

Veles Water Weekly Report

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WATER FUTURES MARKET ANALYSIS

Welcome to ***WATERTALK***

by Joshua Bell

CLICK THE LINK BELOW

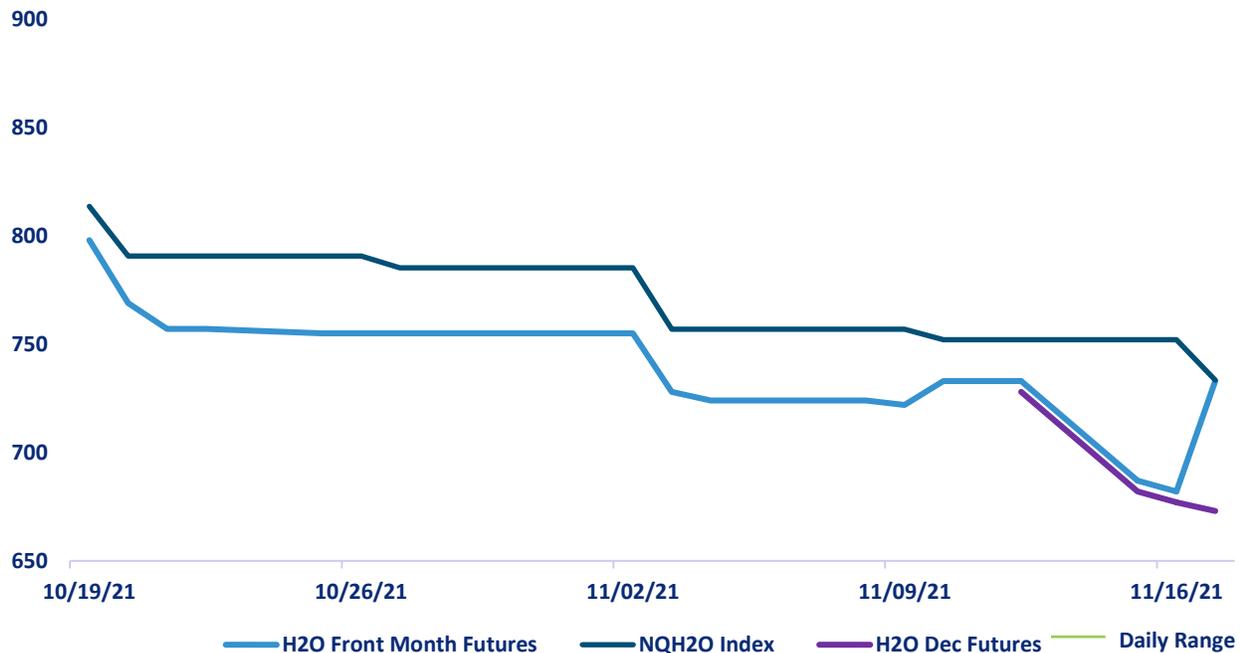
“A 2 minute technical analysis video of H2O futures”

<https://vimeo.com/647227624>



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 \$733.42 was published on November 17th, down \$18.69 or 2.48%, with the November contract expiring at that price. The new near contract is the December which closed at a discount of \$70.10 to the index, which is a relatively large discount to the index.

NQH2O is up 46.73% YTD.

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

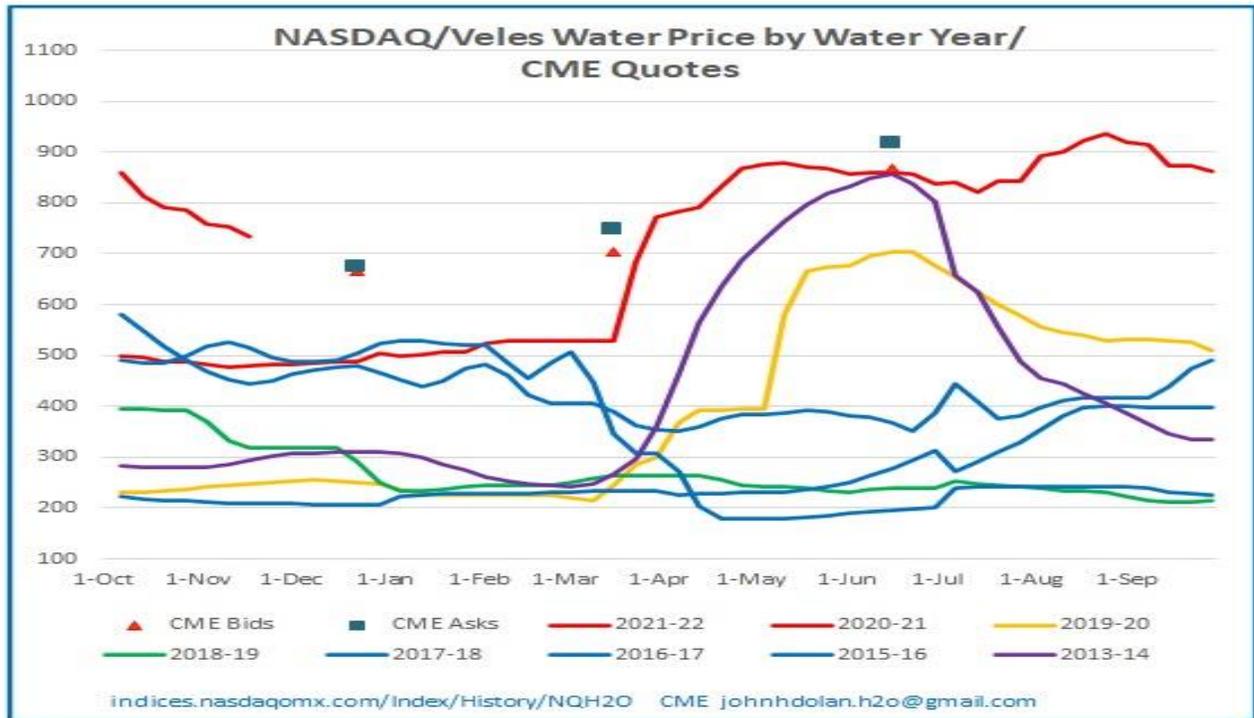
December 667@673

March 22 704@748

June 22 867@918



NQH2O INDEX HISTORY



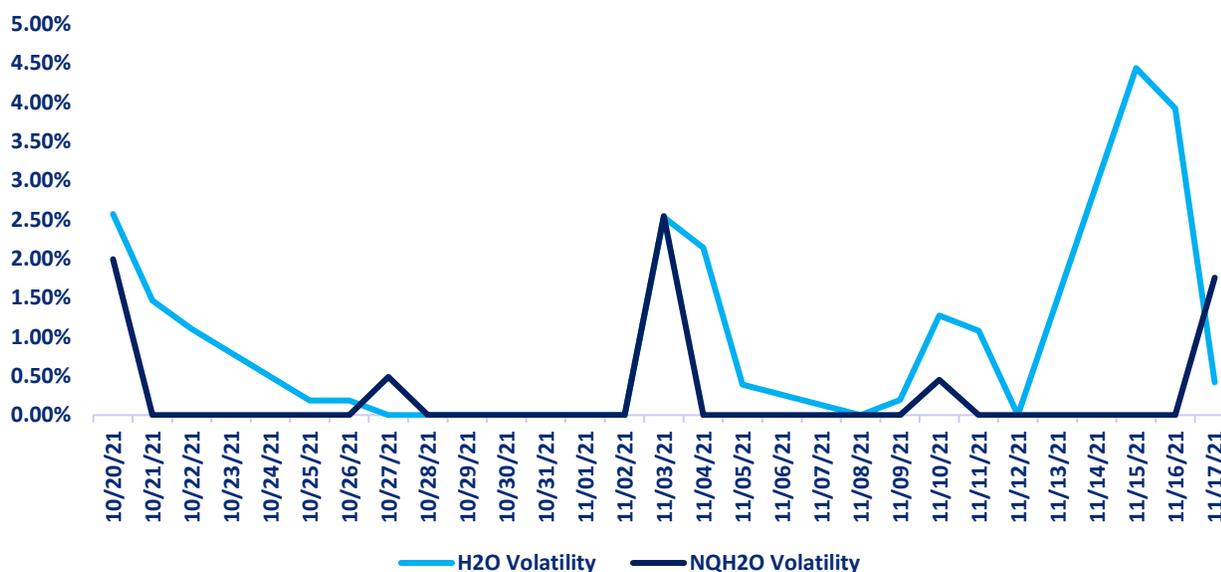
The graph above lays out the Nasdaq Veles water index by year, showing 2013- 2022. In very dry years, prices clearly rise through the spring, peaking in May to July (with the exception of 2015) as demand for water from farmers peaks. Prices then taper off heading into the winter on reduced demand, and the possibility of rain/snow. The restricted ability to “carry” water, much like one can do with financial contracts, gives this index the same type of seasonal pattern that one sees on some other commodities.

