

Veles Water Weekly Report

1. **WATERTALK**
TECHNICAL ANALYSIS BY ROBIN BIEBER
2. **NQH2O INDEX VS H2O FUTURES PRICE PERFORMANCE**
3. **NQH2O INDEX AND H2O FUTURES VOLATILITY ANALYSIS**
4. **CENTRAL VALLEY PRECIPITATION REPORT**
5. **RESERVOIR STORAGE**
6. **SNOWPACK WATER CONTENT**
7. **CALIFORNIA DROUGHT MONITOR**
8. **CLIMATE FORECAST**
9. **CALIFORNIA WEATHER DISCUSSION**
10. **REGULATORY NEWS**
11. **WATER NEWS**

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VelesWater



WATER FUTURES MARKET ANALYSIS

Welcome to ***WATERTALK***

by Robin Bieber

CLICK THE LINK BELOW

"A 2 minute technical analysis video of H2O futures by Robin Bieber."

<https://vimeo.com/534343848/934149609b>



NQH2O INDEX PRICE vs H2O FUTURES PRICE

1 Month Price Performance NQH2O Index vs H2O Futures

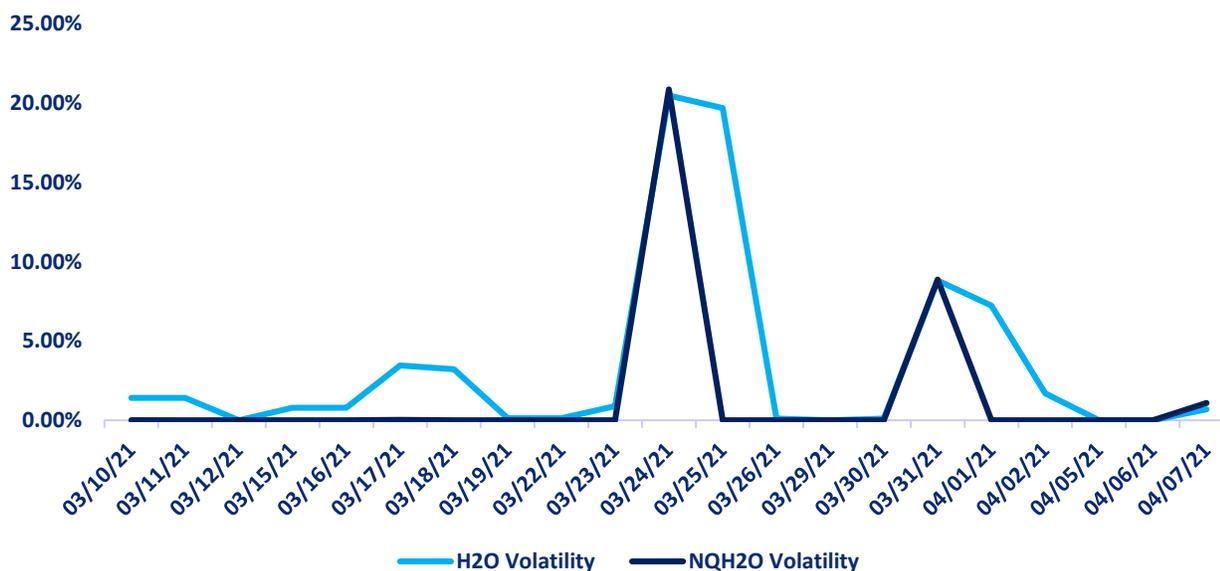


The week starting on the 31st March began with a new index level of \$772.10 up \$86.21 or 12.57% from the previous week. On the 7th April, the index increased a further \$11.84 or 1.53% to \$783.94. The futures ranged from a low of \$799 on the 7th April, to the high of the week at \$820 on the 4th. For most of the week the futures have been trading at a premium of \$40.9, however with the new index level being published on Wednesday, the premium reduced to \$21.06. The futures premium reduction indicating the market still anticipating further upward movements but possibly not as sharply as the previous weeks. There has been a phenomenal 48.03% increase in the index over 3 weeks and a year-to-date increase of 56.84%.



