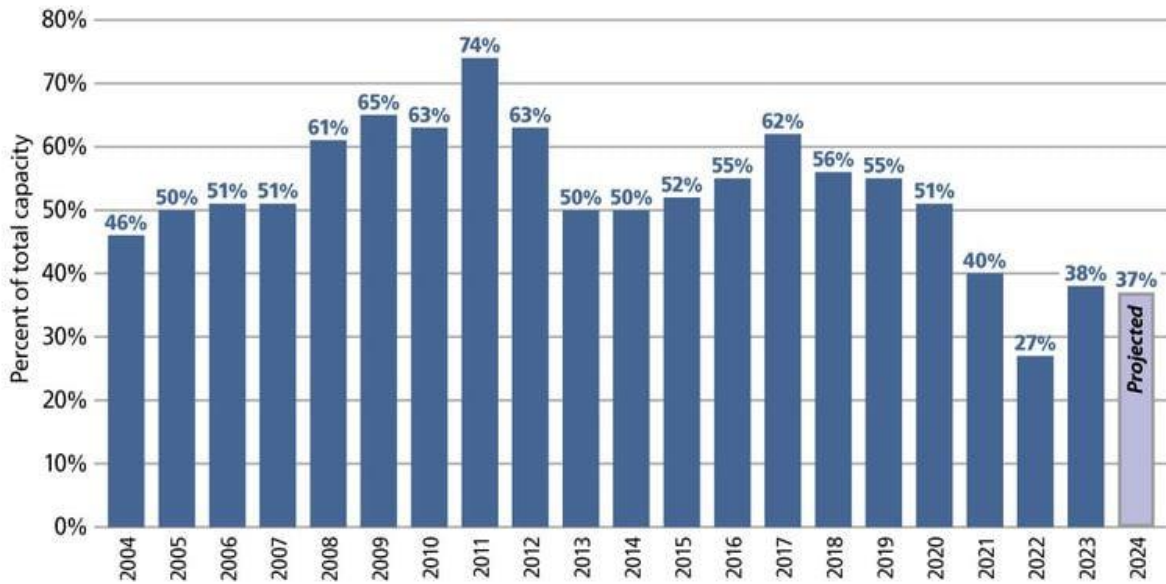
Spring represents a fresh start for plants, animals, alarm clocks — and Lake Powell. Lake Powell’s levels have fallen throughout the winter, but as the weather warms, the snowpack that has accumulated in the mountains over the winter will begin to melt. That water will feed rivers and streams across the West — including the Colorado River, which fills Lake Powell on Arizona and Utah’s shared border. This year, hydrologists forecast that Lake Powell’s peak capacity will rebound close to its peak capacity last year. But those elevations are still far below 100% full.



VELES WATER WEEKLY REPORT

Maximum Lake Powell storage by year

This graph shows the maximum water storage of Lake Powell each year in percentage of full capacity.



Source: National Weather Service Colorado Basin River Forecast Center

GRAPHIC BY CHRISTOPHER CHERRINGTON | The Salt Lake Tribune

(Christopher Cherrington | The Salt Lake Tribune)

95.7K

Two churches came together for sale of Kirtland Temple. How those ties may now change.

The National Weather Service Colorado Basin River Forecast Center predicts that 5.4 million acre-feet of unregulated runoff will spill into the reservoir between April and July. For reference, an acre-foot of water can sustain two households for a year.

The reservoir’s level is expected to rise from its current level, 32% full, to 37% full capacity at its projected peak. That’s a jump from an elevation of 3,560 feet right now to about 3,581 feet — an increase of 21 feet.

The lake’s elevation at full capacity is 3,700 feet.

Last year, after a record-breaking winter, Lake Powell rose from a record low of 22% full to 38% full — a rise from about 3,522 feet in elevation to 3,583 feet. The reservoir’s elevation is up almost 39 feet from where it was last March.

The Colorado Basin River Forecast Center provides runoff projections to the Bureau of Reclamation, a federal agency that oversees water projects nationwide. A March 2024 report from the Bureau of Reclamation forecasting water storage and reservoir levels for the next two years predicts that Lake Powell will receive 7.66 million acre-feet of water between October 2023 and September 2024.

In October 2023, Reclamation predicted that Lake Powell would receive 9.4 million acre-feet over the same time frame. After a dry start to the winter, the agency revised its estimate in December to be 7.6 million acre-feet.