The graph for 2021 is highlighted in red. It shows the same seasonal climb, but at record-high values above each of the last eight years since February. Current bids and offers in the market are still higher than historic prices showing that expectations are that this is an exceptionally dry year and prices may not fall seasonally as much as they have in prior dry years.

(Reference: John H Dolan, CME Market Maker)



Daily H2O Futures Volatility vs Daily NQH2O Index Volatility



DAILY VOLATILITY

Over the last week the November future volatility high has been 4.44% on November 15th with lows of 0% on November 12th. A rare moment where the index volatility is higher than the futures volatility.

ASSET	1 YEAR (%)	2 MONTH (%)	1 MONTH (%)	1 WEEK (%)
NQH2O INDEX	34.55%	5.45%	2.68%	2.444%
H2O FUTURES	N/A	8.62%	5.39%	3.76%

For the week ending on the November 10th the two-month futures volatility is at a premium of 5.01% to the index, up 1.84% from the previous week. The one-month futures volatility is at a premium of 4.79 to the index, up 2.08% from last week. The one-week futures volatility is at a premium of 3.13% to the index, up 3.13% from the previous week. These futures premiums in volatility are indicating the futures are anticipating greater moves in the index.

*Above prices are all **HISTORIC VOLATILITIES** and **IMPLIED VOLATILITIES** will be introduced once an options market has been established. 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 17/11/2021

STATION	MTD (INCHES)	WEEK ON WEEK CHANGE (INCHES)	% OF 20 YEAR AVERAGE MTD	2022 WYTD VS 2021 WYTD %	2022 WY VS 20 YEAR AVERAGE TO DATE %
SAN JOAQUIN 5 STATION (5SI)	0.86	0.48	24.96%	253	193
TULARE 6 STATION (6SI)	0.21	0.19	8.51%	242	113
NORTHERN SIERRA 8 STATION (8SI)	2.87	0.54	55.51%	501	285
CENTRAL VALLEY TOTAL	3.94	1.21	29.66%	349	197

RESERVOIR STORAGE

RESERVOIR	STORAGE (AF)	% CAPACITY	LAST YEAR % CAPACITY	HISTORIC ANNUAL AVERAGE CAPACITY %
TRINITY LAKE	704,891	29	52	50
SHASTA LAKE	1,090,952	24	45	45
LAKE OROVILLE	1,034,729	29	39	58
SAN LUIS RES	446,201	22	45	45

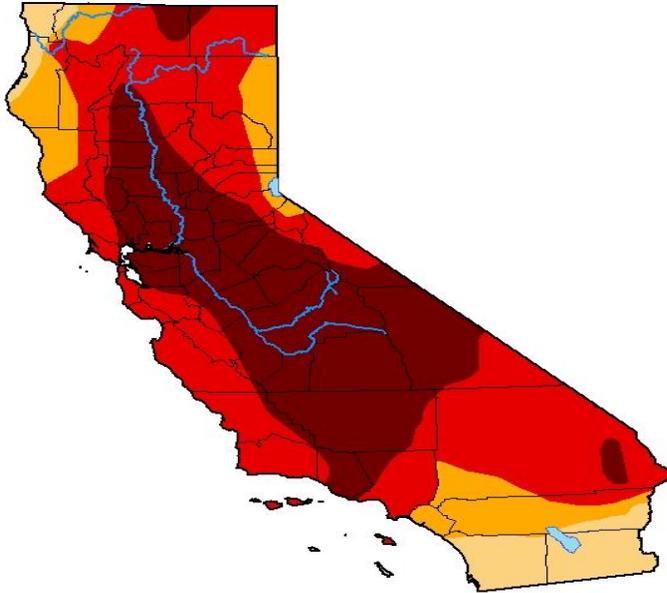
Reference: [California Water Data Exchange](https://www.waterdataexchange.com/)



DROUGHT MONITOR

U.S. Drought Monitor California

November 9, 2021
(Released Thursday, Nov. 11, 2021)
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	92.43	80.28	37.62
Last Week <i>11-02-2021</i>	0.00	100.00	100.00	93.81	83.33	38.74
3 Months Ago <i>08-10-2021</i>	0.00	100.00	100.00	95.07	88.37	47.10
Start of Calendar Year <i>12-29-2020</i>	0.00	100.00	95.17	74.34	33.75	1.19
Start of Water Year <i>09-28-2021</i>	0.00	100.00	100.00	93.93	87.88	45.66
One Year Ago <i>11-10-2020</i>	15.48	84.52	70.91	41.25	15.83	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

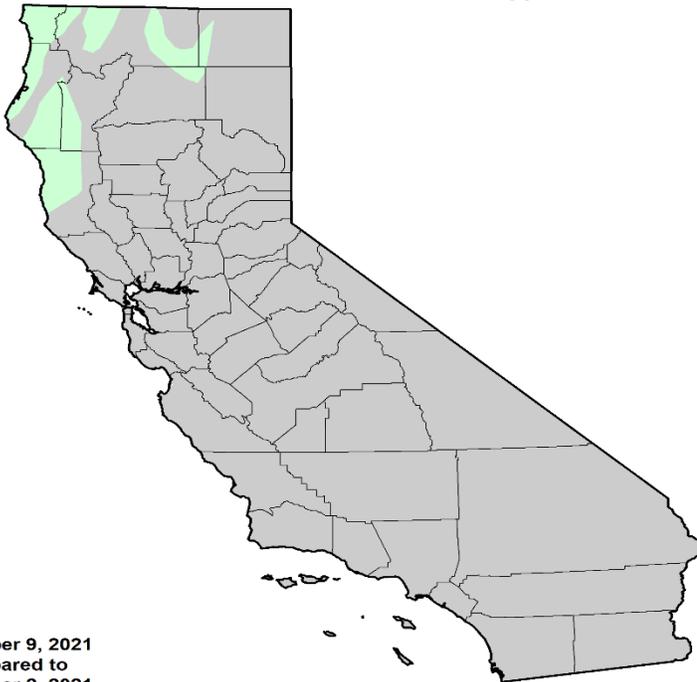
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Curtis Riganti
National Drought Mitigation Center



U.S. Drought Monitor Class Change - California 1 Week



November 9, 2021
compared to
November 2, 2021

droughtmonitor.unl.edu



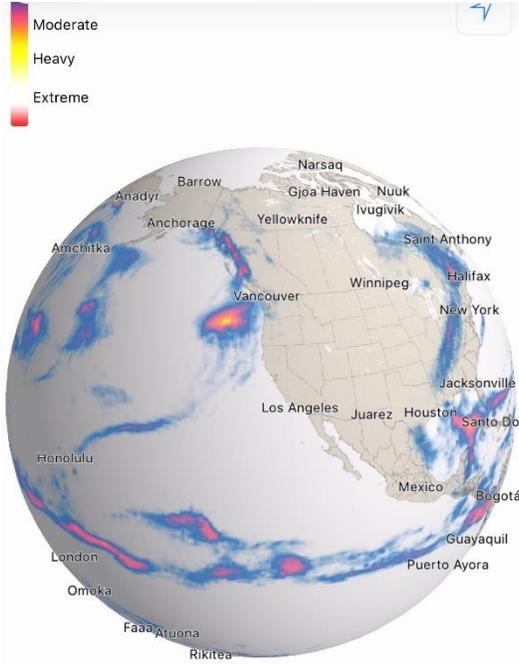
- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement

The US Drought Monitor release their statistics with a 1-week lag to this report. Over the past week there has been a class 1 improvement in drought conditions in Northern CA.