H2O FUTURES AND NQH2O INDEX VOLATILITY ANALYSIS

Daily H2O Futures Volatility vs Daily NQH2O Index Volatility



ASSET	1 YEAR (%)	2 MONTH (%)	1 MONTH (%)	1 WEEK (%)
NQH2O INDEX	59.48%	26.89%	27.24%	11.04%
H2O FUTURES	N/A	31.3%	30.06%	11.44%

A smaller movement in the index this week is causing a consolidation of the relative differences in volatility between the index and the futures. In the week beginning the 31st March the two month futures volatility is at a premium of 4.41% to the index. The one-month futures volatility is at a premium of 2.82% to the index, which is higher than the previous week, but we expect this to narrow. The one-week futures volatility is still at a small premium of 0.10% to the index which is basically flat, down 8.58% from the previous week indicating a coupling between the index and the futures volatilities.

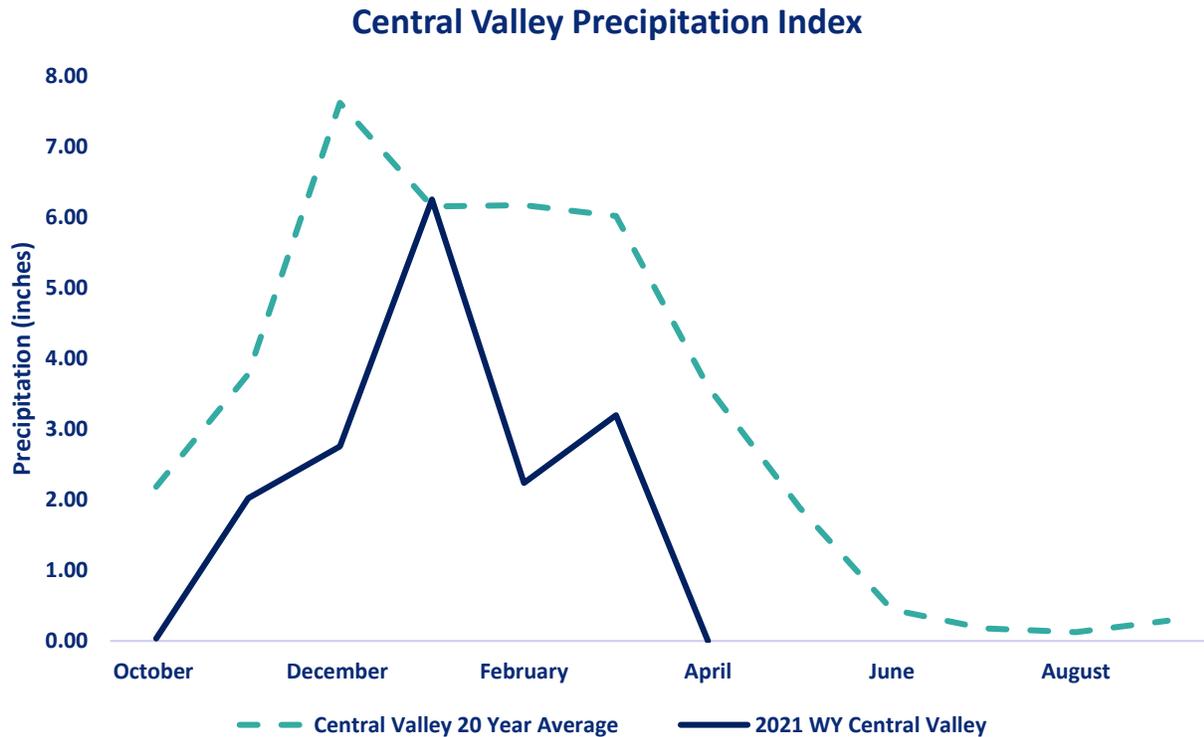
DAILY VOLATILITY

The daily volatility high for futures for the week was 8.83% on the 31st March with a low of 0.00% on the 5th and 6th March ending off the week yesterday at 0.7%. Earlier in the week there were small intraday movements.

