



## **TMWA Board Meeting**

**Wednesday, February 16, 2022**

### **Press Clippings**

**January 12, 2022 – February 10, 2022**



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ENVIRONMENT

## How the U.S. Megadrought Will Affect 2022 and Beyond

As drought spreads wider than ever across the Western U.S., water rations and other emergency measures have begun.

By Tom Yulsman | Jan 5, 2022 12:00 PM



(Credit: John Locher/AP)

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Just halfway through the summer of 2021, a startling record was set: By one measure, almost 100 percent of the Western U.S. was in drought. In 122 years of observation, never had that much land been that dry west of the Continental Divide.

Lack of precipitation was a factor. But even more significant were high temperatures. In June alone, 202 all-time record highs were set in the West. For the Southwest, these extremes amplified a 20-year megadrought that's been drying out the region and, most notably, the Colorado River Basin.

In the effort to meet rising water demands in the basin, the two largest reservoirs in the U.S. — lakes Mead and Powell along the Colorado River — both shriveled to historic lows this summer. "It's a ticking time bomb," says Brad Udall, a water and climate research scientist at Colorado State University.

The drying up, or aridification, of the Southwest has been taking a toll on the snowmelt-dependent Colorado River for many years. As a result, its natural flows have diminished by nearly 20 percent since 2000. Meanwhile, demand for its water — the lifeblood of an economy exceeding \$1.4 trillion — has only increased, with roughly 40 million people counting on it today.

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(Credit: Tim Roberts Photography/Shutterstock)

On Aug. 16, the U.S. Bureau of Reclamation issued the first-ever shortage declaration for Lake Mead. This will trigger substantial cuts in 2022 to water deliveries, especially to agricultural users, in Arizona, Nevada and Mexico. Arizona will take the biggest cut, totaling about a fifth of its Colorado River supply. Residents in cities like Phoenix, the fastest growing in the U.S., will be spared. But farmers who irrigate crops with water from the Central Arizona Project canal will see their supplies reduced by about 30 percent.

Bigger cuts that would hit cities, not just farmers, may be coming. “With growing populations and continued development in the metro areas of Las Vegas, Phoenix, and L.A., it’s very concerning how water resource issues will impact these urban areas in the not-so-distant future,” says David Simeral, a climate scientist with the Desert Research Institute.

Researchers caution that, for the Southwest in particular, including parts of the Colorado River Basin, the prolonged heat could signal a new, more-arid norm beyond temporary droughts.

A 2020 study published in *Science* showed that the period between 2000 and 2018 was the

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Home > News > Environment > **'Ideal': Snow survey brings positive new**

ENVIRONMENT

## **'Ideal': Snow survey brings positive news for region**

By Ty O'Neil | January 10, 2022

**T**he region's snowpack is "way above normal" according to Jeff Anderson, hydrologist for Natural Resources Conservation Service in Nevada. His January snow survey on Monday near the Mt. Rose Summit measured 7.5 feet of snow with more than 27 inches of water content—185% of the average snowpack.

The site is electronically monitored with a "snow pillow" and other equipment, but Anderson makes physical inspections throughout the winter and invites members of the media along.

Anderson said over the past two years snow has fallen on dry ground within the region. When that snow thawed, much of the water first went into the soil instead of the region's lakes and reservoirs. That's the case this year, though. October storms brought both snow and rain to the Lake Tahoe basin fillin the soil with water and giving run off a chance to head to the area's parched bodies of water.

Chad Blanchard, Federal Water Master for the Carson-Truckee Rivers, discussed the health of local reservoirs.

Lake Tahoe, which fell below its rim in 2021, is back up and now holding more water. Blanchard sai that because Lake Tahoe has such a massive surface area precipitation will affect the lake's level righ away, simply because much of it is landing in the lake itself.

Other bodies of water with substantially less surface area will have to wait until the spring run off to begin seeing much of this winter's moisture.

While December storms have brought snow to the mountains, precipitation in February and March still decide what the region's water conditions will be for 2022.

**Ty O'Neil** Photojournalist

Ty O'Neil is a lifelong student of anthropology with two degrees in the arts. He is far more at home in the tear gas filled streets of war torn countries than he is relaxing at home. He has found a place at This Is Reno as a photojournalist. He hopes to someday be a conflict photojournalist covering wars and natural disasters abroad.



## NEWS

# December's record snowfall: The drought persists, but there's good news, too



**Amy Alonzo**

Reno Gazette Journal

Published 4:00 p.m. PT Jan. 10, 2022

The record-setting snow Tahoe and other portions of the Sierra received in December has many people wondering, "Is the drought over?"

Not quite.

The heavy December storms – 214 inches of snow in North Tahoe – made a good dent in the West's drought. Mt. Rose Ski Area is reporting 27.4 inches of snow water equivalent (the amount of water in the snow that the region can expect to see as spring runoff) and is at 185 percent of its median snowpack. The Tahoe Basin, as a whole, is at 174 percent of its median snowpack.

**16-plus feet of snow:** Tahoe shatters 50-year December snowfall record

And Lahontan Reservoir is filled to 64,000-acre feet (20 percent of capacity), Boca Reservoir is at 26,200-acre feet (64 percent of capacity) and Stampede Reservoir is at 89,800 acre-feet of water (40 percent of capacity.)

"We've caught up a lot, but our reservoir storage is still really low," said Jeff Anderson, hydrologist for the U.S. Department of Agriculture's Natural Resources Conservation Service.

And drought conditions persist.

Almost all of California remains in some level of drought and all of Nevada's 2.7 million residents still live in at least moderate drought. The southeast portion of Nevada remains in an exceptional drought, the highest level of drought a region can reach, according to the federally administered U.S. Drought Monitor.

The good news, though, is that soil moisture beneath the snow is really good, Anderson said. At this time last year, the soil, even beneath several feet of snow, was "dry as a bone."

The moist soil ensures that when it comes time for snow to melt into spring runoff, the soil won't absorb all the water.

"I'm more excited about that than how much snow we have," Anderson said.

The drought is better than it was, though. In early December, more than 70 percent of California and Nevada were in extreme or exceptional drought. The epic late-December storms helped dramatically – as of Jan. 4, just under 20 percent of California and Nevada are categorized as being in extreme or exceptional drought.

What determines if the drought continues or subsides? The amount of precipitation that falls in the next few months, according to the U.S. Drought Monitor.

Extended forecasts for January show below-normal precipitation for the next two weeks.

And there's nothing else on the immediate horizon.

There is no major upcoming storm activity for Northern Nevada, according to National Weather Service Meteorologist Dustin Norman, and temperatures will be slightly above normal for the month.

**'It's DEEP!':** Tahoe prepped for epic skiing and riding conditions

"Small little weak storms may sneak in from time to time, but we aren't seeing any blockbuster systems like we did in December," he said. But, according to Norman, early indicators show February might be wetter. "We can't call it quits yet."

