

Veles Water Weekly Report

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July 1st 2021

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WATER FUTURES MARKET ANALYSIS

Welcome to ***WATERTALK***

by Robin Bieber

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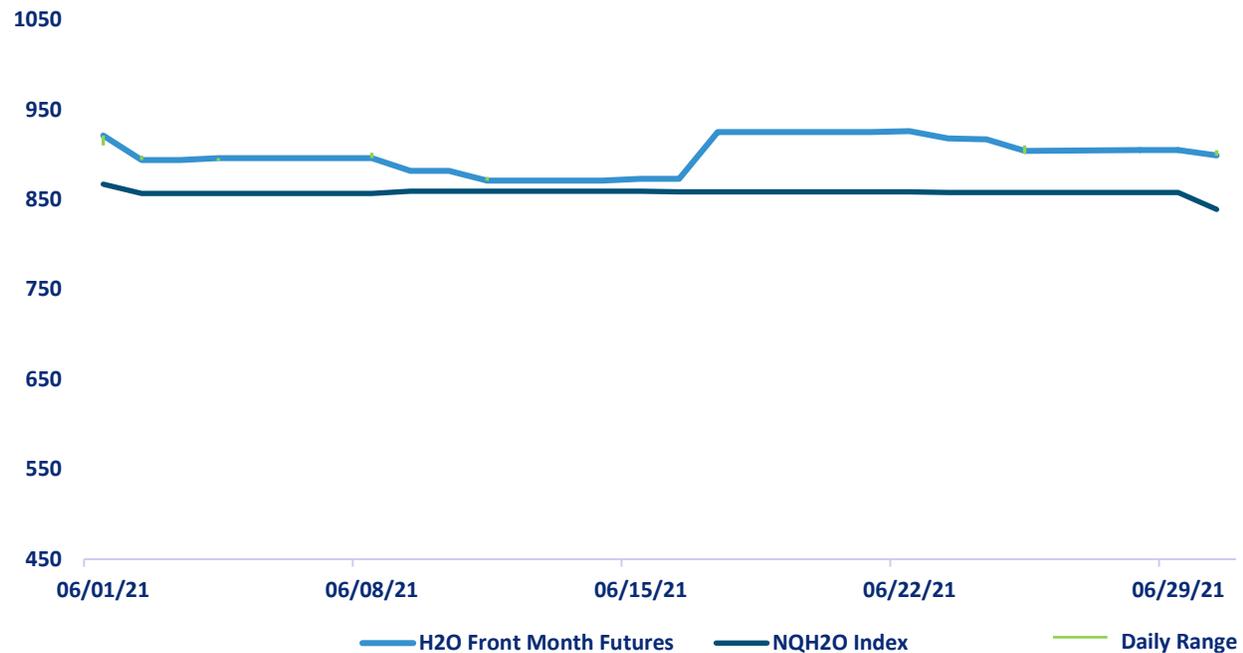
“A 2 minute technical analysis video of H2O futures by Robin Bieber.”

<https://vimeo.com/569726781/54df293959>



NQH2O INDEX PRICE vs H2O FUTURES PRICE

1 Month Price Performance NQH2O Index vs H2O Futures



The July Futures contract has now been the front month contract for 2 weeks. Yesterday, the July 30th a new index level was published at \$839, down 18.61 points or 2.17%. The futures have been trading at a premium ranging from \$46-\$59 to the index. With the new index level being published yesterday the premium increased to around \$60. This may reduce over the forthcoming week. The Futures high for the week was on June 24th at \$917 and the low for the week was yesterdays close at was yesterdays close at \$899. The NQH2O index is up 67.86% Year to Date.

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

July is 862@899

August is 870@940

September 800@910

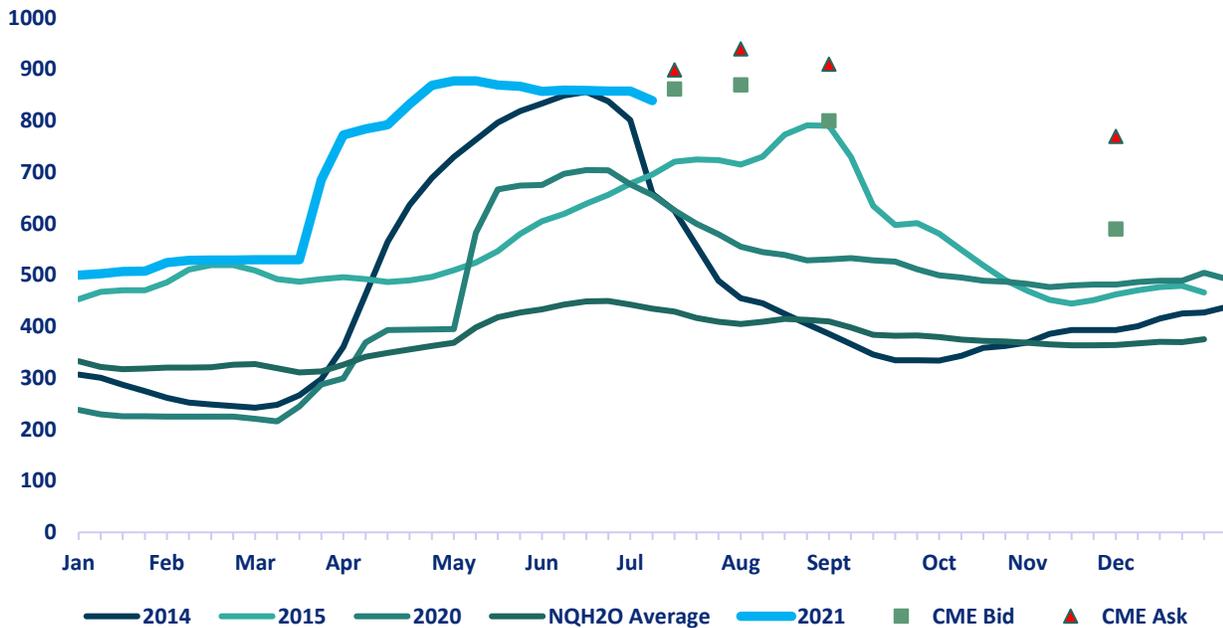
December 590@770

The December offer price is still cheaper than the July, August and September bids. The July bid to December offer is minus \$92. This is indicating a significant implied seasonality in the trading of water, with prices peaking in summer and tapering off in winter.