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 current satellite picture shows continued frontal and low pressure systems off the coast in the NW US and making landfall in Canada. Behind this there are signs of further frontal activity brewing over the NW Pacific.

It is expected that this activity will bring further precipitation to the Northwestern US including reaching Northern California. We do not expect this activity to bring precipitation as far south as the LA area as there is a ridge of high pressure over the SW region.

There is limited frontal activity brewing in the sea south of Alaska but we do expect to see more signs of further frontal activity coming from this region over the next few weeks.

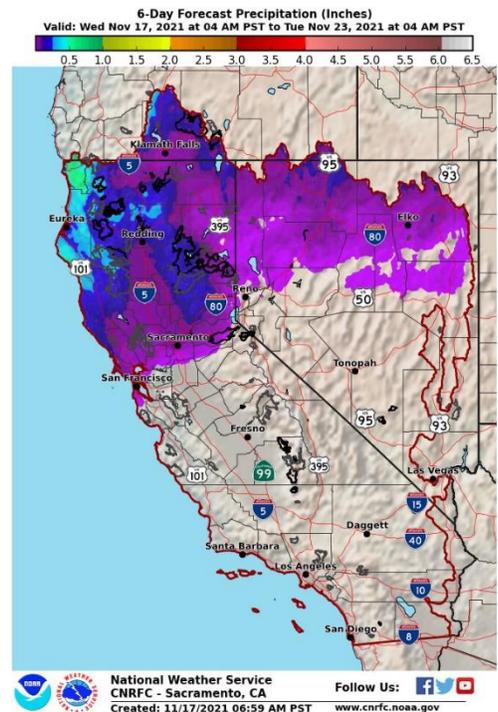
Ref. Dark Sky Monsoonal effects are not prevalent on this satellite picture at present as it appears this moisture inflow from the South may have ceased for the year. Our long-term models are still showing the potential for greater precipitation to reach the SW and Western US this winter.

10 Day Outlook

Dry conditions have returned to the region, with precipitation clearing up over southeast NV. Weak ridging follows tomorrow and Thursday ahead of the next system moving in from the north. GFS 12Z run sped up slightly, coming closer in line with the EC 00Z and 12Z runs. Current QPF follows closely with WPC for details.

Minimal changes for the afternoon forecast issuance. Still looking at some light precip from about I-80 northward on Friday as a weak s/wv trof traverses the northern portion of the region. Then for the weekend dry conditions are expected with an upper ridge building across the west coast with a weak upper low spinning to the southwest of CA.

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





WESTERN WEATHER DISCUSSION

Along the Pacific Coast, near or slightly below normal temperatures combined with heavy precipitation (which exceeded 5 inches in some areas) to improve drought conditions in parts of northern California, southwest Oregon, and Washington. In central Utah, groundwater conditions and long-term precipitation deficits had improved enough for some of the exceptional drought to improve to extreme drought. In Montana, much of the eastern part of the state remained dry, leading to some expansion in exceptional drought, where multiple short- and long-term datasets indicate worsening conditions. In western Montana, a small part of exceptional drought improved to extreme drought where short- and long-term precipitation deficits had improved. In small parts of western Colorado and south-central Wyoming, streamflow and precipitation deficits had decreased enough to lead to improving drought conditions. Farther east in Colorado, recent warm temperatures combined with dry weather to lead to worsening drought conditions in a few areas. Finally, moderate drought expanded in eastern New Mexico, where short-term dry weather combined with depleted soil moisture to lead to worsening conditions. In Oregon and California, long-term drought conditions have adversely affected salmon populations and migratory birds. Due to widespread recent precipitation, much of the West region is now experiencing long-term drought, rather than both short- and long-term drought.

Reference:

Curtis Riganti, National Drought Mitigation Center
Richard Tinker, NOAA/NWS/NCEP/CPC



WATER NEWS

CALIFORNIA WATER NEWS

Sonoma County backs well water regulations, favoring new era of groundwater oversight

Hailed as a complex and historic step, Sonoma County supervisors on Tuesday unanimously endorsed plans to guide use and governance of groundwater relied on by rural residents, farmers and cities.

The plans, required by a 2014 state law crafted amid California's past drought, will eventually include well water use fees in three basins underlying the Santa Rosa Plain and Sonoma and Petaluma valleys.

The plans, four years in the works and due for submission to the state Department of Water Resources in January, are "extraordinarily complex, politically charged and technically nuanced," board Chair Lynda Hopkins said.

"This is a very big deal," she said, calling it the "first time ever the state of California regulated groundwater," a resource that has been handled like the "Wild West for all this time."

The vote came with just a few remarks by supervisors and no public comments or questions. Official approval of the plans is still to come from the Groundwater Sustainability Agencies in charge of each basin, a step set for December.

"I wasn't sure that we'd ever get to this point, but we did," Supervisor Susan Gorin said. The plans are blueprints for use and governance over the next three decades. One critical part of their enforcement — the fees that will be charged to well water users — has not been decided.

"Eventually we will have to set those fees," said Supervisor David Rabbitt, the board's senior incumbent. The fee structure needs to credit areas "that are putting more water down into the ground," he said.

A county report said the state law "mandated that groundwater resources be sustainably managed to ensure that water will be available today and into the future for all beneficial users, including flora and fauna, municipal and domestic, agricultural, and business users."

Cities, even those that primarily draw their drinking water from the Russian River, benefit from groundwater, Rabbitt said, calling it "a shared resource that belongs to all of us."

Each of the three basins is governed by a groundwater sustainability agency with a board made up of elected or appointed members from eligible agencies, including a representative from both the county and Sonoma Water, the agency that delivers Russian River water to more than 600,000 Sonoma and Marin county residents.



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The agencies must achieve sustainability — no significant drop in groundwater tables year-to-year — by 2042 and maintain sustainability to at least 2072.

Original Article: [Press Democrat by Guy Kovner](#)

State’s groundwater “cop” weighs in on plans to stop over pumping and finds them lax

As California’s Central Valley water managers nervously await the first official Department of Water Resources responses to plans for how they expect to fix massive groundwater over pumping, some were dismayed to “stumble” on comments from a different, and very powerful, state water agency.

The State Water Resources Control Board quietly submitted highly critical comments on five Central Valley groundwater sustainability plans in late summer that some local groundwater agencies only recently discovered.

Since the Water Board is the ultimate enforcement arm of the state’s Sustainable Groundwater Management Act, the significance of these comments was immediately noted by water managers.

Original Article: [SJV Water by Lois Henry](#)

What La Niña Means for California’s Drought

For California, the arrival of winter means the beginning of our rainy season, at least relatively speaking.

However much precipitation California is going to receive in a year, the bulk of it typically falls between December and March. And given the severity of our state’s ongoing drought, the amount of rain we get this winter couldn’t be of more importance.

A recent outlook from the National Oceanic and Atmospheric Administration suggests that the northern and southern halves of the state may experience diverging water fortunes this winter because of something you may already be familiar with: La Niña.

Like its climatological cousin El Niño, La Niña is a weather phenomenon that originates in the Pacific Ocean but can affect the whole world. La Niña generally means drier, warmer conditions in the southern half of the United States and wetter weather in the northern half.

Scientists predict that La Niña this winter will lead to below average precipitation in a large swath of California, stretching from the Bay Area to the state’s southern border. They expect warmer than average temperatures for Southern California and eastern parts of Central California.