*Amy Alonzo covers the outdoors, recreation and environment for Nevada and Lake Tahoe. Reach her at [aalonzo@gannett.com](mailto:aalonzo@gannett.com). Here's how you can support ongoing coverage and local journalism.* Page 5 of 83





**KUNR**

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# Agency seeks input on placing restrooms at parks along Truckee River

KUNR Public Radio | By [Lucia Starbuck](#)

Published January 10, 2022 at 7:00 AM PST



*Lucia Starbuck / KUNR Public Radio*

This “Portland Loo” was the first bathroom facility installed as part of the Truckee River Restroom Project by the nonprofit One Truckee River at Brodhead Memorial Park in Reno, Nev.

## A local nonprofit is looking for input from the public on a project that places restrooms at parks along the Truckee River.

One Truckee River is a coalition of local government agencies and nonprofits with the goal of improving the health of the Truckee River, which provides a lot of the region's drinking water. One piece of that plan includes providing a place for people to use the bathroom that isn't the river itself.

"There is a need for more public restrooms along the Truckee River. There is a concern with human impact on water quality. And then also there's a growing recreational need in the area," One Truckee River Executive Director Iris Jehle-Peppard said.

The first facility was installed at Brodhead Memorial Park near downtown Reno last summer, which is an area where people experiencing homelessness oftentimes camp or spend their days. She says the goal isn't to address homelessness — but that's been an outcome.

"Whether you're somebody that's camping along the river, or you're a mom with a kid that's just gotta go, the restrooms are for everyone," Jehle-Peppard said.

The type of restroom the organization is using is called the "Portland Loo," and they cost about \$100,000 each. One Truckee River is looking to install nine more of them over the next several years.

The organization will be presenting its proposal at four local government meetings over the next month, and they have a survey that can be found [here](#).

*Lucia Starbuck is a corps member with [Report for America](#), an initiative of the [GroundTruth Project](#).*



### Lucia Starbuck

Lucia Starbuck is a corps member with Report for America focusing on community reporting and the impacts of the COVID-19 pandemic. Local community issues are her passion, including the affordable housing crisis, homelessness, a lack of access to healthcare, protests and challenges facing vulnerable communities in northern Nevada.

[See stories by Lucia Starbuck](#)



## Stateline

# California's Drought Reckoning Could Offer Lessons for the West

## STATELINE ARTICLE

January 11, 2022

By: [Ma Vasilogambros](#)

Clouds hover above Los Angeles as California received some much-needed rain this winter. After two years of drought, the Golden State can offer its Western neighbors insight into water conservation in a changing climate.

Ringo Chiu via The Associated Press

**MONTEREY, Calif.** — The golden hills of California have turned green in recent weeks after a series of storms delivered much-needed rain and snow to a state suffering from two years of drought.

But state officials and water policy experts are still urging caution even in these wet conditions, pushing for water-saving measures as the drought is expected to continue throughout much of the West.

“Even with those rains and with that massive snowpack, the larger issues of drought in California are not resolved,” said Char Miller, a professor of environmental analysis at Pomona College in Claremont, California. “No one talks about water when it’s raining. We need to have the conversation now.”

California remains in the grip of a dry period that has substantially depleted the state’s reservoirs, facilitated some of the largest wildfires in state history and led officials to add new restrictions on water use.

This past water year (a measure that takes into account total winter precipitation), which ran from October 2020 through the end of September, was the driest in a century. Just three months into the new water year, California already has surpassed 2021’s precipitation levels.

The drought has laid bare some of the challenges that California and other states face in managing their water supplies. A California conservation law being implemented over the next two decades, along with a range of actions by communities across the state, provide a preview of difficult policy choices communities across the West will have to grapple with as climate change pushes water shortages to crisis levels.

While some communities, such as Marin County just north of San Francisco, have debated building a multimillion-dollar emergency pipeline to bring in water, other communities have sought approaches that rely on reuse and recycling.

Orange County now is home to the world's largest groundwater replenishment site, a treatment plant that purifies wastewater and injects that water back into its underground aquifers, instead of pumping treated water into the Pacific Ocean.

Some communities are trying to improve their stormwater capture systems, while others are exploring turning ocean water into drinking water. San Diego County has the largest desalination plant in the western hemisphere, and other communities are considering following its example.

The infrastructure law President Joe Biden signed in November [includes](#) \$82.5 billion for critical water investments nationwide, including grants, studies and federal projects.

But the problems these policies attempt to address are daunting.

California and other states swing from extreme wet to extreme dry conditions, which will only be exacerbated by the worsening climate crisis.

There's also a lack of reliable long-term weather forecasting that could predict precipitation levels throughout an entire wet season, instead of just two weeks.

"These days, it's all about being more efficient in water management," said Jeanine Jones, interstate resources manager at the California Department of Water Resources. "You need better forecasts to be more efficient."

In long dry spells, communities and farmers in many states also draw heavily on underground aquifers, many of which are being overdrawn, even in average rain years. California's Central Valley, the heart of America's produce industry, is literally sinking because of its depletion and overpumped aquifer.

Big measures are needed now to address many of these challenges, said Andrew Ayres, a research fellow at the Public Policy Institute of California, a San Francisco-based nonprofit. California has generally lagged other Western states in having comprehensive groundwater plans, Ayres said.

Arizona, for example, enacted its groundwater management act in 1980. The legislation mandated water conservation from businesses throughout the state and sought to manage groundwater consumption in five counties where overpumping was historically an issue. But some water experts [have called](#) for an update to the law to address groundwater supply issues in rural Arizona.

California policymakers enacted a law in 2014 that they hoped would increase aquifer levels through conservation efforts that not only decrease the amount being pumped but also increase water seeping back underground. The Sustainable Groundwater Management Act is still being implemented, as communities and water rights-holders have until 2040 to reach sustainable groundwater levels.

But the law's outcome is not certain, Ayres said. Water management is a complex web of state and local water authorities, long-held water rights and uncharted legal territory, he said, and the next two decades of implementing this new law will lead to difficult negotiations and sacrifices by both agricultural and urban consumers.

"There's a lot of uncertainty around solutions and what they will look like," he said.

Over the past year, the state has added other restrictions for water use, including a call by Democratic Gov. Gavin Newsom for residents to voluntarily cut their water consumption by 15%, but the state fell far short of that goal. Newsom has resisted a politically fraught statewide water conservation mandate. In 2015, then-Gov. Jerry Brown, a Democrat, ordered communities to cut water consumption by 25%. The cuts ended a year when heavy rain saturated the state and eased the drought.

Last week, the state also issued emergency regulations that target water waste by residents, including hosing down sidewalks or watering lawns soon after it rains.

These measures have been necessary even after the recent rain and snow brought some relief.