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



CENTRAL VALLEY PRECIPITATION REPORT



Central Valley average is calculated using data from 19 weather stations in the Central Valley, California.
Data accurate as of 04/07/2021

STATION	MTD (INCHES)	WEEK ON WEEK CHANGE (INCHES)	% OF 20 YEAR AVERAGE MTD	2021 WYTD VS 2020 WYTD %	2021 WY VS 20 YEAR AVERAGE TO DATE %
SAN JOAQUIN 5 STATION (5SI)	0.00	0.00	0	54	52
TULARE 6 STATION (6SI)	0.00	0.00	0	50	38
NORTHERN SIERRA 8 STATION (8SI)	0.00	0.00	0	57	51
CENTRAL VALLEY TOTAL	0.00	0.00	0	54	47

RESERVOIR STORAGE

RESERVOIR	STORAGE (AF)	% CAPACITY	LAST YEAR % CAPACITY	HISTORIC ANNUAL AVERAGE CAPACITY %
TRINITY LAKE	1,290,157	53	81	67
SHASTA LAKE	2,390,143	53	79	65
LAKE OROVILLE	1,429,140	40	65	53
SAN LUIS RES	1,126,365	55	73	61

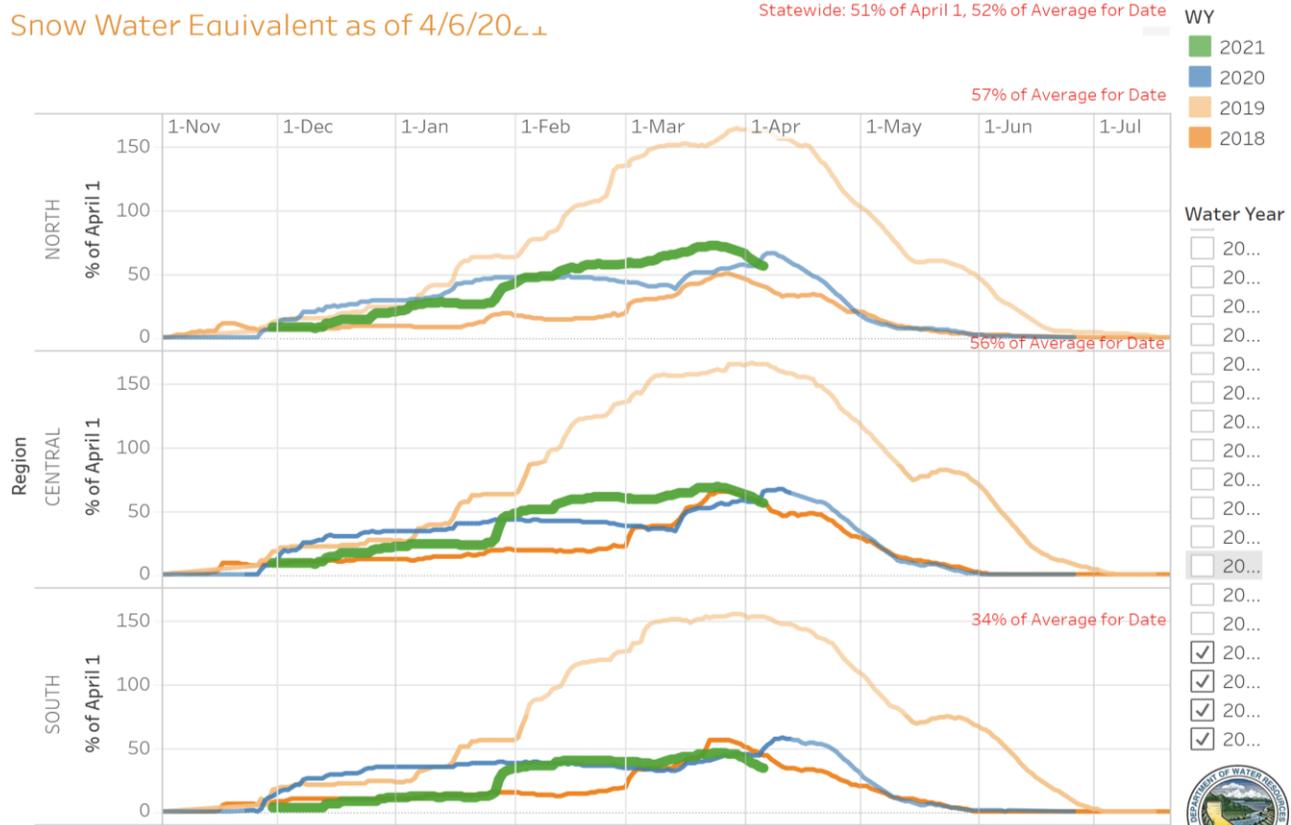


SNOWPACK WATER CONTENT

Snow Water Equivalent Dashboard

Snow Water Equivalent as of 4/6/2021

Statewide: 51% of April 1, 52% of Average for Date



Last Updated: 4/7/2021 5:06:09 AM



REGION	*SNOWPACK WATER EQUIVALENT (INCHES)	WEEK ON WEEK CHANGE %	% OF AVERAGE LAST YEAR	% OF 20 YEAR HISTORICAL AVERAGE	% OF HISTORICAL **APRIL 1ST BENCHMARK
NORTHERN SIERRA	20.1	-4.98	56	67	67
CENTRAL SIERRA	20.3	-3.98	57	65	65
SOUTHERN SIERRA	10.7	0.93	45	43	43
STATEWIDE	17.8	-3.93	54	61	61

*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.

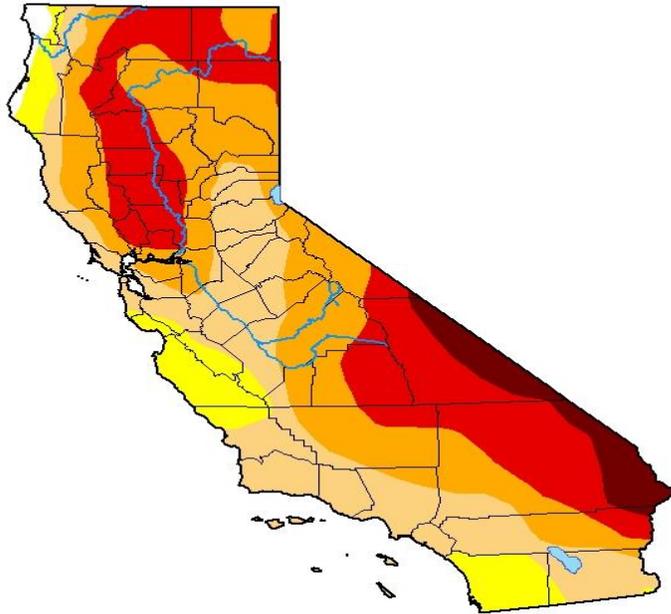