VELES WATER WEEKLY REPORT

According to the Colorado Basin River Forecast Center, spring runoff this year will be 85% of the average runoff between 1991 and 2020.

Since the turn of the century, the Colorado River's flows have decreased by at least 20% due to climate change and extreme drought in the West. As the river dwindles, U.S. states that rely on it are working to develop new plans to operate the river and its reservoirs, like Lake Powell.

Original Article: [The Salt Lake Tribune by Anatasia Hufham](#)

Reusing and purifying, this Colorado town will use 100% renewable water by 2065

Today, the town of Castle Rock gets about 30% of its water from renewable sources. About 15% comes from reused or recycled water, about 10% comes from surface water, like Plum Creek, and about 5% is imported through a partnership with the cities of Denver and Aurora. In 40 years, they hope to be 100% renewable.

Historically, Castle Rock has gotten most of its water from Denver basin groundwater; essentially aquifers. But those are being depleted too fast to be considered renewable water sources.

"This is our advanced water purification facility here in Castle Rock," said Castle Rock Water Director Mark Marlowe.

Since 2021, the Plum Creek facility has been an integral part of Castle Rock's transition towards renewable water.

"The water runs through the town. It goes down your drain, gets treated at what we call a 'water reclamation facility,' put back in the creek, goes downstream a little ways, then we take it out and it comes back here and gets purified," said Marlowe.

Recycled and non-recycled water from Plum Creek, along with groundwater from the aquifers are blended and aerated, then go through processes called flocculation, carbon filtration and membrane filtration, before being oxidized with ozone, put through carbon filters and disinfected with UV light.

The town hopes to rely completely on renewable water sources by 2065 and to be 75% of the way there by 2050.

"Over time, we're going to continue to transition away from that Denver basin groundwater and we're gonna preserve that resource for times of drought when water's not available in the creeks and the rivers," said Marlowe.

Castle Rock's population is expected to grow from its current 85,000 to around 140,000.

"I think a lot of residents are seeing new developments coming in, and they're just starting to worry, maybe that math isn't adding up for them. Is there really enough water for all these new people?" CBS News Colorado's Olivia Young asked Marlowe.

"Castle Rock Water has actually been planning for the type of development that you see now for several decades. So this is not some big surprise that we're not prepared for," said Marlowe. "A lot of that conservation and efficiency is really about being efficient



VELES WATER WEEKLY REPORT

with the resources we have here and using them in a way that makes sense and is cost-effective."

Last year, Castle Rock put regulations in place, limiting cool weather turf in new developments, and instead requiring drought-tolerant native plants, something they call "Colorado-scaping."

"If people use that water on outdoor landscaping, that water can't be reused because it gets used by the plants and evaporated into the air and we lose that supply," said Marlowe.

It's just one way the town is investing in its most valuable resource.

Construction of the Plum Creek Water Purification Facility cost about \$60 million and currently outputs six million gallons of potable water a day. In the next two years, Castle Rock will spend another \$65 million to double the size and output of the facility. The town says it will save everyone money in the long term.

"It's much more cost-effective to use and conserve the water rights and resources we already have than to have to go try to get them from a long way away and import them over a long distance," said Marlowe.

Original Article: [cbs News by Olivia Young](#)

Governor Katie Hobbs Signs Bill to Extend Douglas AMA Water Right Deadline, Appoints Groundwater Users Advisory Council

Today Governor Katie Hobbs signed House Bill 2016, extending the deadline for water users in the newly created Douglas Active Management Area (AMA) to submit their grandfathered groundwater right applications to the Arizona Department of Water Resources. The Governor also announced her appointments to the Douglas AMA Groundwater Users Advisory Council.

These actions continue the Governor's work of securing rural groundwater supplies, including her push for rural groundwater reform legislation (HB 2857), her administration's reduction of fees in the Douglas AMA, and protecting water supplies in the Butler Valley groundwater basin.

"Since the day I took office I've made clear my commitment to supporting rural communities in managing their groundwater," said Governor Katie Hobbs. "This legislation will give Douglas AMA water users more time to submit their water right applications to ADWR, and I'm confident that these local leaders who have volunteered to serve on the Groundwater Users Advisory Council will provide invaluable input as the water conservation programs are developed for the basin."