The deluge of the past month soaked much of the Golden State, replenishing dammed reservoirs and underground aquifers, and revitalizing streams that until recently laid dormant and dusty. For a state with nearly 40 million residents in need of drinking water and the country's largest agricultural industry that provides a tenth of the nation's crops and livestock, this weather has been essential.

Throughout much of the past year, dangerously depleted reservoirs and lakes fell way below water lines, beaching boats and raising alarm statewide. Reservoirs, though many remain [well below](#) their historical average, have risen substantially with recent precipitation.

When considering drought conditions and the low reservoir and groundwater levels going into this winter, the state is still significantly behind healthy water levels, said Michael DeGner, a research associate at Scripps Institution of Oceanography at the University of California, San Diego.

Drought recovery depends on what Californians and the state does now, said Heather Cooley, director of research at the Pacific Institute, an Oakland-based think tank.

There are massive challenges: Overdrawing of the state's aquifers has been exacerbated by drought, engineers have detected cracks in aqueducts and shallow wells are drying up in some rural areas. And as reservoirs dry up, there are no other major rivers to dam.

Californians can do their part, said Cooley, including by upgrading old appliances (such as dishwashers and toilets), removing grass lawns and replacing them with climate-efficient plants, and fixing leaks. Some communities, from Encinitas up to Santa Clara County, have added requirements for home and business owners to replace inefficient appliances.

California's State Water Resources Control Board last week ordered local governments to stop using drinking water to water ornamental grass on street medians. Similar policies are being implemented in other drought-ridden states. Neighboring Nevada banned strictly ornamental grass on office parks, outside malls and on road medians.

Further, the state needs to improve its timely access to data and information on water levels and consumption by consumers, said Nell Green Nylen, a senior research fellow with the Wheeler Water Institute at the Center for Law, Energy & the Environment at the University of California, Berkeley, School of Law. But, she admits, this is challenging in such a complicated management system.

It's even more challenging to manage a water system that also keeps in mind ecosystems and essential habitats for fish and wildlife, she said. Last year, [nearly all](#) the endangered winter-run chinook salmon juvenile population died in the warm Sacramento River, unable to receive cold water from snowmelt.

But all potential solutions require a drastic cultural shift and change of approach that entails sacrifice, Cooley said.

"That shift takes time," she said. "I think people are making it, but there's more we can do."

## About Stateline

Stateline's team of veteran journalists provides daily reporting and analysis on trends in state policy.

[ABOUT](#)

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Home > News > Government > **City invites public feedback on tree**

GOVERNMENT

## City invites public feedback on tree codes

By Kristen Hackbarth | January 11, 2022

**C**ity of Reno officials have scheduled eight upcoming opportunities for the community to provide feedback on updated tree protection standards for the city. Sessions are scheduled starting January at neighborhood advisory board meetings and in online public workshops.

City Council members in July 2021 voted to update the city codes related to the tree canopy. The city had begun the code amendments in 2019 but paused the process in early 2020 as the pandemic limited opportunities for community input. The city's urban forestry and tree canopy preservation efforts started in 2015.

Council member Naomi Duerr at the July meeting said she was grateful for the work city staff and community partners have put into tree canopy efforts. Duerr initiated [ReLeaf Reno](#), a city-sponsored effort to preserve and expand the tree canopy.

"Over the last five or six years we've actually lost trees, not gained trees," Duerr said. She said some trees had been lost to drought or other circumstances, which she didn't highlight.

In February 2021 developer Urban Lion [removed a handful of century-old trees](#) from a site at Riverside Drive and Washington Street where it plans to build a 34-unit housing complex. The removal sparked outrage on social media and Duerr at the time said she'd be doing all she could to save the remaining trees at the site.

Proposed updates to the city's tree protection ordinance set new criteria for developers and residential developments related to tree preservation and replacement and require a tree protection plan to be submitted with development plans.

A nearly century-old tree was felled on Washington Street to make way for Urban Lion's new development before community members and city officials stepped in on Feb. 25, 2021. Image: Jeri Chad

This Is Reno



City staff, in their July 2021 presentation, said tree-topping and lack of installation or care for trees continue to be problems. The city also has limit staff to oversee urban forestry activities, staff said.

Workshops and open houses are scheduled for the following dates and times:

- ~~Tuesday, January 11~~ RESCHEDULED for Jan. 31, 5:30 p.m.: [Ward 1 NAB](#)
- Tuesday, January 11, 5:30 p.m.: [Ward 5 NAB](#)
- Thursday, January 13, 3-5 p.m.: [Virtual Stakeholder Workshop](#)
- Thursday, January 13, 5:30 – 7:30 p.m.: [Virtual Public Workshop](#)
- Tuesday, January 18, 5:30 p.m.: [Ward 2 NAB](#)
- Thursday, January 20: [Ward 4 NAB](#)
- Thursday, January 27, 11 a.m. – 1 p.m.: \*Virtual Open House
- Friday, January 28, 11 a.m. – 1 p.m.: \*Virtual Open House

Code revisions can be reviewed online [here](#), and details on the process and virtual open houses will posted [here](#).

*Updated: This story has been updated based on the rescheduling of the Ward 1 NAB meeting to January 31.*

Kristen Hackbarth is a freelance editor and communications professional with 20 years' experience working in communications in northern Nevada. Kristen graduated from the University of Nevada, Reno with a degree in photography and minor in journalism and has a Master of Science in Management and Leadership. In her free time, she is a volunteer backpacking guide along the Tahoe Rim Trail, an avid home cook and baker, cyclist, wife and stepmom.



University of Nevada, Reno

Giving

Last Updated: 1/11/2022

## 2021 Foundation Professor Krishna Pagilla

<https://www.unr.edu/giving/stories/impact/krishna-pagilla>

2021 Foundation Professor Krishna Pagilla shares how the University's expertise has shaped water science in our region, including our role as one of the first in the country to track the prevalence of COVID-19 through wastewater.

To learn more about Pagilla, his research and his recognition as a 2021 Foundation Professor, watch his full interview. To help support the College of Engineering, please **contact Flynn Ginty (mailto:mailto:fginty@unr.edu)**, director of development, at (775) 782-7696.

Krishna Pagilla was recruited to the University in 2015 to direct the environmental engineering program in the Department of Civil & Environmental Engineering. In the six years since, he has helped grow the University's prominence in the field of water engineering and science, and he became the chair of the Department of Civil & Environmental Engineering, the holder of the Ralph E. and Rose A. Hooper Endowed Professorship in Engineering and the director of the Nevada Water Innovation Institute.

"My efforts have always been balancing between teaching, research and community engagement. Many of our projects are working with community partners like City of Reno, City of Sparks, Washoe County, Truckee Meadows Water Authority, Nevada Department of Transportation and other agencies in the region," Pagilla explained. "I'm also engaged in a lot of research. For example, right now, I am leading the study for the region on COVID-19 monitoring through wastewater."