These hot, dry conditions are obviously bad news after our warmest summer on record and before we’ve seen the end of fire season.

But north of the Bay Area, where the drought is most extreme, things look more promising.

The region falls in a “no man’s zone” where past La Niñas have brought a wide variety of fates — warmer, drier, colder, hotter and average winters — Jon Gottschalck, chief of



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the operational prediction branch of NOAA's Climate Prediction Center, told me. So it's difficult to know how this year will play out.

Yet even with that uncertainty, the climate center predicts that the drought will probably improve north of the Bay Area this winter. The rest of the state is expected to see worsening drought conditions.

These forecasts are based on analyses of what has happened in the past as well as climate models. The important thing to remember is that there are no guarantees.

In the winter of 2016-17, as California grappled with a severe drought, La Niña conditions emerged. Unexpectedly, California got so much rain that, after six years, the state declared the drought over.

Original Article: [New York Times by Soumya Karlamangla](#)

In a Drying West, Cities Turn Sewage Into Drinking Water

For the past decade, water officials in San Diego have been testing technology that would provide the city with a new source of drinking water. In a pilot facility loaded with tubes and tanks, a five-step process filters and disinfects wastewater, turning it into potable water cleaner than what comes out of most people's faucets.

The purified water is crystal clear and tasteless, says Amy Dorman, deputy director of San Diego's Public Utilities Department. "I think even water from my tap has a taste, but this stuff doesn't." When Dorman started working on the project in 2010, the idea of turning wastewater into drinking water felt like a far-flung concept. But now, it's on the verge of becoming a reality. Across the street from the pilot facility, construction crews are building a full-scale facility that will produce 30 million gallons of purified water per day by 2025.

"It's just been really awesome to see something like this come to fruition," Dorman says. San Diego imports roughly 85 percent of its water from the Colorado River and Northern California—sources that are becoming increasingly unreliable and expensive as the West withers under a historic drought. The city's wastewater-to-drinking-water initiative, dubbed Pure Water San Diego, aims to produce 83 million gallons of potable water per day by 2035, providing nearly half of the city's water and reducing reliance on imported sources.

The program's first phase will use a process known as "indirect potable reuse," in which treated effluent is stored in an environmental buffer, such as an aquifer or a reservoir. The buffer serves as an additional protective barrier, allowing the purified wastewater to mix with surface or groundwater and providing time for authorities to respond if treatment processes fail. In San Diego, treated effluent will be stored in the Miramar reservoir before being treated again and sent to residents' taps.

Indirect reuse is not new—the practice has been supplying drinking water in areas such as Los Angeles County and Orange County for decades. As the Pure Water program scales up, however, officials may employ a more unusual approach, known as "direct potable reuse," or DPR. Instead of sending treated effluent to an environmental buffer,



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DPR systems inject purified wastewater directly into drinking water systems. In California, sending recycled water to a reservoir that doesn't provide adequate mixing or time to respond to treatment failures also qualifies as DPR. This latter setup is one that San Diego is contemplating using in the second phase of the Pure Water program. If officials decide to pursue this option, the city will be among the first to use DPR at such a large scale, says Caroline Scruggs, associate professor of natural resources and environmental planning at the University of New Mexico, who studies DPR.

Original Article: [Sierra Club by Chloe Williams](#)

Can We Coordinate Water Sources to Recover More Water Sustainably?

In many places, including Southern California, climate change has increased the threat of drought and the need for new and continuous water resources. Higher salinity water streams, and sometimes seawater, come into consideration to alleviate such scarcity, but require higher energy investment due to the need to desalinate these streams. The proximity of some desalination facilities to wastewater reclamation facilities provides an opportunity to coordinate the two different water resources. Researchers at the USC Viterbi School of Engineering explored such opportunities in order to recover more water, at a reduced cost.

In research published in "Desalination," Amy Childress, Gabilan Distinguished Professor in Science and Engineering, USC Viterbi doctoral student Xin Wei and Kelly Sanders, Dr. Teh Fu Yen Early Career Chair, studied current and future scenarios of wastewater treatment, particularly with regard to higher salinity streams. The goal: provide the most water supply possible, using as little energy as possible and with environmental stewardship in mind.

"While potable reuse and desalination have traditionally been considered separate parts of the water supply portfolio," Childress, a professor in the Sonny Astani Department of Civil and Environmental Engineering, said, "it makes sense to consider ways we can blend wastewater treatment and desalination to meet water and energy goals while ensuring compliance with environmental standards."

To understand this opportunity, one must consider the current context. First, the salinity of wastewater is increasing, in part due to water conservation. This higher salinity water stream is more expensive to treat, and may require a desalination process. Advancements at wastewater reclamation facilities mean that desalination processes (like reverse osmosis, which filters contaminated water through a semi-permeable material to clean it) can help treat higher salinity water streams relatively efficiently.

Original Article: [USC Viterbi by Avni Shah](#)

California backslides on water conservation amid drought

A severe drought prompted California Gov. Gavin Newsom last summer to ask the state's nearly 40 million residents to voluntarily reduce water use by 15% this year. New data released Tuesday shows few people are doing that.



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Californians reduced their water use by a measly 3.9% in September, down from 5.1% in August. Overall, California has reduced its water consumption by just 3.6% since July, when Newsom made the request.

“It’s not the news we want to see, for sure,” said E. Joaquin Esquivel, chair of the State Water Resources Control Board.

A megadrought fueled by climate change has enveloped much of the West. As California heads into what traditionally is its wettest time of the year, 80% of the state is classified as in extreme or exceptional drought, the two worst categories.

State officials had hoped Californians’ conservation would continue to improve each month as more people learn about the drought and water agencies promote their conservation efforts. Instead, data showed none of the state’s “hydrologic” regions met the 15% threshold and two in the Central Valley region that account for 10% of the state’s population actually used more water in September than a year ago.

Water agencies say California actually has reduced its consumption because of changes put in place during prior droughts. That means cutting more now is harder.

In Los Angeles, customer demand for water has dropped 30% since 2007. And during the drought that ended in 2017, customer demand fell by 20%, a reduction mostly maintained once that drought ended.

For example, the Los Angeles Department of Water and Power has imposed mandatory irrigation restrictions since 2009 and incentivized customers to replace their lawns with turf. The agency has been hiring more people to enforce water use rules, beefing up patrols that search for leaks and violations.

Beyond those efforts, it will take lots of time and money to see any real savings “given most of the immediate savings potentials have already been accomplished in our service area,” said Terrence McCarthy, the department’s water resources policy manager.

Original Article: [Marin Independent Journal by Associated Press](#)

Proposed ballot measure would fast-track construction of dams, desalination plants and other water projects

California has not built enough new reservoirs, desalination plants, and other water projects because of too many delays, too many proceedings, and too many bureaucratic formalisms.

This is a message from the growing coalition of farmers in the Central Valley and desalination supporters in Southern California. They quickly tracked large water projects and began collecting signatures for state-wide voting bills that would provide billions of dollars to fund them. Next year with environmentalists shaped by the state’s ongoing drought.

Measures known as “2022 Water Infrastructure Financing Act, ”Eligible for state-wide voting in November 2022 requires the signature of 997,132 registered voters by April 29.



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If approved by a majority of voters, 2% of California's general financial resources (about \$ 4 billion annually) should be reserved for projects to expand water supply. They may include new dams and reservoirs, desalination plants, reclaimed water plants, and other projects such as canal and pipe upgrades.

Funds will continue to flow until 5 million acre feet of new water are supplied each year. This is an increase of about 13% of the average 39 million acre-foot used by all residents, farmers and businesses in the state. According to this, this can take decades and cost \$ 100 billion. analysis According to a nonpartisan state legislative analyst office.

"We believe that conservation has an important role to play," said Edward Ring, a spokesman for the campaign known as More Water Now. "But conservation alone can't get you there anymore. If you're resistant to long-term droughts, you'll need to get new supplies."