NQH2O INDEX HISTORY

NQH2O Seasonal Pricing/ CME H2O Futures Quotes



The graph above lays out the NASDAQ/Veles water index by year, showing 2014, 2015, 2020, 2021 plus an average price of the last eight years. 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.

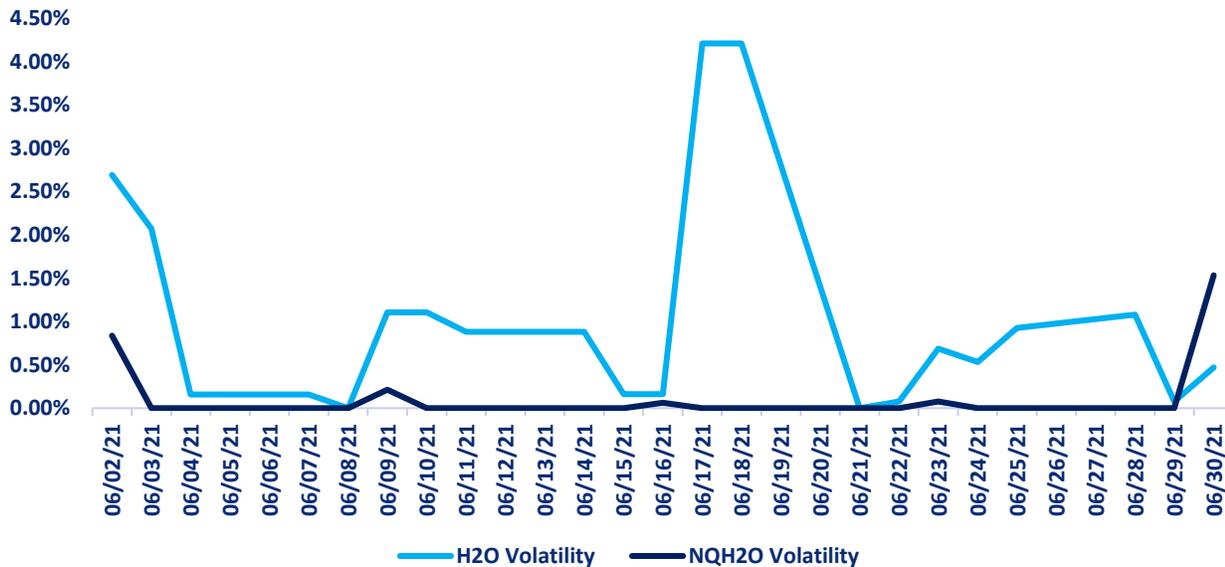
The graph for 2021 is highlighted in light blue. It shows the same seasonal climb, but at record-high values above each of the last eight years since February.

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. Some North of the Delta trades are coming though into the pricing at present which typically softens the price. This appears to be the norm when Southern CA prices have risen dramatically, and it makes economic sense to purchase water North of the Delta.



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	34.75%	4.94%	2.24%	2.060%
H2O FUTURES	N/A	10.1%	6.71%	1.33%

For the week ending on the 30th June the two-month futures volatility is at a premium of 5.19% to the index down 1.04% from the previous week. The one-month futures volatility is at a premium of 4.47% to the index, down 1.99% for the week. The one-week futures volatility is at a discount of 0.73% to the index down 3.9%, a reversal for the week.

With the futures volatilities premiums to the index reversing in the one-week timeframe, implies that there are market expectations of lesser volatility and potential price stabilization or decreases in the index.