Pagilla says the University's already-established expertise and tools in cleaning water allowed faculty and student researchers to quickly pivot at the start of the pandemic — becoming one of the first in the country to measure COVID-19 cases through wastewater testing. This greater understanding of community prevalence was especially important at the start of the pandemic, when access to testing was limited.

Alongside studies like this, Pagilla says he is very proud of the collaborative work being led by the Nevada Water Innovation Institute. "We can showcase or leverage these regional projects for nationally competitive grants from the National Science Foundation, the EPA and The Water Research Foundation; and since founding the [Nevada Water Innovation] Institute in 2017, we've been able to get millions of dollars in funding for leading-edge research as well as applied research to solve the problems of the region. That has enabled us to be a leader in the nation, sharing our experience with others nationwide about how we built this relationship with multiple local agencies. I am also excited to share that we are hosting an international conference right here in Reno on leading-edge technologies for water and wastewater in 2022 which further highlights our international reputation."

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**VOICES | Opinion** *This piece expresses the views of its author(s), separate from those of this publication.*

# Opinion: We love trees! Do you? | Naomi Duerr

**Naomi Duerr**

Published 6:00 p.m. PT Jan. 11, 2022

*This opinion column was submitted by Naomi Duerr, the Ward 2 representative of the Reno City Council.*

“Trees are poems that the earth writes upon the sky,” Kahlil Gibran penned during his brilliant literary career. As a writer, poet and artist, Gibran had a special appreciation for trees and their place on this earth.

Anyone who knows me well will tell you that I, too, am a tree lover. And since I joined the Reno City Council in 2014, I’ve made the protection and expansion of our local tree canopy a high priority as I’ve worked with my Council colleagues and community groups to plant more trees and to set the policies and plans that are shaping our great city’s future.

Reno has the dubious distinction of being one of the fastest-warming cities in the U.S. over the last 50 years, with a more than 7-degree increase in that time (ClimateCentral.org). Given our recent summers with months of back-to-back 95-degree days, it is no wonder that air conditioning is being installed in older homes more than ever before.

Trees are the simplest, cheapest and most effective thing we can do to counteract Nevada’s changing climate and reduce Reno’s urban heat island effect. Not only do trees shade our lands, but they also suck up carbon dioxide, a heat-trapping gas, and add back oxygen, helping us to meet air-quality goals. They create wildlife habitat, filter noise, reduce stormwater pollution and beautify our homes, parks and open spaces. And, given the stresses of our ever-changing world, trees provide rare sources of respite.

Trees increase property values too. A tree that might cost \$100 at planting can increase in value to \$10,000-\$20,000 at maturity, adding significant value to residential and commercial spaces alike. People view neighborhoods with mature trees as more valuable — ask any real estate agent — and commercial spaces with trees command higher rents.

One of Nevada’s most preeminent authors, Walter Van Tilburg Clark, fondly described Reno in his influential book as “The City of Trembling Leaves.” But we are rapidly losing that distinction. Whether due to drought, lack of care, or misunderstanding the critical role trees play in our community, our tree canopy coverage now stands at about 5 percent, far less than the 10 to 15 percent desired for a high desert community such as ours.

## Critical month for future of Reno's trees

Whether trees are deciduous (lose their leaves in the winter) or coniferous (keep their “leaves” in winter), our community’s trees have now settled down for their long winter’s nap. Thus, while trees might not be top of mind today, I assure you this is a critical month for our city and the future of our trees.

Why? Because the City of Reno is currently in the process of updating its tree protection standards and ordinances, and we're looking for community input and feedback. (An ordinance is a local law.) This ordinance will decide how we manage our trees on both public and private properties going forward.

The Urban Forestry Commission and city staff have labored long and thoughtfully to develop this update of our tree ordinances. You may review the draft Tree Protection Ordinance at [Reno.gov/Trees](http://Reno.gov/Trees) and find a list of input opportunities, an option to subscribe to updates, and a form to submit comments online.

What are we trying to accomplish with this ordinance? The goal is to increase the tree canopy within the city by supporting the retention of healthy trees and specifying replacement requirements for trees that must be removed. Overall, it clarifies and expands tree protection standards (keep the tree where possible, protect the roots); clarifies maintenance responsibilities (plant the right tree in the right place, use sufficient quality and quantity of soil and water properly); and streamlines procedures and enforcement.

Residents have been invited to a series of upcoming virtual workshops, open houses, and Neighborhood Advisory Board meetings to learn more about the draft ordinance and provide input. The full list of events is available at [Reno.gov.Trees](http://Reno.gov.Trees), but coming up are two key opportunities:

- Thursday, Jan. 13, 5:30 – 7:30 p.m.: Virtual Public Workshop
- Tuesday, Jan. 18, 5:30 p.m.: Ward 2 Neighborhood Advisory Board

Following the community input process, the Reno Urban Forestry Commission will consider a potential revised draft, and staff will present a draft to both the Planning Commission and Reno City Council later this year for approval.

Trees offer us protection from the elements, a host of unmatched environmental and financial benefits, and are the simplest way we can combat climate change. They soothe our souls —what is more beautiful than a colorful canopy at the height of autumn? — and give us a sense of hope and inspiration. Do your community a favor: get involved and support the trees.

That's my take. Tell us what you think at [Reno.gov/Trees](http://Reno.gov/Trees).

*Naomi Duerr is the Ward 2 representative of the Reno City Council and a self-described tree lover. She can be reached at [duerrn@reno.gov](mailto:duerrn@reno.gov).*

**Have your say:** How to submit an opinion column or letter to the editor



## Snowpack measured at 185% of normal for this time of year on Mt. Rose

by Ben Margiott

Monday, January 10th 2022



*Fresh snow blankets the Truckee Meadows as seen from the Sky Vision drone team (KRNV/KRXI)*

RENO, Nev. (News 4 & Fox 11) — It's no secret the recent Sierra snowstorms have greatly helped the region's snowpack, but just how much?

Hydrologists manually measured the snowpack at Mt. Rose summit for the first time Monday morning and confirmed that [snowpack is 185% of normal for this date](#).