Proponents say that if California does not keep pace with expanding its water supply, leading to a serious shortage of farmers in recent years and the state's two-year drought continues, water distribution for many urban dwellers will increase next year. It states that there is a possibility.

Scientists say that climate change is making California's drought more serious. They say the state needs more reservoirs to save water in rainy years, especially as the temperatures melt in the Sierra Nevada Mountains.

"A large storm creates excess water that needs to be harvested," says Ring.

The bill has already been approved by 27 state legislators, 18 Republicans, 1 Independent, 8 Democrats (including one from the Bay Area), Congressman Tim Grayson, D-Concord.

But environmentalists say the measures are overkill and are ready to fight them.

"In next November's vote, this is a top priority for environmental groups," said Jonas Minton, senior water adviser to Sacramento's nonprofit Planning and Conservation League. "This is due to the destruction of California's environment resulting from billions of dollars of unsupervised spending each year without environmental oversight."

Under this bill, the California Water Commission, a nine-member committee appointed by the Governor, will spend the money each year.

This measure streamlines environmental reviews. For coastal water projects, the California Coastal Commission must make a decision within 90 days and may be rejected by the State Secretary of Natural Resources.

Environmental impact reporting is still needed. However, if an opponent filed a proceeding, the court must rule them within 270 days.

Minton said many state political powers could oppose this measure, as the money guaranteed for the water project means less for other spending on the state budget.

"This is the biggest scam in California's history of robbing nurses, teachers and firefighters of more than \$ 100 billion in taxpayer funds to pay for sponsored extraordinary interest projects," he said.



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Political observers say the bill will challenge to collect enough signatures to qualify for voting. However, if the drought continues and water restrictions are tightened across the state, it can be a populist problem that may have a chance to pass, as predicted by local and state water authorities.

Jack Pitney, a professor of political science at Claremont McKenna College in Los Angeles County, said:

“If I had a no campaign, I would assemble it as a free gift for agribusiness,” he said. “But for many Californians, if they are hit by a severe drought in August, their attitude will be” environmentally friendly and want to take a shower. ” “

So far, supporters have raised about \$ 100,000 primarily from the profits of farms in the Central Valley. The organizer is Wayne Western Jr., a board member of the California Farm Water Coalition. It is included. Jeffrey Van den Huber, Director of Regulatory and Economic Affairs at the California Milk Producers Council. Several supporters for building a new desalination plant in Huntington Beach: Steve Sheldon, Chairman of the Board of Directors of the Orange County Water District, and Sean Dewane, a member of the Board of Directors of the Mesa Water District in Costa Mesa.

California voters approved Proposal 1, a major water bond, during the last drought in November 2014. The \$ 7.45 billion measure funded projects from drinking water plant upgrades to reclaimed water initiatives. It also includes \$ 2.7 billion for new storage projects.

Original Article: [California News Times](#)

Parched California Drives Almond Supplies Lower

Almond production in California, the world’s biggest producer of the nuts, is expected to drop 10% to 1.3 million tonnes (2.9 billion pounds) this year because of high temperatures and drought. The return of La Niña conditions could bring another weak crop next year as well.

The crop shortfall threatens to drive almond prices sharply higher, with some growers expecting a price jump of 50% or more from last year’s \$1.83 per pound. That would hit many packaged food companies that rely on almonds for a wide variety of chocolate and other snack products. In addition, almond milk is the preferred dairy alternative in the US, with those manufacturers likely to see margin pressure and consumers possibly seeing higher prices.

Almond prices’ last big spike, to \$4 per pound, occurred in 2014 in the wake of another deep California drought.

California grows virtually all the almonds raised in the US, and accounts for 79% of global supply. Australia is the second-biggest producing country, but production gains there failed to offset declines in California, and global almond production is expected to decline by 8%, according to USDA estimates.

Rainfall in California’s almond-growing regions from March through June, the period when nuts are maturing, was 74% below the 10-year trailing average, while the average



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temperature was 11% above average, according to Gro's Climate Risk Navigator for Agriculture. The Gro Drought Index shows extreme levels of drought in key growing areas during the summer. The harsh growing conditions reduced nut set per tree by 18% and kernel weight by 3%, even as almond acres increased by 6%, according to the USDA.

As California has been hit by repeated droughts in recent years, almond growers have increased irrigated acreage while decreasing the number of non-irrigated acres. The US Climate Prediction Center recently announced that La Niña conditions have returned for a second year in a row and says the chance of it lasting through the North American winter is nearly 90%. La Niña tends to bring drier than normal conditions to the Western US, which could put almond groves in California's Central Valley in a precarious position.

Original Article: [Gro Intelligence](#)

\$1 billion project to expand major Bay Area reservoir gains momentum

The rolling hills and ranchlands of eastern Contra Costa County are known for wineries, cattle ranches, wind turbines and growing subdivisions.

But soon they may be known for something else: The biggest new water storage project in the Bay Area in years. And now, amid the current drought, nearly every major water agency in the region wants a piece of it.

The Contra Costa Water District is moving closer to breaking ground on plans to expand Los Vaqueros Reservoir, south of Brentwood, by raising the reservoir's earthen dam by 56 feet, to 287 feet high. That would make it the second tallest dam in the Bay Area, eclipsed only by Warm Springs Dam on Lake Sonoma near Healdsburg, which is 319 feet high.

Construction, slated to begin in late 2023 and finish by 2030, would expand Los Vaqueros from its current 160,000 acre-feet capacity to 275,000 acre-feet, enough water when full for the annual needs of 1.4 million people.

At a time when other efforts to build new dams and reservoirs in California have struggled for lack of money, ballooning costs and opposition from environmental groups, Los Vaqueros is gaining momentum.

The idea is that part of the \$1 billion cost would be shared by other Bay Area water agencies, who would receive some of the water.

"It's about water supply reliability," said Marguerite Patil, assistant general manager of Contra Costa Water District. "It's not a big enough project to solve everybody's problems, but it's a good tool to have in the tool kit."

Recently, the project has cleared several significant hurdles.

Last month, the Contra Costa Water District and seven other agencies formed a legal partnership to oversee the design, construction and funding of the reservoir — including negotiating in the coming year how much money each agency will contribute and how much water they will secure.



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That partnership, called a Joint Powers Authority, held its first public meeting Wednesday.

Environmental studies are finished. Engineering plans are expected to be reviewed in the spring by state dam safety officials for final approval.

Two weeks ago, the California Water Commission, a nine-member agency appointed by the governor, voted unanimously to confirm that the project qualifies to receive \$470 million from Proposition 1, a state water bond passed by voters in 2014.

The project also has \$223 million in federal funds. The rest of the funding would come from other Bay Area water agencies.

“We’re feeling great,” Patil said.

There are still challenges ahead. To raise the dam, the reservoir will have to be drained in 2027 for three years. The district says it will provide water during that time to Contra Costa County residents directly from the Sacramento-San Joaquin River Delta and from transfers and exchanges with other districts.

Original Article: [Mercury News by Paul Rogers](#)

DWR awards another \$25M in drought relief

Calif.’s Department of Water Resources (DWR) today announced its fourth round of funding through the Small Community Drought Relief program. This fourth round will provide \$25 million to 14 projects.

DWR and the State Water Resources Control Board identified the 14 projects for funding in 10 counties: Tulare, Lake, Santa Cruz, Shasta, Sonoma, Humboldt, Santa Barbara, San Mateo, Yolo and Colusa. Of the 14 projects, about half will benefit disadvantaged communities and range from covering the cost of hauled water to constructing new wells and replacing leaky pipelines.

“As climate change further exacerbates dry conditions in California, it’s imperative that we take action now to strengthen drought resilience in our small and rural communities as we prepare for the possibility of a third dry year,” said Kris Tjernell, DWR Deputy Director of Integrated Watershed Management, “DWR and the State Water Resources Control Board will continue coordinating to identify projects for future phases of funding and provide support to our residents who need it most.”