Original Article: [AZ Governor](#)



Tribes seek equal status in Colorado River talks, compensation for any forced cuts

Two-thirds of the tribes with lands and water rights in the Colorado River Basin are calling for equal status in developing new river management guidelines and protection of their senior water rights against proposed cuts or caps on developing their water.

Leaders from 20 tribes, including eight in Arizona, sent a letter to the U.S. Bureau of Reclamation March 11. In the letter, obtained by The Arizona Republic, the tribes outlined what they expect in new river management guidelines that will take effect when the current guidelines expire Dec. 31, 2026.

The two tribes with Arizona's largest river allocations — the Colorado River Indian Tribes, which holds senior rights to 720,000 acre-feet of water, mostly in Arizona, and the Gila River Indian Community, with 653,000 acre-feet of Colorado River and other waters — did not sign the letter.

The Gila River Indian Community opposed a plan offered by the three Lower Basin states and said it would issue an alternative plan, which it has not yet released. The tribe said it could walk away from a plan if it is not satisfied. The letter from the other tribes did not include a similar ultimatum.

"Basin tribes have long faced systemic barriers to developing and benefiting from their water rights," the group said. Tribes have until recently been largely left out of Colorado River management planning, even though they hold senior rights to at least 20% of the river. In Arizona, that number is closer to 40%.

The Colorado River Compact, enacted in 1922, barely mentioned tribes' rights to water. The 2007 guidelines left tribes out almost entirely, the group said.

Tribes stepped forward with voluntary reductions to ease the strain on the river and participated in talks to develop the Drought Contingency Plan, which addressed a historic drought that disrupted the 2007 guidelines that were designed for a 20-year span.

Since then, they have advocated for a greater, more equal role in creating the new management protocols.

There has been some movement toward more tribal participation. Tribes are represented in the Arizona Governor's Water Policy Council, and Quechan President Jordan D. Joaquin is the first-ever Native member of the the Colorado River Board of California.

Tribes' letter outlines three principles

The tribal leaders presented three key principles they expect the administration to abide by when developing river management protocols. They said the U.S. must:

Uphold its trust responsibility to the basin tribes by protecting Indian tribal water rights whether or not they have been quantified.



VELES WATER WEEKLY REPORT

Create and support an array of tools to give tribes flexibility in how and when they use their water rights.

Provide a permanent, formalized structure for tribal participation in implementing the new Colorado River management guidelines during the current negotiations and in any future river policy and governance.

Among other points, the tribes said Reclamation must reject any plan that would force the five Colorado River Valley tribes, four of which have lands and water rights in Arizona, to accept involuntary or uncompensated reductions. Those tribes' rights were affirmed in the case Arizona vs. California and are among the tribes with the oldest affirmed rights, dating back to the mid-19th century.

Leaders said those tribes, as well as tribes who receive their allocations through the Central Arizona Project Canal, should receive alternative water supplies if their water rights usage is disrupted by the new guidelines.

Tribes should also have the right to lease or use water off their reservations, the group said.

The Ak-Chin Indian Community, which signed the letter, said since tribes hold some of the largest and most senior rights on the Colorado River, it was vital that they have a seat at the table as the Bureau of Reclamation develops the new river management framework.

"Though tribes, including Ak-Chin, have too often in the past been left out of important decisions that impact our people, we have seen more recently that tribal involvement leads to better and more creative solutions," said Ak-Chin Chairman Robert Miguel.

Original Article: [AZ Central by Debra Utacia Krol](#)

GLOBAL WATER NEWS

New solar-powered system converts saltwater into drinking water

The KCL research team said the new system works by separating the salt using a set of specialised membranes which channel salt ions into a stream of brine, leaving the water fresh and drinkable.



VELES WATER WEEKLY REPORT

By flexibly adjusting the voltage and the rate at which salt water flowed through the system, the researchers developed a system that adjusts to variable sunshine while not compromising on the amount of fresh drinking water produced.

Using data first gathered in the village of Chelleru near Hyderabad in India, and then recreating these conditions of the village in New Mexico, the research team converted up to 10m³ of fresh drinking water. This was enough for 3,000 people a day, with the process continuing to run regardless of variable solar power caused by cloud coverage and rain.

The researchers said that the process is over 20 per cent cheaper than traditional methods and could signal a step change in providing clean water in developing countries and beyond.