45°

48°

50°

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*Snowpack measured at 185% of normal for this time of year on Mt. Rose*

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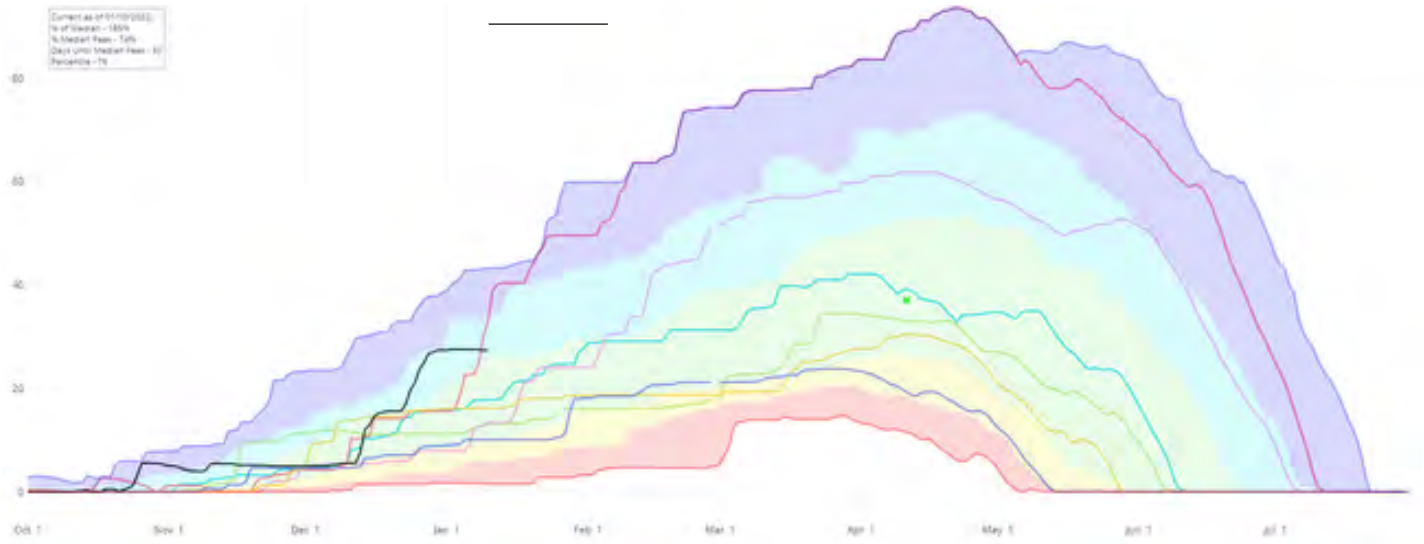
Despite being off to a great start, the region is still at 73% of the normal April peak. NRCS hydrologist Jeff Anderson said soils were drenched in the October rain events, meaning the spring and summer runoff will be much more efficient than years past.

**“ When the snow starts to melt this spring, that melt doesn't have to fill up the soil like it's had to do the last two years. It's going to run off to our creeks, it's going to help fill up our reservoirs. But we do need that precipitation if we're going to get out of the drought.**

Anderson said the current dry pattern isn't the end of the world because things can change so quickly.

**“ Right now the way our climate is, it just dumps a lot of precipitation so yeah we need to get the storm track back though.**

45° 48° 50°



Graph showing the snow water equivalent at Mt. Rose ski area. The black line represents the 2021-2022 water year.

[Home](#)

## Nevada offers free lead test kits, guidance to licensed childcare providers

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 Submitted by [Jeff Munson](#) on Wed, 01/12/2022 - 8:03am

Samantha Thompson, NDEP

The Nevada Division of Environmental Protection, in partnership with the U.S. Environmental Protection Agency, Nevada Division of Public and Behavioral Health, and Washoe County Health District, is offering all licensed childcare providers throughout the state the opportunity to screen for lead in their drinking water systems with expert guidance, technical assistance, and educational resources provided every step of the way.

Funded by a \$418,000 EPA grant, this voluntary program is available at no cost to all licensed childcare providers, with first priority given to those located in historically underserved and disadvantaged communities. All childcare providers will be receiving enrollment information from NDEP's contractor, TruePani, and are encouraged to review additional outreach materials online at [ndep.nv.gov/lead](https://ndep.nv.gov/lead).

Test results, with follow-up support, will be sent to each facility to be posted and shared with parents and caregivers, and will be available on NDEP's website. If elevated levels of lead are found, NDEP stands ready to work with childcare centers to provide recommendations and discuss funding opportunities that may be available to them through NDEP's current grant programs, and potentially through the federal American Recovery Plan Act or the Bipartisan Infrastructure Law.

"The Nevada Division of Environmental Protection is committed to helping childcare providers ensure that every child in their care has access to safe, lead-free drinking water," said NDEP Deputy Administrator Jennifer Carr. "For the last four years, our program has supported no-cost, voluntary lead testing at nearly 500 K-12 schools throughout the state. We look forward to expanding our lead testing program through engaging Nevada's more than 600 licensed childcare centers, where thousands of kids learn and play every year. I thank our local, state, and federal partners for supporting this critical undertaking that will benefit Nevada's children and families for generations to come."

Young children are among those particularly vulnerable to health and developmental issues from exposure to high levels of lead. The majority of childhood lead exposures happen in the home, usually from deteriorated lead-based paint or lead contaminated soil. However, it is possible that repeated drinking of water containing lead can contribute to a child's lead exposure, especially if the building was built in Nevada before 1989. Testing drinking water from water fountains, faucets, and other fixtures is a simple way to determine where lead is present and can help inform next steps for addressing any potential concerns.

"There are no safe levels of lead exposure," said Dr. Ihsan Azzam, the Chief Medical Officer for the State of Nevada. "Even limited amounts of lead can have serious developmental negative health outcomes, particularly for young children and pregnant women. Studies have demonstrated clear relationships between exposure to lead in drinking water and blood lead in children, even when the concentration of lead in water was low. These effects can include learning and behavioral problems, hearing and speech problems, lower IQ and decreased ability to pay attention. Early detection of this environmental hazard in drinking water, timely interventions and proper use of various mitigation strategies can prevent exposure to lead and protect young children."

"Lead testing of drinking water is critical for the protection of our children," said Deborah Jordan, EPA's Deputy Regional Administrator for the Pacific Southwest. "EPA is pleased to support Nevada in both its efforts to detect and remediate lead in drinking water at childcare centers and prioritize those in historically underserved and disadvantaged communities."

The Nevada Lead Testing Program is part of a nationwide effort established by the federal 2016 Water Infrastructure Improvements for the Nation (WIIN) Act. As part of the WIIN Act, the EPA provides grant funding to states to test the drinking water in schools and childcare centers for lead.

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# Statement on Lahontan Water Board Approval of the Tahoe Keys Control Methods Test

Jan 13, 2021:



LAKE TAHOE, CA/NV (January 13, 2021) -- This morning, the Lahontan Water Quality Control Board voted unanimously to approve a test of methods to tackle the growing infestation of aquatic invasive weeds in the Tahoe Keys, located on Lake Tahoe's south shore. Aquatic invasive species, including the plants plaguing the Keys, are the most pressing ecological threat to Lake Tahoe's health and beauty.

Today's decision to approve the *Tahoe Keys Lagoons Aquatic Weed Control Methods Test* comes after more than seven years of planning, design, scientific analysis and robust public input from many agencies, organizations and the Tahoe community. The League to Save Lake Tahoe has been involved throughout, and in efforts that predate the *Control Methods Test*.