Recipients of the \$25 million include:

- Westhaven Community Services District: In Humboldt County, the Westhaven Community Services District is losing an average of 20 percent of its water supply due to a leaking distribution system which is being further stressed by the drought. The district will receive \$4,120,833 to drill additional wells and replace the aging distribution system to minimize water loss.
- Sweetwater Springs Water District: Faced with an unreliable water tank and water system, the Sweetwater Springs Water District of Sonoma County will be awarded \$735,000 from the State. Funds will be used to rehabilitate the existing well and add a water storage tank to strengthen drought resiliency.



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- Harbor View Mutual Water Company: In Lake County, the aging water storage tanks serving the Harbor View community are leaking significant amounts of water. As a solution, the State will provide \$1,866,553 to replace the existing tanks with epoxy-lined steel water storage tanks.
- County of Colusa: Nearly 25 private domestic wells have gone dry or are running out of water in Colusa County. The County will receive \$718,750 to cover the cost of 25 water tanks and bi-weekly water deliveries for up to 50 residents for about one year.
- Pixley Public Utility District: In Tulare County, the disadvantaged community of Pixley is dealing with small and leaky pipelines with no backup power source, making them vulnerable to losing water during the current drought. In addition, the existing well casing has been compromised in several locations due to subsidence. The district will be awarded \$1,986,677 to rehabilitate the existing well, install a backup generator, and replace leaking water mains.
- San Lorenzo Valley Water District: The state will award \$3,203,856 to the San Lorenzo Water District to consolidate two water systems impacted by drought. The project includes the installation of nearly two miles of pipelines and a pump station to provide water to Bracken Brae (24 connections) and Forest Springs (128 connections) in Santa Cruz County.
- San Mateo Resource Conservation District: The community of Loma Mar is dealing with severe water loss due to leaking pipelines. The Conservation District will receive \$2,095,442 to replace about three miles of aging pipelines. To strengthen drought resiliency, the old water plant will be upgraded by replacing the wet instrument station, filter station, pump station, and chemical feed station. A backup generator will also be installed for system resiliency.

Since its launch earlier this summer, the Small Community Drought Relief program has awarded over \$65 million total in funding to 37 projects in 16 counties. In addition to the Small Community Drought Relief Program, DWR recently published the final guidelines for the Urban and Multibenefit Drought Relief Program. The program includes an additional \$200 million in grant funding for urban water suppliers and multi-benefit drought relief projects to address hardships caused by drought.

Original Article: [Water World](#)



US WATER NEWS

Biden signs historic \$1-trillion bipartisan infrastructure bill

President Biden on Monday signed a historic \$1-trillion bipartisan bill that he said will overhaul the nation's infrastructure and boost the nation's economy, which has been battered by the COVID-19 pandemic.

Touting the legislation as a job creator, the president said it was also an example of him fulfilling a campaign promise to reach across the aisle to get things done.

"Democrats and Republicans can come together and deliver results," the president said during a signing ceremony on the White House lawn that was attended by more than 800 labor leaders, business executives, governors, mayors and mostly Democratic lawmakers.

The bill is expected to fund a plethora of infrastructure projects — including the expansion of broadband internet access and repairs to aging roads and bridges — over the next five years. California is set to receive about \$3.5 billion to eliminate lead water pipes and take other steps to improve drinking water. It should also receive more than \$80 million to help mitigate wildfires and other natural disasters.

The bill is smaller and less ambitious than Biden's original \$2.3-trillion proposal, which was trimmed to ensure Republican support in the Senate.

Though the White House invited all 32 Republican lawmakers who voted for the bill, only a fraction attended the ceremony on the White House lawn. Among them was Sen. Rob Portman of Ohio who said he hoped to work with Democrats on other bills that "advance the interests of the American people."

Former President Trump, who repeatedly failed to overhaul the nation's infrastructure, blasted Republicans who backed this bill, directing particular ire at Senate Minority Leader Mitch McConnell of Kentucky. Trump attacked McConnell in a statement over the weekend, calling the senator "Old Crow" and claiming the bill has given "Biden and the Democrats a victory just as they were falling off the cliff." The former president added that Republican lawmakers who crossed the aisle are "greatly jeopardizing their chance of winning reelection."

Original Article: [The LA Times by Erin B. Logan](#)

Texas Groundwater Supplies Are in Danger, Reports Say

Across Texas, groundwater is being pumped out of aquifers so quickly that more wells are in danger of going dry, and more springs and surface water may begin to dry up, according to two reports released today.

The reports — issued by researchers at The Meadows Center for Water and the Environment at Texas State University and at Environmental Defense Fund (EDF) — paint



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an unstable, unsustainable picture for the millions of Texans, the cities and communities, and the rivers, streams and springs that depend on groundwater:

- Statewide, Texas is losing groundwater at nearly twice the maximum sustained rate — and according to plans already pending with local management agencies, that rate is likely to increase in coming years unless officials change course.
- Groundwater is being pumped out of the Ogallala Aquifer — the primary source of water for Texans in the High Plains and Panhandle regions — 6.5 times faster than its sustainable rate.
- In many cases, groundwater conservation districts have adopted plans and goals that will accelerate these depletion trends — in some districts, officials have set long-term management goals that will lead to unsustainable pumping.

“This unsustainable groundwater pumping will ultimately lead to dry wells, dry springs, less surface water, and other problems that directly impact Texans, Texas’ economy, and the environment,” said Dr. Robert Mace, executive director and chief water policy officer at The Meadows Center for Water and the Environment and lead author of the report [“Five Gallons in a Ten Gallon Hat: Groundwater Sustainability in Texas.”](#)

In many places, he added, Texans are already seeing the depletion and feeling the impact.

“In the Hill Country, water-levels are declining, wells are running dry, and springs are vanishing. That’s a sign of things to come across the state. If we want our aquifers to be available to future generations, we have to start thinking about groundwater differently,” said Mace, whose research and reporting was sponsored in part by the Cynthia & George Mitchell Foundation. “There’s still time to manage groundwater so that future Texans can count on it.”

The EDF report, [“Advancing Groundwater Sustainability in Texas: A Guide to Existing Authorities and Management Tools for Groundwater Conservation Districts and Communities,”](#) focuses on groundwater conservation districts — local agencies charged with managing and protecting groundwater supplies, especially in more rural areas — and the regulatory tools that are available to these districts to manage groundwater sustainably.

The EDF report also warns that Texas is headed in the wrong direction in terms of groundwater management, with most groundwater districts setting long term goals that allow for the eventual depletion of aquifers.

Original Article: [EDF by Vanessa Puig Williams](#)

Utah water projects get a boost from congressional infrastructure bill

A critical Utah water project will get millions from the congressional infrastructure spending bill. Sen. Mitt Romney, R-UT, worked on the bipartisan legislation and received thanks Friday afternoon in southern Utah County from local officials and water managers.



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They met in Spanish Fork and toured a construction site for a portion of the Central Utah Project — a decades-long project that pipes Colorado River water to the Wasatch Front. It's getting a \$50 million boost, but was almost left out of the final bill, according to Romney.

But he said it was added at the last minute.

"This is really critical for us to be able to get water for Utah County and for Salt Lake County," Romney said. "If this doesn't get done now, it could stretch on for a long time and could result in even greater shortages, and even with the drought going on right now, we need to move this along."

Officials on the project said the money will go toward constructing a segment of the pipeline that serves 10 communities in the county. They said the funding will help cut the timeline in half for this section of the project.

Todd Adams, deputy director of Utah's Department of Natural Resources, said this infrastructure project and others funded by the bill will help generations in the future.

"Utah, as the fastest growing state in the nation, has critical infrastructure needs," he said. "Not only do we need new infrastructure to support our growth, we also need to maintain and replace our aging infrastructure to preserve the quality of life Utah is famous for."