** April 1st is used as the benchmark as it when the snow pack in California is generally deepest. It has been used the benchmark date since 1941 by DWR and can be used to predict spring river flow.



DROUGHT MONITOR

U.S. Drought Monitor California

March 30, 2021
(Released Thursday, Apr. 1, 2021)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.77	99.23	90.66	64.02	31.76	5.36
Last Week 03-23-2021	0.70	99.30	90.66	64.02	31.76	5.36
3 Months Ago 12-29-2020	0.00	100.00	95.17	74.34	33.75	1.19
Start of Calendar Year 12-29-2020	0.00	100.00	95.17	74.34	33.75	1.19
Start of Water Year 09-29-2020	15.35	84.65	67.65	35.62	12.74	0.00
One Year Ago 03-31-2020	24.86	75.14	43.31	1.30	0.00	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>

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CPC/NOAA



droughtmonitor.unl.edu

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



March 30, 2021
compared to
March 23, 2021



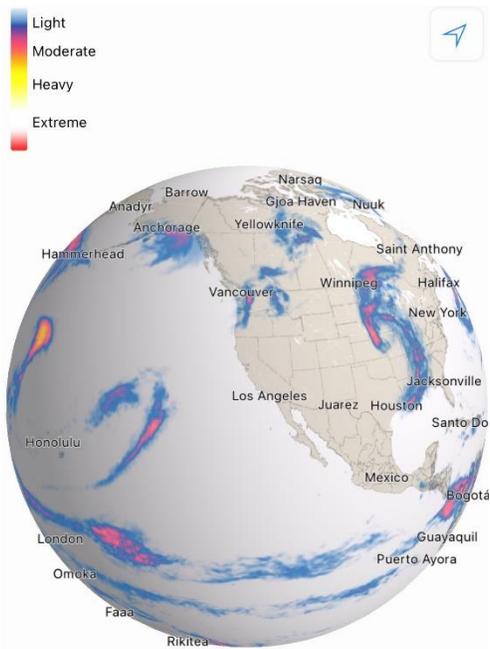
Dark Brown	5 Class Degradation
Brown	4 Class Degradation
Orange	3 Class Degradation
Yellow	2 Class Degradation
Light Yellow	1 Class Degradation
Grey	No Change
Light Green	1 Class Improvement
Green	2 Class Improvement
Dark Green	3 Class Improvement
Teal	4 Class Improvement
Dark Teal	5 Class Improvement

droughtmonitor.unl.edu

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



Over the last week there has been no precipitation in CA. Current imagery does not show any expected notable precipitation events.