Recognizing the threat invasive species pose to Lake Tahoe's water quality, the League has taken a leadership role in efforts to tackle the problem and keep it contained, which includes helping develop and fund innovative technologies currently implemented in the Keys. The League is a strong supporter of the *Control Methods Test*, relying on the best available science, results from their pilot projects, and investigations into emerging methods to guide their position.

The following is a statement from Darcie Goodman Collins, PhD, CEO of the League to Save Lake Tahoe, also known as Keep Tahoe Blue:

*“To Keep Tahoe Blue, we urgently need to solve the invasive species problem in the Tahoe Keys. This morning’s approval of the Tahoe Keys Control Methods Test puts us on the right path. The unanimous decision by the Lahontan board recognizes the rigorous scientific basis, innovative design and strict environmental safeguards of the test, which were crucial to earning the League’s support.*

*For nearly a decade, the League has been a leader, working tirelessly to develop solutions, but also to find common ground for battling invasive species in the Tahoe Keys with all key stakeholders. Years of dedication from the Tahoe Keys Property Owners Association, Lahontan, the Tahoe Regional Planning Agency and members of the community helped get us to this point, where we are poised to learn from the wide range of tools and approaches in the Control Methods Test. The League will continue to collaborate to solve the problem in the Keys and protect Tahoe’s water quality.*

*We are hopeful that the Tahoe Regional Planning Agency concurs with Lahontan’s decision at their upcoming meeting, and we can set off on this three-year path to determine how to control ground zero for aquatic invasive species at Tahoe and preserve the Lake for generations to come.”*

The Lahontan Water Quality Control Board’s decision to certify the environmental review documents and approve the rigorous scientific monitoring in the Tahoe Keys that accompanies the test is the result of years of stakeholder collaboration. The Board’s vote is an important step forward in combating aquatic invasive species at ground zero of their infestation in Lake Tahoe. On January 26, 2022, the Tahoe Regional Planning Agency Governing Board will consider taking action to provide the final needed approval for the *Control Methods Test*.

###

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*The League to Save Lake Tahoe, also known by its iconic slogan “Keep Tahoe Blue,” is Tahoe’s oldest and largest nonprofit environmental advocacy organization. Our team of solutions-oriented Tahoe advocates use innovation, boots-on-the-ground action, and a holistic approach to solve the environmental challenges threatening the lake we love. In our 65th year, we continue pushing to Keep Tahoe Blue in an ever-changing world. Learn more at [keeptahoeblue.org](https://www.keeptahoeblue.org) (<https://www.keeptahoeblue.org/>).*



## The US 'megadrought' sets another stunning record

By **Allison Chinchar**, CNN Meteorologist

🕒 Updated 12:15 PM ET, Thu January 13, 2022



**Photos:** The West's historic drought

Water-level lines, unveiled by years of drought, are seen on the rocks of the Elephant Butte Reservoir or Consequences, New Mexico, on July 9.

**(CNN)** — Despite several recent drenching rainstorms in the West and enough snow to [top the second story](#) of some buildings, the United States has tied an alarming drought record: At least 40% of the Lower 48 has gone 68 straight weeks -- more than 17 months -- in drought conditions.

Drought was present in nearly 55% of the contiguous US this week, according to the US Drought Monitor. The last time drought has been so widespread for so long [was October 2013](#). And without significant and unprecedented precipitation over the next seven days, the country will be in uncharted drought territory and break that record outright.

Almost all of the US drought is located west of the Mississippi River, with [extraordinarily dry conditions in far Western states](#), which scientists warn is [a consequence of the climate crisis](#). Much of the West's drought is actually a long-term phenomenon, persisting from year to year without enough





precipitation to lead to a full recovery, said Brad Rippey, a meteorologist with the US Department of Agriculture.

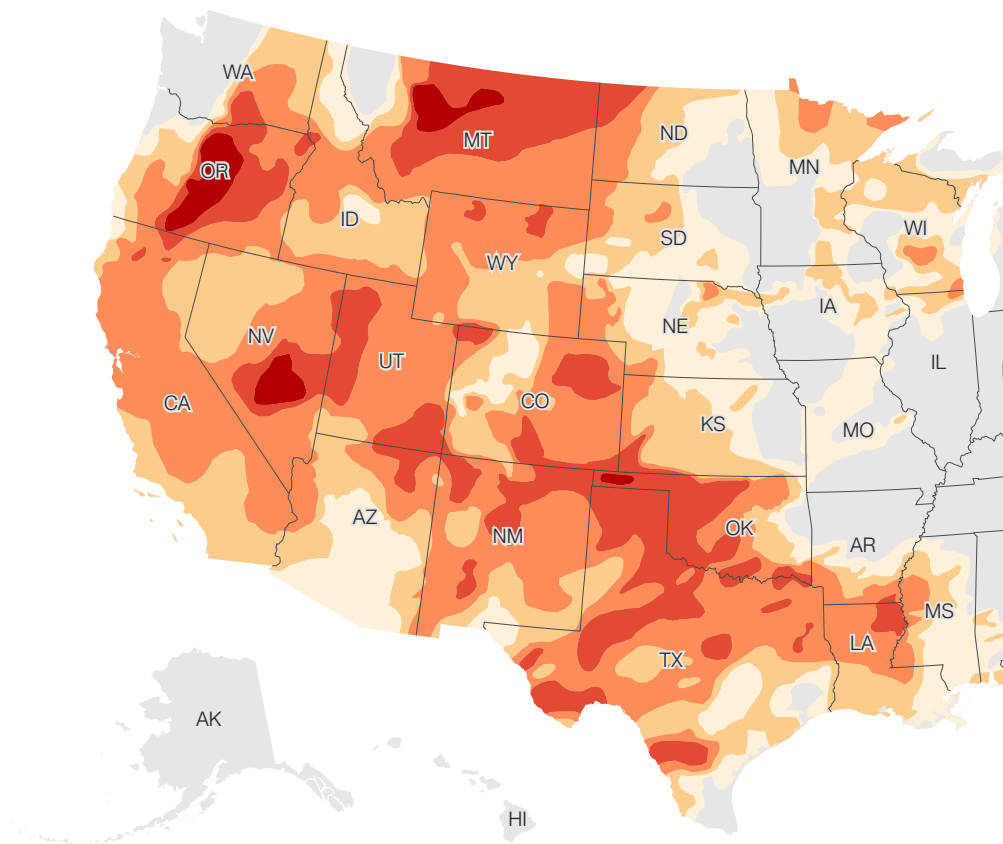
"The Southwest has been experiencing what many scientists have termed a 'megadrought' for about two decades," Rippey told CNN.

In November, US drought coverage climbed above 50% for the first time since 2013. Before the 2013 records, the US had also experienced 65 consecutive weeks of drought between March 2002 and June 2003. The US Drought Monitor has been tracking conditions since 2000.

**Related Article:** The last 7 years have been the warmest on record as planet approaches critical threshold

Abnormally dry  
Severe drought  
Exceptional drought

Moderate drought  
Extreme drought



Data is reported weekly. Map updated Thursday, January 20 and represents analysis as of Tuesday, January 18.