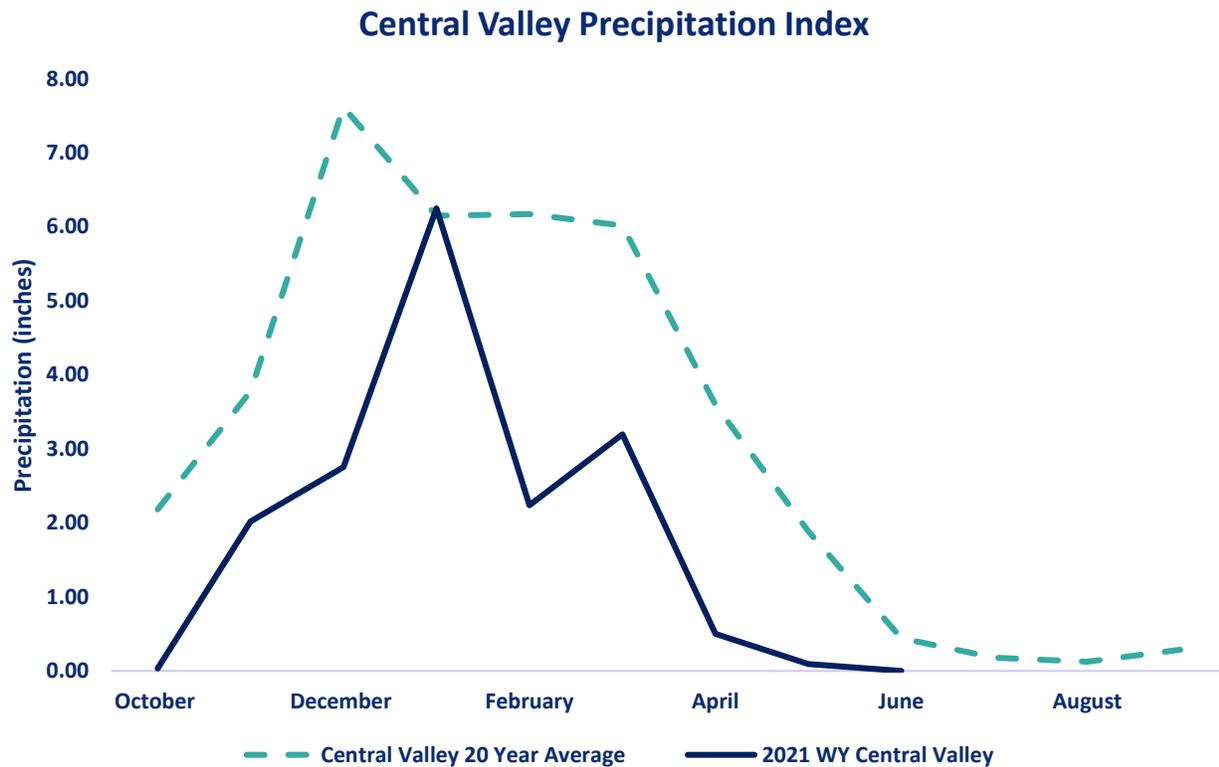
DAILY VOLATILITY

Over the last week the July future volatility high has been 1.08% on June 28th and the low has been 0.08% on June 29th.

*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 as of 06/30/2021

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)	0.01	0.00	2.98%	63	47
TULARE 6 STATION (6SI)	0	0.00	0.00%	67	35
NORTHERN SIERRA 8 STATION (8SI)	0.08	0.03	9.90%	63	46
CENTRAL VALLEY TOTAL	0.09	0.03	4.29%	64	42.67

RESERVOIR STORAGE

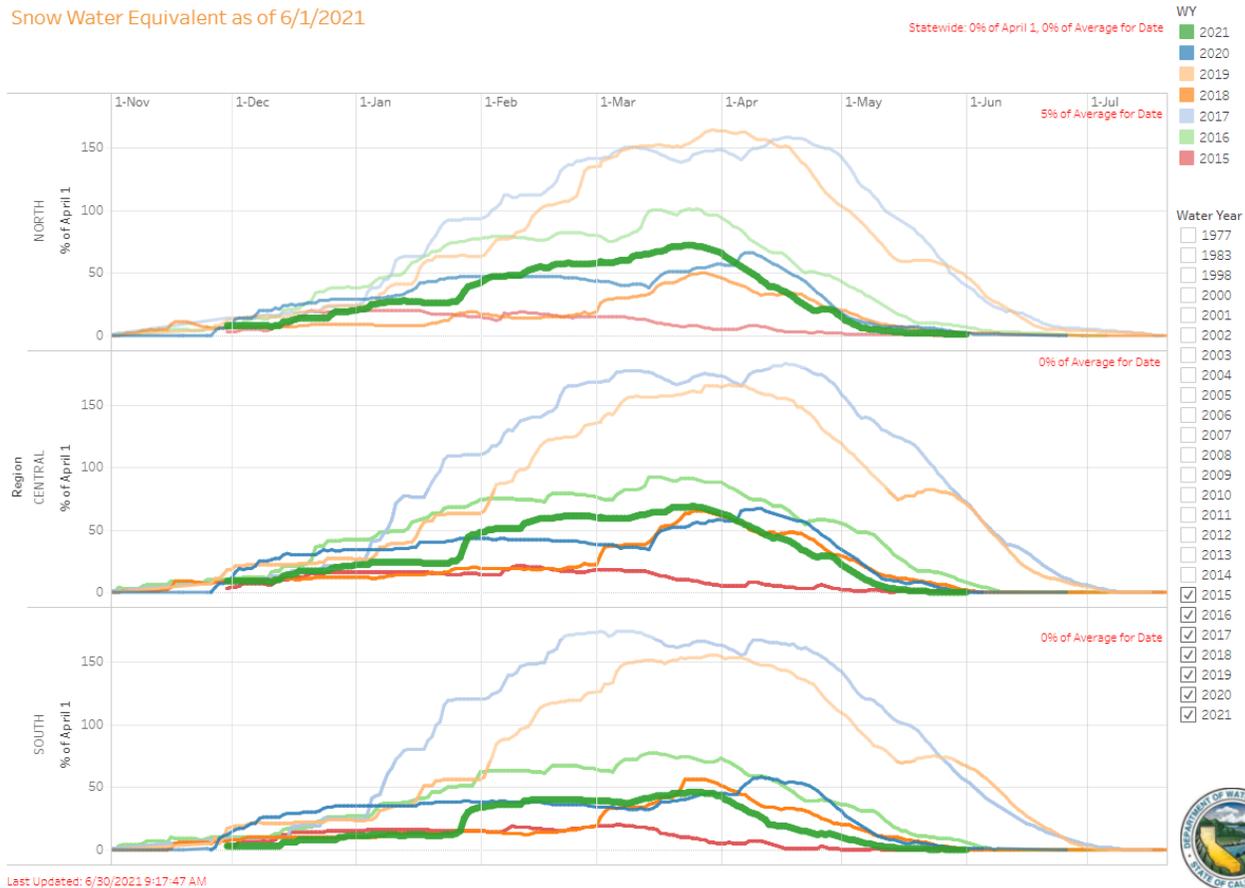
RESERVOIR	STORAGE (AF)	% CAPACITY	LAST YEAR % CAPACITY	HISTORIC ANNUAL AVERAGE CAPACITY %
TRINITY LAKE	1,165,719	48	72	56
SHASTA LAKE	1,752,185	38	69	48
LAKE OROVILLE	1,136,063	32	62	39
SAN LUIS RES	674,478	33	53	52