The US Drought Monitor release their statistics with a 1-week lag to this report. As you can see from the ‘Drought Change’ map on the previous page there has been no change in drought levels in the region. 99.23% of CA is classed as abnormally dry (D0-D4), 31.76% of CA is classed as in extreme drought (D3-D4).

See “Climate Forecast” for a 1-10 day outlook and full weather discussion.

Ref. Dark Sky

CLIMATE FORECAST

1-10 Day Outlook

Forecasts issued by CNFRC and NOAA indicate current dry conditions will persist through the end of this week and over the weekend. Temperatures are expected to rise above average for this time of year.

As you can see from the satellite imagery above there is a small weather front off the west coast however forecasts indicate this will not make it to the CA coastline.





CALIFORNIA WEATHER DISCUSSION

Last week (April 1st) the DWR conducted its fourth manual snow survey of the year at Phillips Station and recorded a Snow Water Equivalent (SWE) of 21 inches, which is 83% of the average. Our analysis of the DWR's electronic snow survey station indicate that as of April 7th the Northern Sierra region is at 56% of the April 1st average, and that the Central and Southern regions of the Sierra are at 56% and 34% respectively. Statewide levels are current 51% of the historic April 1st average.

“While there is some snow on the ground today at Phillips Station, there is no doubt California is in a critically dry year. State agencies, water suppliers and Californians are more prepared than ever to adapt to dry conditions and meet the challenges that may be ahead,” said DWR Director Karla Nemeth in a statement. *“With climate change impacting how precipitation falls in California, ongoing water efficiency and long-term efforts like recycling water, capturing stormwater, and planting water-friendly landscapes are essential to securing California’s water future.”*

The Sierra snowpack accounts for approximately 30% of CA's fresh water supply and that is why these numbers are so worrying. SWE levels paired with well below average rainfall so far this year have confirmed Water Year 2021 as the third driest water year on record.

The dry conditions already witnessed this year are apparent when analyzing reservoir storage levels. As of the time of writing this report Lake Oroville is only at 41% capacity. Lakes Trinity and Shasta are both at 53% capacity.

Over the past week there has been no observed precipitation in California. Dry conditions have continued from last week and April sits at 0% when compared to the 20 year average. In recent weeks we have seen the NQH2O index rise dramatically, and this come as no surprise when analyzing the hydrometeorological conditions in the state.



REGULATORY NEWS

Bloomberg Law

Supreme Court Hands Win to Georgia in State Water War

The U.S. Supreme Court won't force Georgia to curb its water usage, a defeat for downstream Florida in the two states' long legal war over limited resources.

The justices issued their opinion Thursday, rejecting Florida's plea for an order that would ensure more freshwater flows to the state's wild oyster population along the Gulf Coast. Florida has hit repeated walls in its legal effort to protect the industry and the area's broader ecosystem. Justice Amy Coney Barrett authored the opinion for the unanimous court.

The dispute centers on the Apalachicola-Chattahoochee-Flint River basin, which straddles the southern states. Florida says Georgia farmers use too much from the shared resource, leaving insufficient freshwater for oysters in Apalachicola Bay. Georgia says Florida's own management decisions are to blame for the industry's recent collapse. Florida failed to demonstrate that it was facing a serious injury from Georgia's water use and that the benefits of an apportionment order from the court would outweigh any harm, the court said in Thursday's opinion.

Original Article: [Bloomberg Law](#)

CNN

Biden's \$2.2 Trillion Infrastructure Proposal

Now that his massive coronavirus relief package is law, President Joe Biden is laying out his next big proposal: A roughly \$2 trillion plan for improving the nation's infrastructure and shifting to greener energy over the next 8 years.