Current dry conditions are being exacerbated by water overuse, said Michael Anderson, a climatologist with the California Department of Water Resources. When the storms come, it might not be enough to replenish the aquifers, he said.

"That can take quite a bit of time, because its water is coming back to the aquifers," Anderson told CNN. "But water is continuing to be used, so you have to have enough water coming into the aquifer that exceeds the use for that restoration to occur."

Oregon also saw a huge increase in precipitation in December, but it did little to bring up the reservoirs around the Rogue River Basin, where half of the reservoirs are at [less than 10% of capacity](#).

Even as recent winter storms have helped recharge the parched Western landscape, drought has worsened in the Southern Plains, especially in Texas, where it has increased from 15% to 82% in just the last three months.

## Winter rain and snow has helped, but not enough

The winter season started strong with [remarkable rain and snow](#) in December, especially in California. For the first time since December 2020, the state this week has no areas with exceptional drought -- the highest designation, the US Drought Monitor reported. Extreme drought, the second-highest, is down to 1%, whereas 80% of the state was considered extreme or worse just last month.

A quarter of the state's total average winter snowpack came in December alone, said Julie Kalansky, deputy director of operations for the Center for Western Weather and Water Extremes.

"Currently, the snowpack is at about 50% of the end of season normal snowpack," Kalansky said. "The storms helped a lot, but if there are not some other large storms this winter, it will not be enough to end the drought."

Other states also saw huge gains -- including [Oregon and Washington](#), where several cities broke daily rainfall records in the final month of 2021.

"We call it a great start," Anderson said. "We are always appreciative when winter starts as fantastically as it did because that's the kind of start we needed. The challenge is that we kind of need to sustain that through the rest of January through March."

### A Wet December in CA/NV: Drought Buster, False Hope, or Somewhere in Between?

Storms brought more than 200% of normal precip to parts, improving water storage.

But the next 2 weeks look dry.  
Jan/Feb precip is key.

See <https://t.co/lgc09NI32I> @CnapRisa @WRCCclimate @DRIScience [pic.twitter.com/fg5Rz\\_g3p](https://pic.twitter.com/fg5Rz_g3p)  
— NIDIS Drought.gov (@DroughtGov) [January 7, 2022](#)

Rippey agreed that the West needs more storms this winter. "Despite the promising start to the Western winter wet season, additional storminess will be needed in early 2022 to sustain the recovery from a multiyear drought," he said.

Tremendous gains in precipitation only go so far when you're starting from such a low number, Rippey said.

"By July 1, 2021, the surface elevation of massive Lake Mead, which lies behind Hoover Dam along the Colorado River, fell to 1068.66 feet above sea level -- the lowest level since the spring of 1937," when the reservoir was created, he said.





JUSTIN SULLIVAN/GETTY IMAGES

### Interactive: The Colorado River's shortage is a sign of a larger crisis

Where precipitation falls is critical, too. California is a geographically complex state, with the highest elevation point (Mt. Whitney) and the lowest elevation point (Death Valley) in all of the Lower 48 states.

Drought in Northern and Central California is arguably more problematic than drought in Southern California, Rippey said.

"A key element of California water is that we have our large water projects in (the) north, where typically more rainfall falls," Anderson said. "Then, we move water where there tends to be less rainfall, but there tends to be more people because the weather is really nice."

Years where all areas of California are dry, as now, pose a still challenge, and people rely more on stored water and groundwater.

## What this could mean for the future

Scientists have noted that the variability in precipitation isn't just changing over the course of years but now within the same year -- something they call "weather whiplash."

"Now, even within the year, you can have a really wet month, like we did in October -- we had a fantastic [atmospheric river](#) -- then November comes around and it's really dry," Anderson said. Then, "December comes to us quite bountiful, but now we're back in January and January is dry. That can really challenge trying to navigate that back-and-forth, unless you are prepared."

Dry conditions aren't just a concern for reservoirs and water supply but also for fire mitigation. Where conditions are dry,

In general, droughts that may have occurred only once every 10 years or so now happen 70% more frequently, the [UN Intergovernmental Panel on Climate Change reported](#) in August. The climate change connection is particularly strong in the Western United States, it concluded.

*CNN's Brandon Miller contributed to this report.*

The **NEVADA** INDEPENDENT

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## Nevada is taking steps toward a Western electric grid. What will it look like?



Daniel Rothberg

January 20th, 2022 at 8:00 AM

Environment

SHARE



*Power lines from Hoover Dam stretch through Eldorado Valley south of Boulder City on Friday, June 16, 2016. (Jeff Scheid/The Nevada Independent)*

*Good morning, and welcome to the Indy Environment newsletter.*

*ICYMI: Our multimedia editor Joey Lovato [talked earthquakes](#) on the Indy's podcast this week.*

*As always, we want to hear from readers. Let us know what you're seeing on the ground and how policies are affecting you. Email me with any tips or suggestions at [daniel@thenvindy.com](mailto:daniel@thenvindy.com)*

*To get this newsletter in your inbox, [subscribe here](#).*

The end goal is clear: A more efficient and organized regional electric grid.