SNOWPACK WATER CONTENT

Snow Water Equivalent Dashboard

Snow Water Equivalent as of 6/1/2021



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	0.2	0.00%	9	5	1
CENTRAL SIERRA	0	0.00%	3	0	0
SOUTHERN SIERRA	0	0.00%	3	0	0
STATEWIDE	0.1	0.00%	3	0	0

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

**** April 1st is used as the benchmark as it when the 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.**



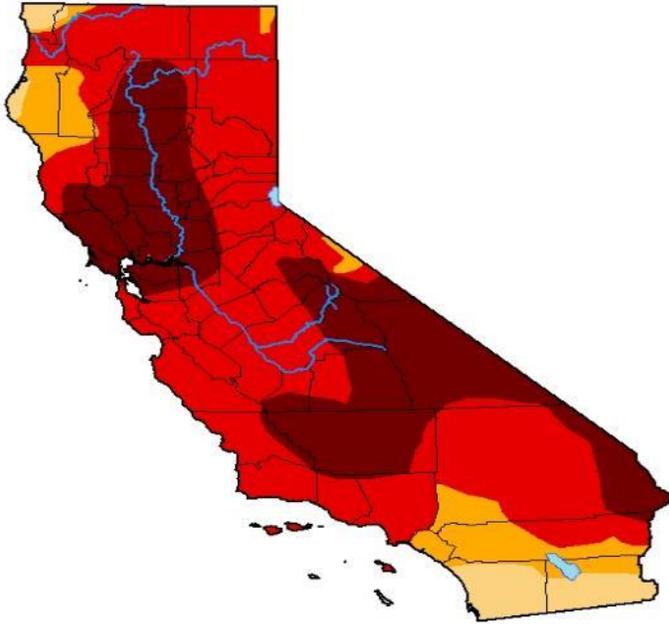
DROUGHT MONITOR

U.S. Drought Monitor California

June 22, 2021

(Released Thursday, Jun. 24, 2021)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	94.73	85.44	33.32
Last Week 06-15-2021	0.00	100.00	100.00	94.75	85.44	33.32
3 Months Ago 03-23-2021	0.70	99.30	90.66	64.02	31.76	5.36
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 06-23-2020	41.79	58.21	46.74	20.84	2.45	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>

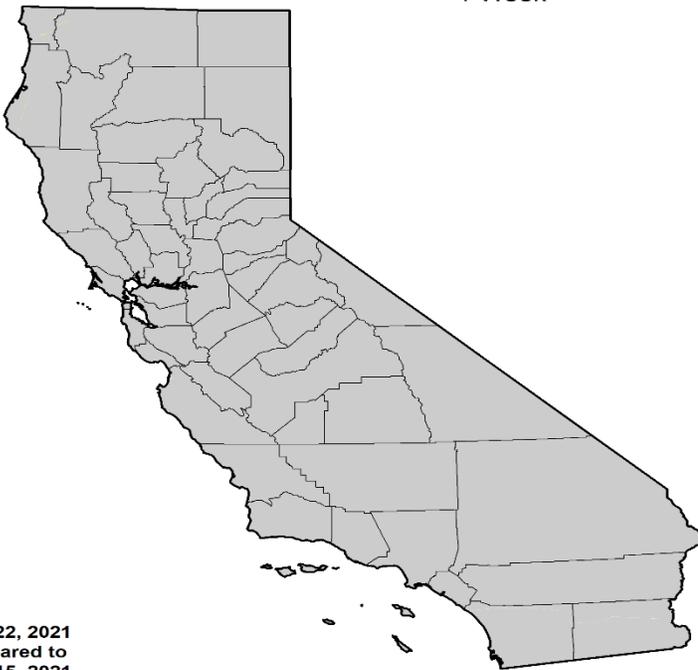
Author:

Curtis Riganti
National Drought Mitigation Center



droughtmonitor.unl.edu

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



June 22, 2021
compared to
June 15, 2021

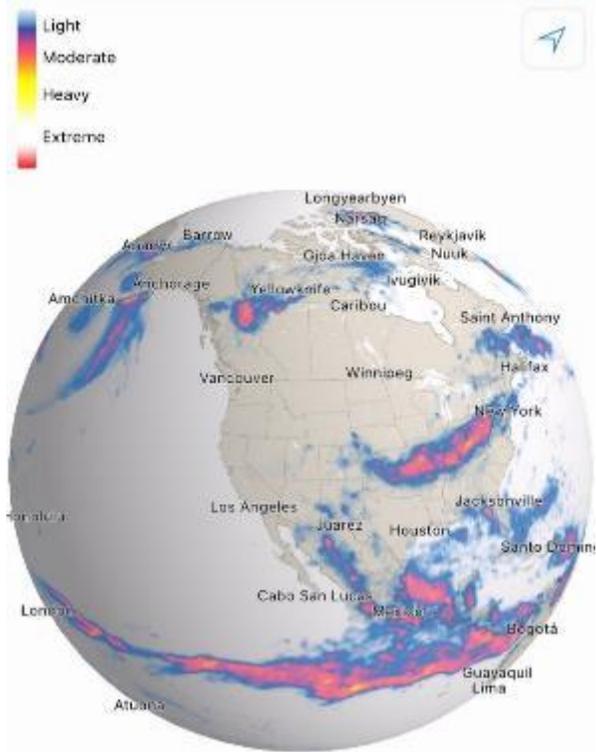


- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement

droughtmonitor.unl.edu



CURRENT SATELLITE IMAGERY



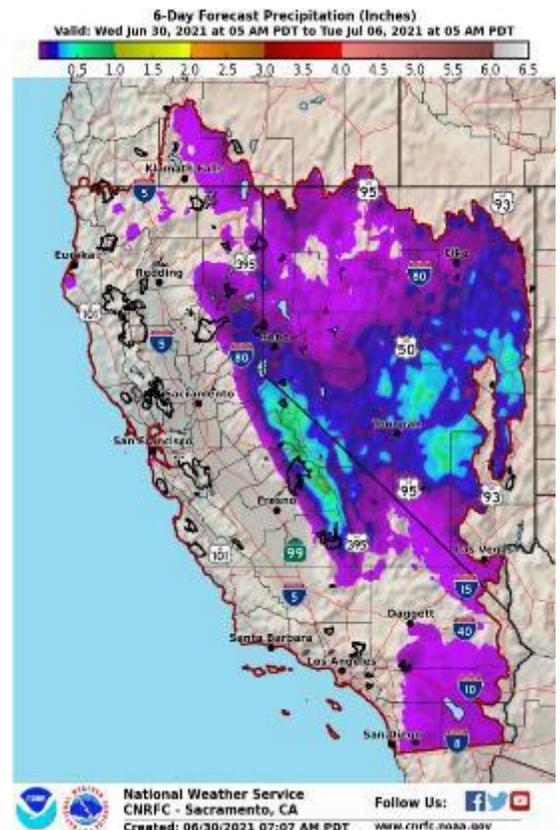
Over the past week California has seen light amounts of precipitation in the north and along the CA/NV boarder. The Northern Sierra has seen circa 0.03 inches of rainfall. Parts of Southern CA have also seen very light precipitation. As can be seen on the satellite image, moisture has been moving northwards from S Mexico bringing slight Monsoon effects to the S Arizona and SE CA border areas.

The US Drought Monitor release their statistics with a 1-week lag to this report. Drought conditions have remained unchanged from the previous week. That is now 2 weeks without significant change. Condition still remain dry. Increase wildfire warnings have been issued.

Ref. Dark Sky

10 Day Outlook

High pressure around the four corners region with SE-S mid-level flow over our region continues to bring mid-level moisture northward for scattered showers and thunderstorms mainly over the Sierra and into Nevada. Isolated storms over SE CA and into Central and S NV this morning with more storms developing in the afternoon and evening as instability increases. Similar conditions through Friday and into the weekend with mostly afternoon and evening scattered thunderstorms/showers over SE CA and the Sierra and into NV. Showers and thunderstorms mainly over NE NV on Monday afternoon as flow becomes more southwesterly as a trough moves into the NW. Temperatures generally above normal into early next week except around normal along the coast.





CALIFORNIA WEATHER DISCUSSION

Forecasters indicate that Monsoonal thunderstorms are looming this week, raising the potential for lightening strikes and wildfire conditions. Much of the region has been under excessive heat warnings for the past week as some have seen temperatures rise to triple digit figures. This has made the ground dry and conditions for fires have intensified.

With the looming Monsoonal thunderstorms, you can expect brief heavy downpours, erratic winds and isolated lightening storms. Moisture has crept up from the south causing these weather conditions, however the rain normally associated with this type of system is unlikely to bring the relief the region needs as forecasters are suggesting the system may get stuck to the east of the Sierra.

REGULATORY NEWS

Budget negotiators, enviros undercut Hurtado's water fix bill

In domino-like fashion, environmentalists rendered their verdict on a key water bill hoping to improve water deliveries to the poorest communities in the San Joaquin Valley along with help boost food production.

The bill, Senate Bill 559, led by Sen. Melissa Hurtado (D–Sanger) is part of a multi-pronged effort to fund fixes for California's south-of-the-Delta water arteries – the California Aqueduct, Friant-Kern Canal, and Delta-Mendota Canal – that have suffered years of declining capacity due to subsidence.

Hurtado's bill is seen as one leg – of three – to fund subsidence repairs for three major arteries of California's water system. The other two-thirds are being cobbled together via a companion Federal bill led by Rep. Jim Costa (D–Fresno) and direct funding from water users. But the effort is coming under assault from environmentalist lobbies arguing that, despite significant need in disadvantaged communities on the west-side of the San Joaquin Valley, from Mendota to Kettlemen City, and eastern Valley communities hit hard by the last drought, the benefit to farm production is a bridge too far. It's handing budget negotiators in the California State Legislature an opportunity to pare back the region's ambitions of repairing badly-damage water delivery systems.

Original Article: [The Sun by Alex Tavlian](#)



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Five things to know about Newsom's budget deal with Legislature

California lawmakers voted tonight to approve a record-busting state budget that reflects new agreements with Gov. Gavin Newsom to expand health care for undocumented immigrants, spend billions to alleviate homelessness and help Californians still struggling through the pandemic.

The \$262.6 billion spending plan for the fiscal year that begins July 1 was fueled by a \$76 billion state surplus and \$27 billion in federal aid. Democrats who control the Capitol wanted to use the windfall to help the state recover from the coronavirus pandemic and its uneven toll on Californians.

While the state's top earners continued to accrue wealth from a strong stock market, booming tech sector and rising home values, low-wage Californians suffered from job losses, childcare cutbacks and a dysfunctional unemployment insurance system. The state's progressive tax structure allowed Newsom and lawmakers to infuse social service programs for the needy and middle class with billions of dollars largely from wealthy taxpayers.

The budget includes \$1 billion over several years for wildfire prevention, \$3 billion to alleviate drought and \$3.7 billion over three years to mitigate dangers posed by climate change — but Newsom and legislative leaders are still figuring out how to spend the funds.

Original Article: [Cal Matters by Laurel Rosenhall, Sameea Kamal and Manuela Tobias](#)

Infrastructure bill could help California drought, water storage

As California and the West suffer through an epic drought, President Joe Biden and Senate Republicans and Democrats have included \$5 billion for Western water projects in their infrastructure deal. The prospect of federal money comes as several big-ticket water projects are on the drawing boards in California — although many are still years from completion and probably wouldn't get finished in time to help California with the current drought. But the federal dollars, which are probably months and several more negotiations away from possible approval, could enable California to jump-start projects that have been in the works for years.