Biden's plan allocates \$111 billion to rebuild the country's water infrastructure.

It would replace all of the nation's lead pipes and service lines in order to improve the health of American children and communities of color. The White House says replacing the pipes would reduce lead exposure in 400,000 schools and childcare facilities.

The proposal would upgrade the country's drinking water, wastewater and stormwater systems, tackle new contaminants and support clean water infrastructure in rural parts of the country.

Original Article: [CNN](#)



KNPR

State Of Emergency, Evacuations In Florida County Over Wastewater Pond Leak

Manatee County in Florida was under a state of emergency over the weekend and more than 300 homes were ordered evacuated over a leak at a wastewater reservoir.

A significant leak was discovered Friday at the wastewater pond located at Piney Point, a former phosphate plant.

Officials had warned about the potential for the reservoir's collapse, flooding nearby areas.

Manatee's Public Safety Department alerted residents Friday and Saturday, urging them to leave immediately.

Authorities are now working to drain water from the reservoir and empty into the bay at Port Manatee to lessen the risks of a collapse.

Gov. Ron DeSantis declared a state of emergency over the county Saturday. He said in a press conference Sunday the water being dumped wasn't radioactive, saying it's primarily salt water "mixed with legacy process water and stormwater runoff."

The Florida Department of Environmental Protection says the water "meets water quality standards for marine waters with the exception of pH, total phosphorus, total nitrogen and total ammonia nitrogen. It is slightly acidic, but not at a level that is expected to be a concern."

DeSantis said that officials are working to bring in additional pumps to drain the reservoir and are pumping out 33 million gallons per day.

Original Article: [KNPR](#)

The Holtville Tribune

Grower Mike Abatti Files Petition with U.S. Supreme Court Over IID Scrap

Imperial Valley grower, landowner, and former elected official Michael Abatti has filed a petition for "writ of certiorari" with the U.S. Supreme Court seeking review of the California Court of Appeal, Fourth Appellate District's decision in Abatti v. Imperial Irrigation District, according to a press release from Abatti and his legal team.

Abatti is seeking to overturn a previous appellate court ruling that asserts Imperial Irrigation District is the "sole owner" of water rights in the Valley, and farmers do "not (have) an appurtenant water right" but rather are entitled merely to "water service" that is subject to modification by the district at its discretion, the press release states.



VELES WATER WEEKLY REPORT

“Well, the district held a position that farmers in the Imperial Valley have the property right. The Supreme Court agreed with that (in the 1980s),” Abatti said during a telephone interview with the Holtville Tribune on Wednesday morning, March 31.

“Now, they’ve (the IID) flip flopped. They’ve flip flopped on this. I speak for a whole lot of farmers with this,” Abatti added.

It wasn’t immediately clear when the petition was filed. The press release from Abatti is dated Monday, March 29.

Original Article: [Holtville Tribune](#)

WATER NEWS

The Albuquerque Journal

State Engineer pauses groundwater permits

State Engineer John D’Antonio has restricted new groundwater permits in three basins of far southeastern New Mexico to study the impact of more wells on regional aquifers. The temporary constraints cover new commercial appropriations in about 2,000 square miles of the Lea, Capitan and Carlsbad underground water basins.

State hydrologists need this “strategic pause,” D’Antonio said, to collect data and calibrate a model that can accurately predict how pumping affects the aquifer system.

“There is a degree of what we call hydrologic connection, and the formations that are underground are pretty complex,” he said. “It’s not yet well understood or quantified on how that aquifer interacts with other aquifers around it and with surface water, so right now the effects of any diversion from the formation can’t be accurately predicted.”

More than 80 commercial groundwater applications have been filed with the Office of the State Engineer’s Roswell District in the past three years.

“There is a degree of what we call hydrologic connection, and the formations that are underground are pretty complex,” he said. “It’s not yet well understood or quantified on how that aquifer interacts with other aquifers around it and with surface water, so right now the effects of any diversion from the formation can’t be accurately predicted.”

Original Article: [Albuquerque Journal](#)



Smart Water Magazine

Joe Biden's infrastructure plan includes \$111 billion to improve water systems

Last week President Joe Biden announced a \$2 trillion infrastructure and jobs plan that includes \$111 billion to improve water systems, reports the New York Post.