In a statement, Dr Wei He from KCL's department of Engineering said: "By offering a cheap, eco-friendly alternative that can be operated off the grid, our technology enables communities to tap into alternative water sources - such as deep aquifers or saline water - to address water scarcity and contamination in traditional water supplies.

"This technology can expand water sources available to communities beyond traditional ones and by providing water from uncontaminated saline sources, may help combat water scarcity or unexpected emergencies when conventional water supplies are disrupted, for example like the recent cholera outbreaks in Zambia."

Roughly a quarter of the world's population face 'extremely high' levels of water stress, which leads to a high likelihood of water scarcity. In the global rural population, 1.6 billion people face water scarcity, many of whom are reliant on stressed reserves of groundwater lying beneath the Earth's surface.

However, worldwide, 56 per cent of groundwater is saline and unsuitable for consumption. This issue is particularly prevalent in India, where 60 per cent of the land harbours undrinkable saline water.

The researchers said that traditional desalination technology has relied either on costly batteries in off-grid systems or a grid system to supply the energy necessary to remove salt from the water. In developing countries' rural areas, the grid infrastructure can be unreliable and is largely reliant on fossil fuels.

Without regular supplies of energy at use, individual villages and communities must rely on expensive batteries to use renewable energy like solar to provide their fresh water, passing the cost onto individual consumers.

"By removing the need for a grid system entirely and cutting reliance on battery tech by 92 per cent, our system can provide reliable access to safe drinking water, entirely emission free onsite and at a discount of roughly 22 per cent to the people who need it compared to traditional methods," said Dr He.

The researchers said the system also has the potential to be used outside of developing areas, particularly in agriculture where climate change is leading to unstable reserves of fresh water for irrigation.



VELES WATER WEEKLY REPORT

Further, the team plan to scale up the availability of the technology across India through collaboration with local partners, create a start-up to commercialise and fund the technology, and apply the technology to other sectors including wastewater and producing alkaline to help the ocean absorb more CO₂ from the atmosphere.

Original Article: [The Engineer](#)

Conflicts Loom if We Don't Solve the Global Water Crisis

Tensions around access to and management of water are heightening all over the world. Finding ways to de-escalate and innovate is a matter of life and death.

The world is facing a water crisis. Four billion people — almost two thirds of the world's population — face severe water scarcity for at least one month each year. By 2030, experts predict that demand for fresh water will outstrip supply for 40 percent.

Heightened scarcity prompts a higher propensity for conflict. As we face a future where some parts of the world will be chronically short of water, so too comes the increased risk that groups will be drawn into conflict and wars over access to and sovereignty over water.

But water conflict isn't just a risk of the future, it's happening before us now. In February 2024, Israel confirmed it was pumping seawater into a network of tunnels in Gaza, claiming it was "neutralising underground terrorist infrastructure".

But the action "will definitely" contaminate an aquifer holding Gaza's groundwater, imperilling Palestinians already facing bombing, imminent famine and a death toll exceeding 30,000.

With this backdrop, the UN is commemorating World Water Day with the theme 'water for peace'. It brings to light not just the conflicts raging over water in the present, but pathways to resolution.

Conflict takes many shapes and forms. While the weaponisation of war in Gaza presents the most imminent threat to human life, other major water struggles happen more gradually — diplomatic disputes and bureaucratic arm wrestles have cause immense friction in major waterways, such as Australia's Murray-Darling Basin and Malaysia's Johor River.

The management of the Murray-Darling Basin is a "cautionary tale of what and who can get in the way of good practice and how reform can, sometimes, go backwards, as well as forwards", according to Quentin Grafton of The Australian National University.

"On paper, it doesn't make sense: Australia is a stable democracy with a robust public service. It could be a model case study of sustainable river management. Instead, it has been derailed by dispute and bureaucratic in-fighting."

This is not uncommon. As Shafiqul Islam of Tufts University notes, "blame shifting, fault finding and panic" are "the usual reaction to water crises all over the world."

To reverse the trend of water scarcity, reform will have to move quickly and comprehensively. From finding ways to end the use of water as a weapon in conflict to



VELES WATER WEEKLY REPORT

foster stronger cohesion in river management to innovations that help maximise the remaining water supply we have left, bringing peace around water is an ambitious but vital challenge for the world.