Original Article: [The Sacramento Bee](#)



Why some of the world's biggest companies are increasingly worried about water scarcity

Major companies from across a range of sectors are increasingly concerned about the cost and availability of the world's ultimate renewable resource: water.

The availability and relatively low cost of water does not tend to capture much attention until it effectively runs out. Yet, with the climate crisis seen as a "risk multiplier" to water scarcity, analysts warn that even companies with relatively limited financial exposure to water risk should brace for disruption.

It comes at a time when water prices are rising around the world. The average price of water increased by 60% in the 30 largest U.S. cities between 2010 and 2019, according to data compiled by Barclays, while California Water Futures have regularly jumped as much as 300% in recent years.

In a research note published June 14, analysts at Barclays identified water scarcity as "the most important environmental concern" for the global consumer staples sector, which includes everything from food and beverages to agriculture and tobacco.

Consumer staples, which was said to be the most exposed of all sectors to water risk, faces a \$200 billion impact from water scarcity, analysts at the U.K. bank said.

This came down to a strong reliance on agricultural commodities, an extreme vulnerability to water price fluctuation and operational risks — including disruption from extreme events such as droughts and flooding, and fines and lawsuits linked to pollution.

Original Article: [CNBC by Sam Meredith](#)

The West's Water Restriction Nightmare Is Just Beginning

A small city in Utah is taking an unprecedented step to adapt to megadrought conditions in the West: halting any new construction projects that would tap into the local water. It's the first municipal ordinance of its kind. Last month, officials from Oakley, Utah—a city of 1,500—finalized a moratorium on new development extending through November. The ordinance prohibits the "erection, construction, re-construction or alteration of any structure" that needs new water connections.

"The city is concerned that the current drought conditions will result in critical water shortages and require further drastic curtailment measures that would be detrimental to the entire city and cause significant public harm," it says.



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Oakley is hardly alone, though. The West's water resources have come under increasing pressure from rising temperatures tied to the climate crisis. Heat can both melt out snowpack early and cause water stored in reservoirs to evaporate. It can also affect groundwater recharge, particularly in years with low snowfall. Explosive growth in the region has made matters worse since more homes and businesses with more lawns and more farmers with water-needy crops put extra pressure on the water system. What's happening in Oakley is a sign of what could come in other communities if the West is to stave off an even bigger water crisis.

The measure to stop building passed amid a historic drought in Utah that has led to, among other things, the state's governor asking residents to literally pray for rain. Oakley is currently in an "extreme drought," according to the Drought Monitor, while more than 60% of the state sits in the worst category, dubbed exceptional drought.

Original Article: Gizmodo by Dharna Noor

Is it time to start thinking about the worst-case scenario on Lake Mead?

It seemed like Colorado River basin states were ahead of the curve in 2007 when we enacted a 20-year set of guidelines that spelled out what would happen if Lake Mead were to ever fall into a shortage.

But a decade later, as water levels at the lake plummeted, it was clear that we hadn't planned nearly enough for shortage. A "stress test" that better accounted for more recent drought conditions revealed that if we didn't do more to prop up water levels, there was an unacceptably high chance of the lake tanking within a few years.

That hydrology helped solidify support for even more stringent cuts in the Drought Contingency Plan that overlaid the 2007 guidelines.

But now, just two years in, we're facing roughly the same chances of falling back into danger territory again. And the prospect of meeting once again to hammer out even more painful cuts before the guidelines expire in 2026.

That doesn't mean the extra work we've done – or the science that helped drive it – was a failure. Both have saved Lake Mead from a far worse fate than if we had stuck with what we knew in 2007.

But if assumptions can be rendered moot in ever shorter amounts of time, are we thinking radically enough about what the lake and the larger river basin are up against? That's a key question for states leading up to 2026, as we negotiate the next 20 years of guidelines for the river. And a challenge for Arizona as it creates models to help assess the potential impacts of ideas that arise in those negotiations.



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Some have said that we should be even more aggressive in modeling potential futures to match the range of possibilities we could face.

Original Article: [AZ Central by Joanna Allhands](#)

Scientists Warn Western U.S. Drought Could Be 'New Normal'

By now, you've probably heard about the historic drought gripping the Western United States. Forecasts for wildfires, water shortages and bone-dry riverbeds abound. It's a scary situation, both for those living in the region and for those who don't.

Whether you live in the Southeast or the Northwest, you might have a few questions about this megadrought and its impacts. If so, you're in luck — that's what we'll be breaking down today.

The drought has gone on long enough that climatologists are considering new terminology for it. Some have proposed labeling it a "megadrought" to convey the scope of the situation. Others argue that the megadrought moniker still doesn't do this event justice. "Something that we might be looking at is actually more like aridification," McAfee says.

Aridification occurs when a region becomes permanently dryer. In other words, it marks a shift in the baseline for the amount of water that is considered "normal." As the effects of climate change play out, it seems that less rainfall in the Western U.S. might become the standard.

"I think it's accurate to say that that area, at least statistically speaking, has been drying out," says Curtis Riganti, an atmospheric scientist at the National Drought Mitigation Center at the University of Nebraska. "Connecting that to the dynamics of climate change I think makes sense."

As they become increasingly common, you might be wondering: What are some of the dangers associated with severe drought?

Original Article: [HowStuffWorks by Joanna Thompson](#)

U.S. Supreme Court won't hear Michael Abatti's Colorado River water case challenging IID

The U.S. Supreme Court on Monday unanimously declined a petition by Imperial Valley farmer Michael Abatti claiming he and a handful of other agricultural landowners, not the Imperial Irrigation District, held senior rights to Colorado River water that nearly 40 million people across the West depend on.



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The decision likely is the last stop for a torturous legal battle that dates back to 2013. As the law stands, farmers have a guaranteed right to water delivery but not a special claim above other users like homes and geothermal plants.