The infrastructure bill also allocates money to drought and wildfire mitigation in the state, as well as over \$200 million to fully fund the Navajo Utah Water Rights Settlement, which brings running water to parts of the Navajo Nation in Utah.

Original Article: [KUER by Lexi Peery](#)

Breakwater breaks ground on water recycling facility

Breakwater Energy Partners, LLC has broken ground on the Morita Commercial Recycling Facility ("Morita"), its second Texas Railroad Commission (RRC) water recycling facility. The facility is Division 6 H-11 commercially-permitted for the receipt, storage, handling, treatment and recycling of nonhazardous oil and gas produced water. Breakwater also operates nine separate non-commercial water recycling facilities for five operators in the Midland Basin. Once complete, Morita will be one of the largest produced water recycling facilities in the Permian Basin with throughput capacity over 200,000 barrels per day.

Rising Permian Basin seismicity has prompted the RRC to announce two separate Seismic Response Actions (SRAs) which limit the injection of produced water into regional Saltwater Disposal Wells (SWDs). The RRC has determined that produced water injection into SWDs is likely a primary contributor to the unprecedented rise in the frequency and intensity of earthquakes observed in the Permian Basin.

"With more of these seismic events shifting to the population centers near Midland, Stanton, and Big Spring, an alternative to wastewater disposal is becoming essential to operators. That is what we are providing with these regional recycling facilities." said Jason Jennaro, CEO of Breakwater. "Operators are looking for environmentally



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sustainable alternatives to disposal within these SRAs and seismic clusters, which is why system interconnectivity and commercial recycling is central to sensible stewardship of the water supply chain."

Located in southwestern Howard County, Morita will serve Martin, Glasscock, and Howard counties with sustainable water services. Morita will also have interconnectivity to Texas' first and largest commercial produced water recycling facility, Breakwater's Big Spring Recycling System (BSRS), which was recently expanded into Martin County with a large diameter pipeline capable of delivering up to 360,000 barrels per day of recycled water.

Morita and BSRS link together numerous operators' produced water systems into nexus and storage points, allowing Breakwater to serve customers with frac water blends of up to 100 percent recycled water. Collectively, BSRS and Morita will be capable of treating and distributing more than half a million barrels of produced water per day to the Midland Basin.

Original Article: [Water World](#)

US states and cities are already making big plans for the \$1 trillion infrastructure bill

The US Congress and president Joe Biden have signed off on a \$1.2 trillion infrastructure deal. Now states and cities must decide exactly how it will be spent.

Over the next five years, most of the money will trickle down to states and cities through funding formulas and competitive grants, it will be up to these local authorities to plan and execute specific projects. Various sums are earmarked for different purposes: roads and bridges, ports, broadband.

Eight billion dollars in the bill are dedicated to "Western water projects" to help states like California, Nevada, and Colorado shore up water systems depleted by drought. This includes \$1 billion in funding for water recycling programs, which treat wastewater to make it safe again for consumption. A handful of US communities have established water recycling programs, and even more, like Los Angeles and its surrounding area, and Colorado Springs are developing plans for them. The southern California water treatment facility is still in its early stages, but once scaled up out could serve more than 500,000 households.

Other specific provisions in the bill for natural infrastructure include \$24 million to support the restoration of wetlands near San Francisco. In Virginia, a federal program to restore the Chesapeake Bay has gotten a \$328 million boost.

Original Article: [Quartz by Camille Squires](#)

Ridgway grants "rights" to its river, joining several Colorado towns in push for new water protections

The Ridgway town council has voted to give "rights of nature" to the Uncompahgre River that flows on the edge of its downtown, joining Nederland and a long list of international locations saying they want to be better stewards of their wild spaces.



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The council followed the lead of Mayor John Clark in approving the river rights resolution 5-0, with one abstention. Supporters said that while their vote was largely symbolic, at the very least they want it on the record that preserving the environment of the Uncompahgre's basin is important to town leaders.

"We believe nature deserves equal footing" with those who use the river's water and other resources for other gains, Clark said after the vote on Nov. 10. "And so I'm pretty excited to be one of the few communities in the nation that are stepping up on this."

It's just a resolution for now, with no clear enforcement path. But the "personhood for the river" discussion is part of a growing effort to protect natural areas by granting them some legal form of a right to exist, after centuries of human intervention. Nederland already passed such a measure in the summer of 2021, and the nonprofits Earth Law and Save the Colorado are helping to spread the conversation in more Colorado towns. Save the Colorado says people have expressed interest in Lyons, Fort Collins and Crested Butte.

The natural rights movement has gone as far afield as New Zealand and Nigeria, with some efforts focused on protecting revered tribal lands, others to stop dams from forever changing valued waterways.

Legal critics of the strategy, though, contend that water can't have rights unto itself, and that the people proposing to speak for Colorado's rivers may have narrow views that don't serve the state as a whole.

"The problem is the assumption that one particular party gets to unilaterally say what the interests of the stream are," said David McDonald, an attorney who has followed the natural rights movement for the Mountain States Legal Foundation. "The stream has no voice. It's not a person. It's a collection of inanimate objects. These organizations are asking us to give them a great deal of trust."

For rivers, the premise begins with the reality that all the rights to the water in Colorado streams are already carved up and passed out to buyers including ranchers, town water supplies, beer brewers and power utilities. The trout and the frogs and the mayflies and the H₂O itself don't get a say, while the water is pushed and pulled and dammed and drained.

The rights of nature movement, Durango-based Earth Law attorney Grant Wilson said in an interview, treats rivers as living entities. That's a revolution, he said, from centuries of water law that treats river water as a human property. Wilson went to Ridgway to explain the resolution before the town council held its vote.

Original Article: [The Colorado Sun by Michael Booth](#)

Gov. DeSantis pushes for \$3B investment in water quality by end of his first term

Hit budget requests \$660 million for Everglades restoration and \$300 million for water preservation.



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The first full day of **Ron DeSantis'** tenure as Governor, he **announced his plan** to spend \$2.5 billion on water quality over four years. As he unveiled the environmental budget for the last year of his term, he's hoping that four-year number can exceed \$3 billion.

"That will be double what had been done the previous four years before I took office," he said. "That shows the extent of that commitment, shows the extent of what we're doing."

The Governor called for more than \$1.5 billion in the next budget for water and resiliency in total.

Budget highlights include \$660 million for Everglades restoration, \$500 million for coastal resiliency grants to battle rising sea tide, intense storms and flooding, \$175 million for targeted water quality projects including wastewater improvement efforts, \$50 million for springs, \$40 million for alternative water supply grants and \$35 million to combat harmful algal blooms (including \$15 million in innovative technology spending alone), \$50 million for resiliency planning and coral reef protection, and \$3 million for battling Burmese python population growth.

Department of Environmental Protection Secretary **Shawn Hamilton** said the plan shows an exciting commitment to protecting and restoring Florida's ecology.

Original Article: [Florida Politics by Jacob Ogles](#)

Ouray County asks state water board to delay filing aimed at instream flow protection

Ouray County is asking the state water board to delay a water court filing designed to protect streamflows so it can try to resolve issues in a separate but related water court case.

In July, the Colorado Water Conservation Board approved an instream flow water right on Cow Creek, a tributary of the Uncompahgre River, and asked staff to file for the right in water court by the end of this year. Instream flow rights are held exclusively by the state with the goal of preserving the natural environment to a reasonable degree. The state board, which is charged with protecting and developing Colorado's water supply, holds instream flow rights on about 1,700 stream segments and 9,700 miles of stream throughout the state.

Now, Ouray County is asking the CWCB to delay the filing by six months so that the two governmental entities can try to work out the board's opposition to a reservoir and pipeline project on Cow Creek on which the county is a co-applicant. CWCB directors will consider the request at their regular meeting Thursday.

In a November letter to Ouray County, Robert Viehl, the CWCB's chief of the Stream and Lake Protection Section, noted that state statutes set clear rules and timelines for commenting and making hearing requests, and that the county's request to delay the filing falls outside of those parameters.