Original Article: [Tempo](#)

Water Is Too Important To Be Sidelined And Treated As An Afterthought

Shadow Water Minister Steph Cooke is calling on the Water Minister to take a more proactive approach during the Minns Labor Government's second year in office when it comes to finding solutions to water issues throughout rural and regional areas.

Ms Cooke said it's her very real fear that issues surrounding the safe and secure supply of water in rural and regional communities across the state are not getting the attention they deserve.

"So much so that I delivered a Notice of Motion in Parliament last week, calling on this government to make water infrastructure west of the Great Divide, an immediate priority," Ms Cooke said.

"The Water Minister has been in the role for 12 months, and all the government has managed to achieve is cancelling visionary projects like raising the Wyangala Dam wall, signing us up to a sham and highly opaque Murray Darling Basin Plan deal, and kicking key water security projects further down the road.

"Not to mention the 13 regional towns and villages that have been placed on boil water notices at various intervals since December last year, with little to no action from the government to alleviate the problems at the heart of the boil water warnings.

"It would be unfair to be too critical; the Water Minister does have other portfolio responsibilities including housing, homelessness, mental health, and youth; all presenting significant challenges that the government has struggled to address during its first 12 months in office.

"But water is too important to be sidelined and treated as an afterthought; inaction is no longer an option," she said.

Ms Cooke said she worries the Water Minister is out of her depth when it comes to finding solutions to the ongoing water security and supply issues those in the regions are facing.

"Our towns are expanding, but without the proper infrastructure in place, this growth will always be held back," Ms Cooke said.

"Having safe and secure water supplies at our schools, hospitals, homes, and small businesses is a basic requirement, and if the Minns Labor Government is serious about giving our rural and regional communities every opportunity to thrive, they must govern for the entire state, and focus their attention on issues beyond the Great Divide," she said.

Original Article: [NSW Nationals](#)



VELES WATER WEEKLY REPORT

Emerging trends and early outcomes signal impactful 2024 proxy season for climate-related proposals

A record number of shareholder proposals, three noteworthy commitments, an early majority vote, and already 56 withdrawn in return for commitment; 2024 proxy season spotlights the staying power of climate-related proposals and growing investor interest in biodiversity loss, just transition, and increasing transparency in the financial services sector.

A new analysis by the sustainability nonprofit Ceres indicates investor-driven climate action interest in the 2024 proxy season remains strong. With hundreds of climate proposals filed, a noteworthy majority vote recorded earlier than usual, and important commitments from three leading financial institutions, the 2024 season is off to an encouraging start.

To date, shareholders have filed 263 climate-related resolutions, according to tracking by Ceres – a record number of proposals filed for a single proxy season, and more are expected. In 2023, there was a record 259 climate-related resolutions filed.

Early majority vote in 2024 Proxy Season

Among the most notable developments so far is a majority vote of 57% at Jack in the Box Inc. on a resolution asking for scope 1 and 2 greenhouse gas emissions disclosure and target setting filed by The Accountability Board that came in early March – a positive sign that many shareholders support climate action by relevant companies.

"A majority vote at this early stage in the season is one indication of a promising outlook for the 2024 proxy season," said Rob Berridge, senior director of shareholder engagement at Ceres. "It's clear that investors are continuing to rally behind key climate-related shareholder proposals, reflecting the sustained commitment to informed, responsible investment stewardship practices and driving corporate action in the face of the rapidly intensifying climate change and nature loss."

In the opening stretch of the 2024 proxy season, New York City Employees' Retirement System (NYCERS) withdrew its resolutions with both JPMorgan Chase and Citigroup, and Investors for Paris Compliance withdrew a similar proposal at National Bank of Canada in return for the banks' commitment to disclose their clean energy financing ratio. This figure reflects the proportion of the institution's financing of low carbon energy projects compared to fossil fuel financing. The New York City Comptroller's office filed similar proposals with four additional major banks, making this new type of proposal an important development to monitor.

Already, a total of 56 Ceres-tracked proposals have been withdrawn in return for a commitment, continuing a trend that demonstrates the shared value of dialogue between investors and companies. For comparison, in 2023, 83 proposals were withdrawn due to a commitment, and in 2022, 116 were.