"Mr. Abatti accepts the Supreme Court's decision and understands that the federal issues in the case must be resolved by the federal courts another day," said one of his attorneys, H. Christopher Bartolomucci from Schaerr Jaffe LLP in Washington, D.C.

The case's legal questions dealt with intricate water law, but the stakes were high. If Abatti and the other small group of farmers had been ceded control of some of the oldest, largest rights to Colorado River water supply, the ripple effects could have affected Los Angeles, Denver, Phoenix, Las Vegas and rural users across several states.

Original Article: [Desert Sun by Janet Wilson](#)

NASA-funded study uses International Space Station to predict wildfire effects

Breaking through branches and stepping over logs, Andrew Barton pauses to run his hand up and down the trunk of a silver leaf oak tree.

After finding the perfect spot he preps his drill as Helen Poulos hands him a sap flow monitor. Within moments, it's firmly in place.

The two researchers are leading a team that is studying the burn scar of the 2011 Horseshoe II Fire, which scorched nearly 223,000 acres across the Chiricahua Mountains in southeastern Arizona. By combining data taken on the International Space Station with readings from on-the-ground monitors, the team hopes to understand tree water use in different post-fire settings.

"In the face of increasing wildfire frequency, size and magnitude — due to both fire suppression and climate change — one of the key things we want to understand is how plants recover from fire, specifically high-severity wildfires," said Poulos, a professor of environmental studies at Wesleyan University and the principal investigator of the study. "Understanding how plants use water is a really important step in understanding ecosystem recovery after a fire."

Original Article: [AZ Central by Anton L. Delgado](#)

Nestlé Waters targets positive water impact by regenerating local water cycles

Nestlé Waters will expand its current efforts to manage water sustainably and increase its collaboration with partners to identify and support local solutions. These solutions are designed to help regenerate the ecosystems in the areas around each of Nestlé



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Waters' 48 sites. As of 2025, they will help nature retain more water than the business uses in its operations.

The new initiative builds on the company's 2017 commitment to certify all of its Waters sites by the Alliance for Water Stewardship (AWS) by 2025. This standard requires water users to understand and act collectively on water challenges.

Nestlé will now use its expertise to advance the regeneration of local water cycles through the implementation of more than 100 projects for its 48 sites by 2025. These new, measurable actions will support better water management and infrastructure. Some project examples include:

- Buxton – Land conservation (protecting land from development) and natural flood management interventions in Derbyshire, UK
- Vittel – River restoration and renaturation projects in Vosges, France
- Nestlé Pure Life – Support for farmers to use drip irrigation in Sheikhpura, Pakistan
- Nestlé Pure Life – The delivery of water treatment, filtration and pipeline infrastructure for the municipal water supply in Benha, Egypt

Nestlé will invest CHF 120 million (USD 130 million) to assist the implementation of the more than 100 projects.

Original Article: [Nestle](#)

Drought: Marin district details water pipeline, desalination plans

The Marin Municipal Water District has taken the first steps toward building an emergency water pipeline across the Richmond-San Rafael Bridge for the first time in nearly 50 years to avoid potentially running out of water next summer.

The district said Friday that it has hired a consulting firm, Woodard & Curran, to find potential water rights holders in the Central Valley willing to sell their allotments. This water could be pumped across the bridge via the pipeline and into Marin's water system should the drought stretch into winter.

"That team is out at the moment searching for a source of water," Paul Sellier, the district's operations director, told the board at a meeting on Friday.

During the major drought of the late 1970s, the district built a temporary 6-mile pipeline across the bridge because it faced running out of water within 120 days. The pipeline was removed in 1982 after the drought ended and at the urging of Caltrans in order to restore a blocked traffic lane on the bridge.



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Nearly 50 years later, the district and the 191,000 central and southern Marin residents it serves face the prospect of running out of water by next summer should this winter be as dry as the last and conservation efforts do not improve. Ben Horenstein, the district general manager, said it is unlikely a similarly dry winter would occur two years in a row, but the district must be prepared for that worst-case scenario. Horenstein said the district's focus remains on conservation being the primary tool to retain local supplies, but it is considering the pipeline and a temporary desalination plant as insurance policies. The district estimates said these options would likely cost tens of millions to hundreds of millions of dollars, though no concrete estimates were provided on Friday.

"I also want to assure the board and the public that this work is happening in parallel with all of our conservation work," Horenstein told the board.

A decision on both the pipeline and desalination plant could come as soon as December. The district is looking for potential water sellers in the Sacramento River, Mokelumne River and Los Vaqueros watersheds, Sellier said. The district has also made inquiries with Sonoma Water, but they are unlikely to yield any options given the drought situation there, Sellier said.

Original Article: [Marin IJ by Will Houston](#)

SJW Group Announces That Its Texas Subsidiary Has Filed Applications to Acquire the Kendall West Utility in Kendall County and Bandera East Utility in Bandera and Medina Counties, Texas

SJW Group (NYSE: SJW) today announced that its Texas subsidiary, SJWTX Inc., which does business as Canyon Lake Water Service Company, is planning to acquire the Kendall West Utility operating in Kendall County and the Bandera East Utility in Bandera and Medina Counties, Texas. The companies have filed applications with the Public Utilities Commission of Texas ("PUCT") for approval of the transactions.

Eric W. Thornburg, chairman, president and CEO of SJW Group, stated, "We are eager to serve the customers of Kendall West and Bandera East Utilities as part of our Canyon Lake Water Service Company. This transaction, if approved by the PUCT, will benefit all of our customers through increased scale and greater resources. We look forward to delivering exceptional drinking water and wastewater services to them in the future."