The Biden Administration calls it The American Jobs Plan. It estimates 6 to 10 million homes still receive their drinking water through lead pipes and service lines. To eliminate lead water pipes, the plan includes a \$45 billion investment in the Environmental Protection Agency's Drinking Water State Revolving Fund and in Water Infrastructure Improvements for the Nation Act (WIIN) grants. It will target lead exposure in homes, as well as in 400,000 schools and childcare facilities.

Recognizing that ageing water systems threaten public health in communities across the nation, the plan will allocate \$56 billion towards upgrading drinking water, wastewater and stormwater systems. Scaling up existing programs, the money will go to states, Tribes, territories and disadvantaged communities, in the form of grants and low-cost flexible loans.

In addition, the plan calls for \$50 billion to improve infrastructure resilience. The investments will safeguard critical infrastructure and services against climate-driven disasters, as well as maximise the resilience of land and water resources, including "funding for the western drought crisis by investing in water efficiency and recycling programs".

Original Article: [Smart Water Magazine](#)

The Progressive Farmer

Western US Rivers Face Pinch

As several states in the American West face intense drought, it is shaping up to be a very difficult year for New Mexico farmers because of limited irrigation supplies, with some saying conditions haven't been this dire since the 1950s.

Snowpack and precipitation are below average, spring runoff is trailing, and New Mexico comes in last among nearly a dozen Western states for dismal reservoir storage levels. Along the Rio Grande, New Mexico's largest reservoir stands at less than 11% capacity, meaning the irrigation season for farmers in the southern part of the state will likely start late and include only small allotments.

Further north, managers with the Middle Rio Grande Conservancy District are in a position not seen in decades. There's no extra water in the reservoirs and interstate



VELES WATER WEEKLY REPORT

water-sharing agreements are restricting both storage and releases from upstream reservoirs since New Mexico has fallen short of what it owes Texas.

The district was forced to wait a month -- until April 1 -- to start its irrigation season due to the meager supplies. Farmers were encouraged to consider resting their fields given that demand will surely outpace supply, but many are used to the risk that comes with planting each season so just a fraction of the acres throughout the Middle Rio Grande valley have been fallowed.

Original Article: [Progressive Farmer](#)

The LA Times

Drought is back. But Southern California faces less pain than Northern California

Drought is returning to California as a second, consecutive parched winter draws to a close in the usually wet north, leaving the state's major reservoirs half empty.

But this latest period of prolonged dryness will probably play out very differently across this vast state.

In Northern California, areas dependent on local supplies, such as Sonoma County, could be the hardest-hit. Central Valley growers have been told of steep cuts to upcoming water deliveries. Environmentalists too are warning of grave harm to native fish.

Yet, hundreds of miles to the south, the Metropolitan Water District of Southern California reports record amounts of reserves — enough to carry the state's most populous region through this year and even next.

Memories of unprecedented water-use restrictions in cities and towns, dry country wells and shriveled croplands linger from California's punishing 2012-16 drought.

Officials say the lessons of those withering years have left the state in a somewhat better position to deal with its inevitable dry periods, and Gov. Gavin Newsom is not expected to declare a statewide drought emergency this year.

Original Article: [The LA Times](#)



The Insurance Journal

Arizona Farmers Should Expect Less Water in 2022

Arizona officials are putting farmers in south-central Arizona on notice that the continuing drought means a “substantial cut” in deliveries of Colorado River water is expected next year.

A joint statement issued Friday by the state Department of Water Resources and the Central Arizona Project said an expected shortage declaration “will result in a substantial cut to Arizona’s share of the river, with reductions falling largely to central Arizona agricultural users.”

The Central Arizona Project is an aqueduct system that delivers Colorado River water to users in central Arizona and southern Arizona, including farmers, cities and tribes.

A shortage declaration would prompt the additional reduction to take effect under 2019 drought contingency plan hashed out by the seven states in the river’s basin – Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming – to lessen the effects.

The statement said the current thinking is that Arizona would be expected to reduce its use of river water by a total of 512,000 acre-feet in 2022, up from 192,000 acre-feet currently, but that supplies for cities and tribes are not expected to be affected.

Original Article: [The Insurance Journal](#)

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