2024 proxy season trends in shareholder-driven climate action



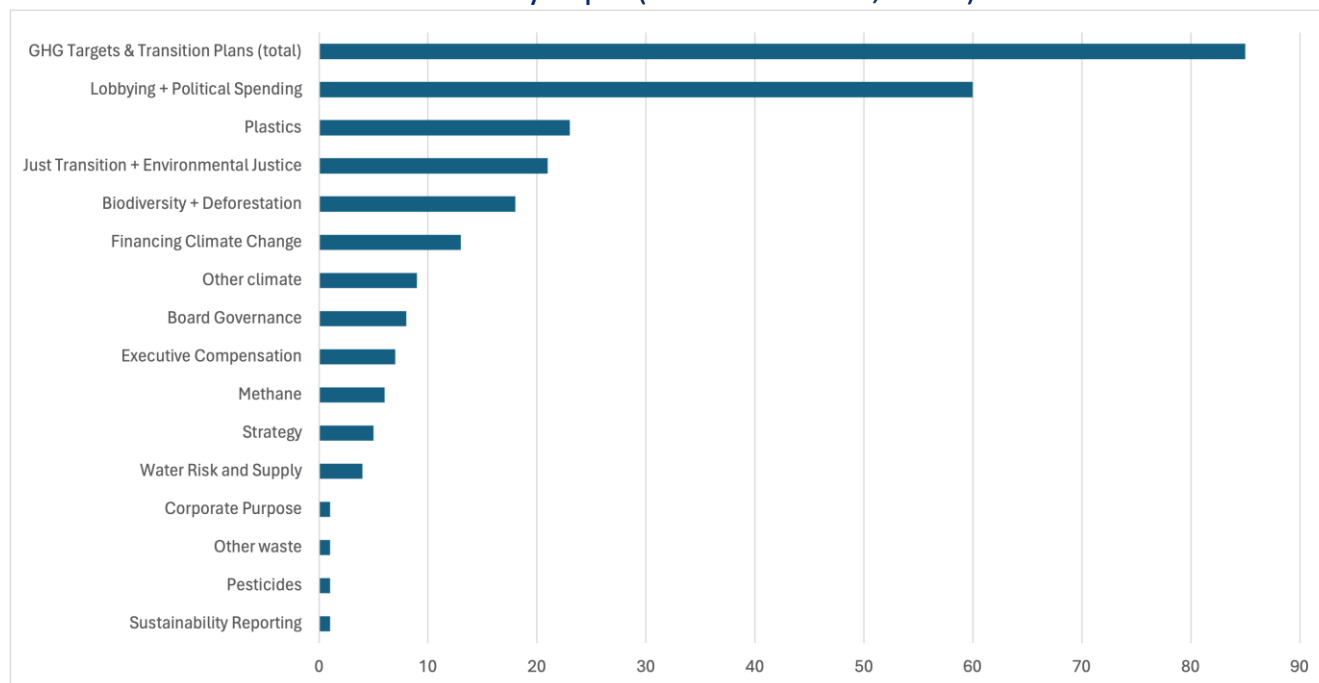
VELES WATER WEEKLY REPORT

As in recent years, proposals relating to greenhouse gas emission reduction goals and/or climate transition plans are the leading category (when combined) this year, making up 28% of the tracked resolutions. Investors filed 60 proposals concerning lobbying and political spending activities, revealing ongoing concerns about whether a portfolio company’s corporate advocacy aligns with climate objectives.

The burgeoning biodiversity-related proposals category highlights investors’ heightened concerns about the risks of nature and biodiversity loss, further demonstrated by the nearly 200 investors participating in the Nature Action 100 initiative. Engagement efforts are also evident in water-related proposals, citing the Corporate Expectations for Valuing Water from the Valuing Water Finance Initiative to urge companies to evaluate and disclose water risk in their supply chains.

Another emerging trend spotlights investors’ growing interest in addressing the risks related to human rights and robust workforce development within the context of a clean energy transition. These Just Transition and environmental justice proposals grew to 21, from 16 last year.

Climate-related resolutions filed by topic (as of March 25, 2024)



The consumer goods sector saw the highest number (72) of climate-related proposals filed this year, followed by financials (59), industrials (40) and energy (26).