Thomas Hodge, president of SJWTX, stated, "The combination of Kendall West and Bandera East Utilities with SJWTX brings together two fast growing utilities in adjacent counties which both rely on water from Canyon Lake and the Trinity Aquifer. The Kendall



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West and Bandera East Utilities provide water to approximately 4,000 people through over 1,300 service connections in a service area approximately 20 square miles. The merger will increase efficiency of operations and bring SJWTX's experience of managing and supporting rapid growth to Kendall, Bandera and Medina Counties." Included with Kendall West are wastewater services that recycle water for landscape irrigation at a local golf course, stretching the use of scarce water resources in this drought prone area. A combination of groundwater wells and surface water from Canyon Lake provide Kendall West Utility and Bandera East Utility with their water supply. The transaction will not affect the rates or service for customers of Canyon Lake Water Service Company, Kendall West Water System, nor Bandera East Water System. Combining Kendall West and Bandera East Water Systems with SJWTX will make for a larger, more efficient water utility with access to capital and management resources needed for this fast growing area. After PUCT review and public comment, the acquisition is expected to be final by the end of 2021. If approved by the PUCT, this would become the 14th acquisition by SJWTX since 2006 and expand its footprint in Texas across seven counties in total. Over the past 15 years, the company has nearly tripled in size from 6,500 to 21,500 connections and now serves approximately 65,000 people. With the addition of Kendall West, SJWTX will serve three of the top ten fastest growing counties in the United States, according to the U.S. Census Bureau.

Original Article: [Business Wire](#)

Texas water systems now must plan for power outages

Water systems across Texas are being required to draw up emergency plans to guide them through long power outages, a less-discussed part of new legislation focused on strengthening the electric grid after the February freeze.

The statewide rules are similar to requirements put in place for water providers in Harris and Fort Bend counties after Hurricane Ike hit in 2008.

Those local rules fell short during this year's freeze though, which packed a crisis within a crisis. In addition to extended power outages, water providers for nearly two-thirds of Texas's population were at some point unable to guarantee clean water going to all taps. Senate Bill 3, which Gov. Greg Abbott signed earlier this month, requires potable and raw water providers in the rest of the state to develop plans to operate during a lengthy power outage "as soon as safe and practicable following the occurrence of a natural disaster."



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The law offers 13 options for doing this, such as maintaining stationary, shared or portable generators. Other options: storing water, getting water delivered or issuing emergency rules for water use to keep demand lower.

Slightly more restrictive requirements have been in place for systems in Harris and Fort Bend counties, except for those exempted because of the financial burden it would impose. But Texas Commission on Environmental Quality Executive Director Toby Baker pointed out in March that many faltered anyway.

Original Article: [Houston Chronicle by Emily Foxhall](#)

Saving blue bonds

On 29 October 2018, the Seychelles government announced the launch of the world's first sovereign blue bond. The proceeds of the bond were to be used in developing and protecting marine ecosystems in and around the island state.

This was a pioneering financial instrument that brought into focus United Sustainable Development Goals six (clean water and sanitation), eight (decent work and economic growth), nine (industry, innovation and infrastructure), 11 (sustainable cities and communities), 13 (climate action) and, arguably most importantly, 14 (life below water). A remarkable number of goals to hit with just one instrument. The ticket, \$15 million, was by no means the biggest note issue for a sovereign state, but it marked the start of a divergent path from traditional ESG financing.

For those that have been involved in sustainable finance for a while, the blue bond offered a refreshing alternative to the safety of green investments.

By no means detracting from the importance of green energy, that market sector has become so sophisticated that deals are now run on the dreaded 'market terms' nomenclature. There is no creative deal structuring or pricing as these deals have moved into the realm of what is credit committee acceptable.

Water and marine ecosystems comprise the largest areas of mass on Earth, including oceans and other water bodies such as rivers and lakes. In terms of natural capital, this seems to indicate a near-infinite resource that can be developed and protected in the same breath.

That in itself is the cornerstone of sustainable finance: do good but do no harm. The blue bond represented a move away from traditional green investments as market participants boldly stepped onto the other colours on the ESG spectrum.

The blue bond created such hype in the market that it suddenly became the flavour of the year with market participants clamouring to get their name on the deal.



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That was two and half years ago.

The deal was meant to provide a workable model to be replicated and scaled. But we soon saw that bold step turning into an amble, and then a few stutter steps, and now nearly a standstill.

It is still difficult to understand why that is the case. The blue bond still represents an overwhelming success, in no small part down to the efforts of Seychelles Conservation and Climate Adaptation Trust, who administer the grants.

Original Article: [Investment Week by Marc Naidoo](#)

Why water levels in megadrought-impacted Southwestern states have some experts concerned

California was once the site of a gold rush.

But now arguably one of the most precious commodities in parts of the state and in the Southwest is something else entirely -- water -- as the region grapples with a decades-long megadrought that experts say has been spurred on by a warming Earth.

Farmers struggle to water their crops. Less snowpack feeds rivers, streams and lakes in areas surrounding the mountains. And what little runoff there is from snow in the spring is immediately sopped up by the arid soil before it can reach important bodies of water. A February report from the California State Water Resources Control Board, for instance, said the question is not whether warming will occur, but the "magnitude of warming" instead and says the state is facing the "threat of greater scarcity of water supplies, increased water demand, and limited water supply reliability." The report said the state said it has taken "bold" actions to reduce the effects of climate change as well as increase water resilience such as the expansion of recycled water.

And the Southern Nevada Water Authority, which gets 90% of its water from the Colorado River, acknowledges it is "facing the worst drought in the basin's recorded history" and has been working to address the drought's impact on water supply for 20 years, including using 23 billion fewer gallons in 2020 than 2002, despite a massive population growth.

Water levels in major bodies of water in the Southwest -- both natural and manmade -- are approaching historic lows as the drought is exacerbated by heatwave after heatwave during a dry season that started earlier this year.

Original Article: [ABC News by Julia Jacobo](#)



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