"Any entity had the opportunity to state concerns with the Cow Creek appropriation and filing of the water right at the CWCB's March, May and July 2021 meetings, when the appropriation was noticed before the board," the letter reads. "This request by Ouray



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County is outside of the set administrative process for the appropriation and filing on instream flow water rights.”

Original Article: [Aspen Times by Heather Sackett](#)

Many in Mississippi's Capital Left With Little or No Water

Residents of Mississippi's capital city are being warned to boil water before using it because of low pressure in the aging water system.

The citywide alert was issued after a problem occurred during the weekend at one of Jackson's water treatment plants, WAPT-TV reported. Charles Williams, the city's chief engineer, said the issue was resolved but it had drained the storage tanks.

Pressure dropped after the city cut off treatment at one of the plants after a worker discovered a bad batch of treatment chemicals were used, WLBT-TV reported. The worker found the problem Sunday, but the pressure did not drop below the threshold until Monday evening.

About 10,000 to 15,000 customers were temporarily without water Tuesday. Several Jackson schools shifted to all-virtual classes for Tuesday because they lacked water.

The problems arose as the administrator of the Environmental Protection Agency, Michael Regan, toured Jackson on Monday to examine the problems with the city's water infrastructure. It was the first of several stops Regan is making to historically marginalized communities in the South.

Original Article: [US News by Associated Press](#)

GLOBAL WATER NEWS

China unveils regulation on groundwater management

Chinese Premier Li Keqiang has signed a State Council decree unveiling a regulation on the management of groundwater, informed [The Xinhua News Agency](#).

The new regulation, which will take effect on Dec. 1, has set out specific rules for groundwater in the areas of survey and planning, conservation and protection, over-exploitation treatment, pollution control, and supervision and management.

Local water administrations and natural resource and ecological environment authorities should conduct survey and evaluations on groundwater conditions, and make underground protection and pollution control arrangements accordingly, it said.

To enhance groundwater conservation and protection, the total amount of groundwater extracted as well as groundwater levels will be placed under control, according to the document. Except under special circumstances, groundwater that is not replenished easily should not be exploited.



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The regulation has also stipulated that the designation of areas where the exploitation of groundwater is prohibited or restricted should be standardized, and provincial-level authorities should make plans for local groundwater over-exploitation treatment.

It said that work shall be done to strengthen the control of activities polluting groundwater; refine the rules that prevent groundwater pollution caused by soil pollution, production and construction activities; and enhance monitoring and management.

Violations of the regulation will entail legal responsibilities, it stated.

Original Article: [Ukra News](#)

Estuaries, though small, have huge economic impact: report

The [2021 update](#) presented Nov. 3, prepared by [TBD Economics](#) and the [Center for the Blue Economy](#), expands on the previous report and looks at natural infrastructure such as wetlands and oyster reefs, and coastal blue carbon, or the carbon captured by marine organisms and stored in coastal ecosystems, in the local economies of six case study sites: Pamlico Sound in North Carolina, Great Egg Harbor in New Jersey, Florida's Tampa Bay, Terrebonne-Haute Basin in Louisiana, San Pablo Bay in California, and Snohomish Estuary in Washington.

"Estuaries are small places with huge economic impact. They're 4% of the continental landmass in the U.S., eight of our 10 largest cities are along estuaries, 40% of our U.S. population and 47% of our gross domestic product are all generated from estuary counties. So what happens in estuaries affects all of us," Restore America's Estuaries President and CEO Daniel Hayden explained during the [Nov. 3 press conference](#) to present the report update.

Hayden said that since the first report, 15% more Americans live in coastal communities, especially within the Gulf Coast region. This means there's more people and more property at risk than ever before. Also, there are two times the number of billion-dollar-plus storms as there were just a decade ago, resulting in 69% more deaths.

"These are trends that we're seeing across the entire country," Hayden said, citing a [study from The Pew Research Center](#) that found 63% of Americans say they're seeing the effects of climate change today. "So this is no longer a future problem. It's today's reality."

These storms and extreme weather are not affecting all communities equally. "There's an increasing body of research that shows that economically disadvantaged communities are impacted much worse by coastal flooding and storms than other communities," Hayden said. He added these storms take an immense human toll and cause disruption to families and communities, which makes it even harder for communities that are already struggling.

Hayden said there is a clear case for investment in the coast. For every \$1 invested in mitigation, \$6 is saved in recovery and this investment can help avoid human suffering and improve habitats. Every \$1 million invested in habitat restoration creates an average



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of 17 jobs. “This is a much higher rate of return than the traditional industries such as coal, gas or nuclear energy generation, there’s a lot of opportunities for us to continue to invest in our coasts while investing in our economy.”

The update includes two new categories, “coastal blue carbon” and “natural infrastructure,” in its assessment of conditions in the continental U.S. This new information was included to fill considerable gaps in understanding the benefits provided by coastal natural infrastructure and blue carbon, according to the update. The values for natural infrastructure flood resilience and carbon sequestration presented in the case studies illustrate the current economic benefits provided by these two services in regions across the country.

The report explains that conserving and restoring estuaries rich in coastal blue carbon – greenhouse gas carbon dioxide sequestered in the soil — mitigates the effects of climate change and provides additional benefits such as nursery habitat for fish and reduction of storm surge impact. NOAA defines natural infrastructure as healthy ecosystems including forests, wetlands, floodplains, dune systems and reefs, that offer many benefits like storm protection through wave attenuation or flood storage capacity and enhanced water services and security.

Hayden added that the value of blue carbon sequestration totals \$600 million to \$3.7 billion at the six sites studied, and natural infrastructure helped avoid between \$1 billion and \$3.1 billion in property losses. “So we can sort of imagine the impact they have on our country as a whole,” he said.

Original Article: [Coastal Review by Jennifer Allen](#)

Heavy rains bring flooding and mudslides to the Pacific Northwest and Canada

A massive wind and rain storm that began Friday is causing flooding and mudslides in the Pacific Northwest near the Canadian border, leading to the closure of an interstate highway, evacuations and power outages.

On Monday, Washington Gov. Jay Inslee declared a severe weather state of emergency for 14 counties in the western part of the state.

Landslides caused by rain and wind as well as saturated soil from an earlier storm led to the closure of Interstate 5 overnight. The West Coast's main north-south highway, which had been blocked off in both directions, partially reopened Tuesday morning.

Dramatic drone video posted by the city of Bellingham, Wash., showed abandoned cars in streets submerged by floodwaters and people using kayaks to get around.

Multiple areas of the state faced evacuations, and more than 158,000 customers in western Washington had no power at one point Monday afternoon, The Associated Press reported. Many schools were also closed or delayed.

Flood warnings remained in effect for several counties into Tuesday afternoon, but the National Weather Service said the high waters were expected to recede.

"Thanks to all the crews working to keep Washingtonians safe," Inslee tweeted Monday evening.



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The devastating flooding also extended into Oregon, where officials in one area rescued 20 people and three dogs from an inundated RV park.

Heavy flooding across the state closed roads, trapped people in their homes and knocked out power in one area, the Salem Statesman Journal reported.

Original Article: [KNPR by Joe Herdandez](#)

Water firms to pay £67m for failing customers

The water sector's regulator Ofwat has announced water companies have to pay a total of £67 million after missing targets on customer service.

The outcome delivery incentives (ODIs) is a scheme that rewards or issues fines to companies for outperformance or underperformance against their performance commitments which are reviewed year-on-year.

Performance commitments are the pledges companies made to their customers and stakeholders at the 2019 price review about service levels to make progress towards their outcomes.

Thames Water will have to pay £53 million and Southern Water will repay £46 million into the redress fund.

Severn Trent Water will receive £25 million as an outperformance payment – that is given as a financial reward when a company performs better than the performance commitment level.

Original Article: [Energy Live News by Dimitris Mavrokefalidis](#)

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