The large number of proposals filed with financial services companies reflects growing momentum on the heels of last year’s proxy season. Shareholder engagement with banks is critical because, as key players in the broader economy, banks face a variety of climate-related impacts and play an important role in reducing systemic financial risks. Meanwhile, investors continue to engage Climate Action 100+ focus companies through dialogues and, when necessary, shareholder proposals. Launched in 2017, Climate Action 100+ is an investor-led effort to ensure the world’s largest greenhouse gas



VELES WATER WEEKLY REPORT

emitters reduce emissions, improve governance, and strengthen climate-related financial disclosures. Key flagged shareholder votes providing information to the market about company responsiveness to investor engagement and the goals of the initiative are anticipated later this spring.

As the 2024 proxy season unfolds, early analysis demonstrates that responsible investors continue to recognize climate risk is financial risk and that it is in their business interest to engage with companies, including through filing and voting on shareholder proposals.

Original Article: [Ceres](#)

Droughts in Europe could be avoided with faster emissions cuts

Advanced computer modelling suggests summer rainfall in southern Europe could decline by up to 48% by the year 2100 if emissions of greenhouse gases continue to rise rapidly, but much of this projected decline could be avoided by reaching net-zero emissions as soon as possible.

The study, led by scientists at the University of Reading, published today (Monday 25 March) in *Geophysical Research Letters*, provides additional evidence to motivate accelerated climate action and prevent drastic rainfall decline, more droughts and more forest fires.

Dr Andrea Dittus, the study's lead author, said: "The climate has already warmed so much that some rainfall decline is inevitable, but our findings show that further summer drying projected for Europe could be avoided. Halting rising global temperatures by reducing fossil fuel emissions to net-zero will mean the Mediterranean does not continue to get drier.

"We have no time to waste in cutting emissions. If we don't act rapidly, many countries in the Mediterranean will suffer from a significant lack of rain, with potential major knock-on effects for the UK and elsewhere."

In July 2023, Dr Dittus was awarded £580,000 by the UKRI Natural Environment Research Council to investigate what a net zero world would look like. Many previous studies have investigated the impact on Earth at different levels of global warming, but studying net zero climates is a relatively recent focus of research that follows commitments by world leaders — such as in the 2015 Paris Agreement — to limit global warming.

The new study focuses specifically on the impact of stabilising temperatures in Europe. The researchers highlight that the speed of global warming is a critical factor in preventing drought and extreme dry periods.

When temperatures rise quickly due to unchecked emissions, it causes more extreme shifts in rainfall. But if warming happens more gradually because of strong climate action, the impacts are less severe.



VELES WATER WEEKLY REPORT

This means that the steps taken by countries to cut pollution in the coming years could hugely influence Europe's future summers. While focused on Europe, the scientists say similar benefits of rapid climate action are likely for other regions across the world.

However, the researchers caution that avoiding the most serious impacts depends on achieving major emissions reductions starting right away. The more optimistic scenarios are only possible if the world transitions away from fossil fuels as soon as possible.

Original Article: [Prensa Latina](#)

More dust from the Sahara is blown into Europe, new wind patterns and drought to be blamed

Dust from the Sahara, a vast desert spanning much of North Africa, has been increasingly blown into Western Europe due to recent changes in wind patterns and desertification. According to an article in science and technology magazine New Scientist, the phenomenon of dust being blown from the Sahara Desert into Europe is happening more frequently and intensely, even during colder months, scientists observed recently.

In southern Morocco, dust intrusions towards the Canary Islands have been recorded in the past three months. Sara Basart from the World Meteorological Organization told the London-based magazine that «in 2024, we are having these extreme events again». Dust from the Sahara also reached Spain this week.

While similar events are normal during warmer months, dust intrusions from the Sahara are becoming increasingly common in western Europe, reaching as far as the UK.

Extra-dusty winters and drought

A study published in August 2023 by a group of Spanish researchers, including Basart, confirms this trend. They found that giant dust clouds from North Africa reached Europe more often than usual during the last four years. Notably, these dust clouds became regular occurrences during the winters between 2020 and 2022, instead of being confined to the warm seasons.

To understand the reason behind these extra-dusty winters, researchers examined air pressure patterns over North Africa, Europe, and the Atlantic Ocean from 2003 to 2022. The findings pointed to significant year-to-year variations and large differences in dust amounts between winter months. The dustiest winters of 2020-2022 had more dust and the dust reached higher altitudes compared to previous winters.

The study suggests that high-pressure systems over the Atlantic Ocean may be to blame for the extra dust. These high-pressure systems act like walls, blocking strong westerly winds and allowing dust to travel farther. The way these systems are shaped seems to play a role, with some shapes being more common during the extra-dusty winters.

Original Article: [Yabiladi by Latifa Babas](#)

Group Five Saudi secures \$800 Million contract for Riyadh water project



VELES WATER WEEKLY REPORT

Group Five Pipe Saudi Company recently secured a major contract valued at 3 billion Saudi riyals (\$799.94 million) with the Saline Water Conversion Corporation (SWCC), a state-backed entity, for the Ras Al Khair-Riyadh water transportation system project.

According to a statement released to the Saudi Stock Exchange, the contract covers a period of 22 months and involves the manufacturing and provision of spiral-welded steel pipes essential for transporting water from Ras Al-Khair to Riyadh.

Original Article: [Utilities ME](#)

CDP: Water Now a Major Risk for World's Supply Chains

The water crisis threatens global supply chains like never before, according to new research from CDP — the global non-profit that runs the world's environmental disclosure system.

Stewardship at the Source — CDP's most-extensive-ever analysis on how companies are responding to water security, based on record-high disclosure numbers — focuses on 3,163 large companies with an annual revenue of more than €/US\$250 million, who responded to CDP's annual water-security questionnaire in response to a request from investors in 2023.

1,542 companies (50 percent) responded that they are engaging their supply chain on water risks — including inserting water requirements into supplier contracts, collecting water data, raising awareness of water issues, or collaborating on innovation.

“Supply chains are the knots which tie our global economy together. But they are coming apart rapidly due to climate change and the reckless abandon with which we treat the world's finite resources,” says Dr Patricia Calderon, CDP's global head of water. “The data is telling us our water supplies are becoming ever more fragile and the financial toll is mounting up. It's down to large companies with the biggest water impacts to take immediate action — working with their suppliers to stem the tide of water risk.”

Join us as Elizabeth Doty, director of the Erb Institute's Corporate Political Responsibility Taskforce, shares Principles for Corporate Political Responsibility and how to use these non-partisan principles to weigh decisions and articulate positions in an environment of distrust — Thurs, May 9, at Brand-Led Culture Change.

Pressure is growing on water to meet increased needs around the world — especially food and energy. Global water demand is predicted to rise by up to 30 percent by 2050, according to the United Nations — which has a direct impact on the world's complex and interwoven supply chains as they struggle to keep up.

Analysis of CDP data provides a unique insight into how some of the world's largest brands are grappling with water issues. One in five (623) companies report supply chain water risks — with the apparel, food, beverage and agriculture, and power-generation sectors reporting most. These companies are facing supply chain risks that could have a



VELES WATER WEEKLY REPORT

substantive financial or strategic impact on their business — estimated to total US\$77 billion.

According to 79 respondents, a total of US\$7 billion was deemed to be at immediate risk due to urgent water scarcity, food, regulatory and reputational issues.

Concerningly, 894 companies (28 percent) — from sectors including manufacturing, agriculture, and transportation — do not engage with their supply chain and have no plans to do so in the next two years. A fifth of these companies told CDP they felt the issue was unimportant, despite their activities having high water impacts.

“We need a paradigm shift in the way our economic metrics, and the politics behind them, value and govern water,” commented Henk Ovink, executive director of the Global Commission on the Economics of Water. “Mitigating climate change while adapting for the ever more extreme impacts, ensuring a just energy transition and securing food for all, restoring our ecosystems, reversing biodiversity loss; and building inclusive, green and resilient systems. The key to make all this happen is to view water as a global common good.”

A group of forward-thinking businesses are already working on the problem: 443 businesses (14 percent) offer their senior leaders — including the board — incentives to improve water management across the supply chain. 118 (4 percent) of these companies — including Coca Cola, L’Oréal and Kao Corporation — provide direct financial incentives to their chief procurement or purchasing officers.

The report makes a strong case for companies to take immediate action on water issues in their supply chain and offers six key steps for companies. Each one of these indicators follows from the next:

- Assess supply chain risks and impacts.
- Set global supply chain targets.
- Incentivize executives to act.
- Include water in supplier requirements.
- Engage with suppliers.
- Incentivize and support suppliers.

“The bar needs to be raised much higher if we want to build strong and effective supply chains, free from serious water risks,” Calderon asserted. “Companies should shift their outlook to recognizing the significant opportunities from becoming more water resilient.”

Original Article: [Sustainable Brands](#)

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