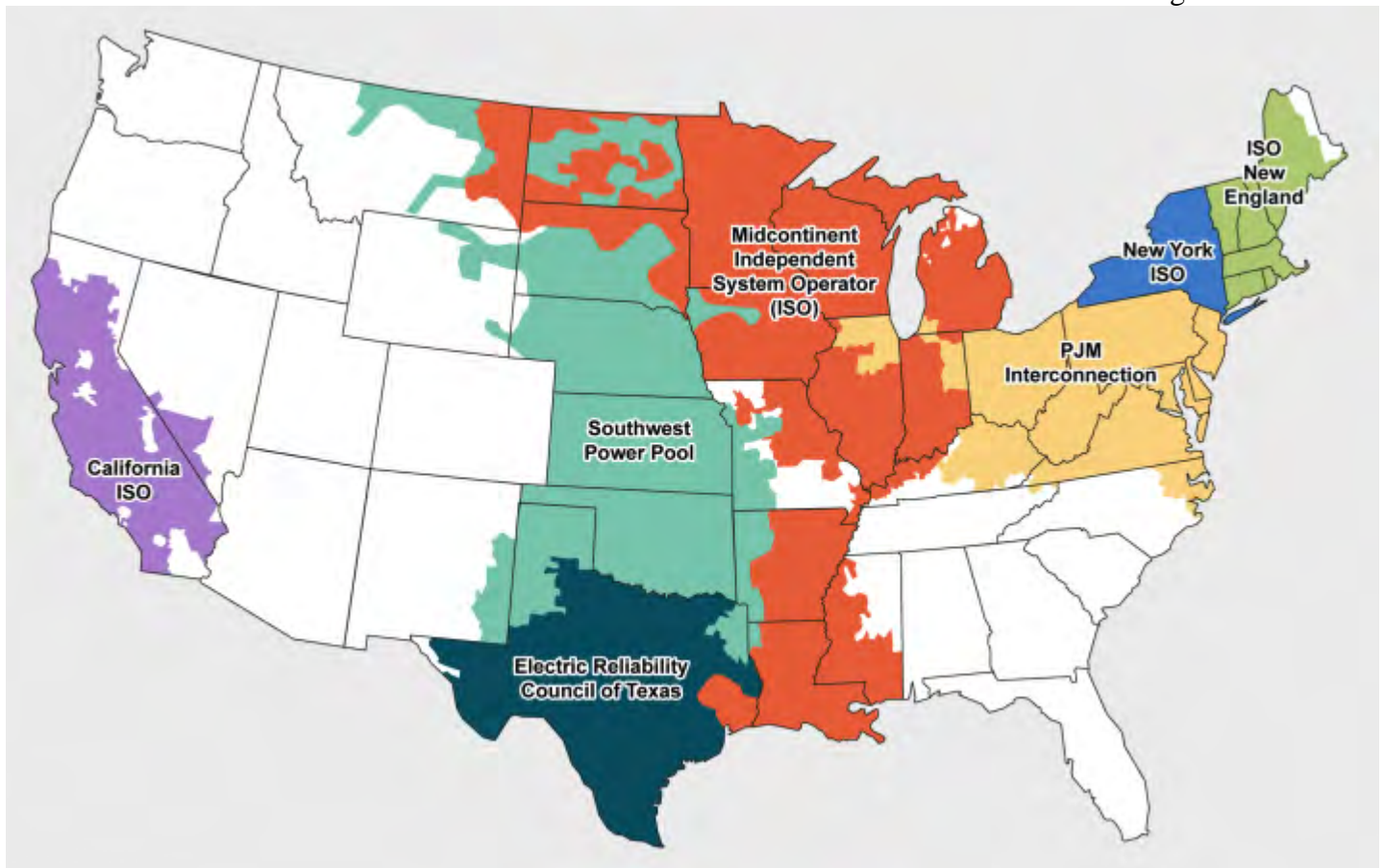
In October, electric utilities representing states across the West announced plans to examine a path forward to do that. The utilities, including NV Energy, [disclosed the formation](#) of an informal working group (the Western Markets Exploratory Group) to explore what a future grid might look like. How would energy sales work across borders? Clean energy policies? Transmission lines?

On the surface, this might seem quite trivial. But the reality is that our electric grid in the West is very complex, sometimes for good reason and sometimes for the worst, in ways that could add costs and undermine national goals of moving away from fossil fuels. Every time the lights go on in a neighborhood, there is an intricate set of systems and transactions that occur behind the scenes to match energy with the demand — and to ship it from Point A to Point B.

In most regions of the United States, the electric grid is organized through what are known as Regional Transmission Organizations (RTO) or Independent System Operators (ISO). Experts [describe these organizations](#), at their core, as platforms that facilitate the sharing of resources — power markets and transmission — across geographical areas. The idea is that, by pooling resources, energy costs go down and resources can be dispatched in a more efficient manner.

Today, if you look at a map, there are two areas that stand out as notable exceptions, lacking a regional organization. The first is the Southeast and the second is the West (California has an ISO that includes a small chunk of Nevada, but by and large, most of our grid is fragmented).





*A map of regional transmission organizations in the United States. (Source: Federal Energy Regulatory Commission/Government Accountability Office)*

It's not fragmented in the sense that everyone is always divided on what to do. In fact, there is a lot of collaboration across the Western grid, especially in the last decade with systems that aim to better distribute power. But it's fragmented in the sense that things remain relatively siloed off.

NV Energy is responsible for balancing power needs and transmission in Nevada. Other utilities or organizations are responsible for this elsewhere in the West. In fact, there are more than 35 decision-makers, or "balancing authorities," that ensure reliability in different parts of the West.

That is the backdrop looming over the effort for regionalization in the West, an effort that has been gaining momentum over the past few years. Last year, both Nevada and Colorado passed legislation directing utilities to join a regional market by 2030. Sen. Chris Brooks (D-Las Vegas) helped write the provision in Nevada as part of an omnibus energy bill in the Senate, [SB448](#).

The provisions in Nevada and Colorado, he said, helped pressure utilities to come to the table through the Western Markets Exploratory Group, in addition to setting up a framework for how to move forward. Brooks is chairing a [task force](#) set up through the legislation. Its aim will be to identify Nevada's priorities and look at different options for joining a regional electric market.

"It really all boils down to governance," Brooks said. "We as a state have carbon goals that might be different from other states. We have resources that are definitely different from other Western states.

And we have a [demand] profile that is different from other Western states.”

But, Brooks argued, there is a recognition that regionalization could benefit all states through lower rates for consumers, better distribution of renewable resources and greater grid reliability.

The big sticking point: Getting there is complex, with many layers of government involved.

States might be directing utilities to join a regional market. But investor-owned utilities are the ones discussing what that would look like through their informal Western Markets Exploratory Group. Then there are state regulators that oversee those utilities; their mandate is to balance the interests of customers and shareholders. They might be reticent about giving up control.

At the same time, governors and lawmakers across the West approach energy through different lenses: Some are more focused on climate change goals than others. There are also existing contractual regional efforts and relationships already in place to distribute power across the grid. How do those fit into this? Finally, federal regulators will have to approve of a regional market.

Discussions in Nevada and elsewhere are looking at all of that (there is a seemingly endless list of interstate working groups, with lengthy acronyms, that are studying what might work best).

“The key is really letting states continue to set their own energy policy,” said Sarah Steinberg, an analyst with Advanced Energy Economy, an association of businesses supporting clean energy. “All Western states want to maintain independence but want low-cost reliable energy.”

Steinberg argued that a regional market could be a way of getting more low-cost energy in a way that also helps states, such as Nevada, meet their renewable goals. A common example: In a more regional market, Nevada might not have to burn fossil fuels and turn on a natural gas plant when demand peaks but could instead import renewable power from elsewhere.

The question is how to get there from a structural standpoint. An effective regional market would mean putting at least some authority in the hands of a regional operator. Instead of having many decision-makers (the current situation), you would have an operator taking a more regional approach to balancing energy needs and delivering the necessary power to customers.

What does that look like? How do you achieve the benefits of regionalization without losing the autonomy that comes with running separate grid systems? And who will this operator be?

David Bobzien, the director of the Governor’s Office of Energy, said it will be important for the task force to take up these issues. But he sees Nevada as a central node in a regional market.

“That's ultimately the question before us,” Bobzien said this week. “[The task force is] a strong opportunity for Nevada to chart its own destiny with regards to how we answer that question.”

For a long time, there was one primary contender to operate a regional market: The California Independent System Operator (CAISO). Already, it manages about a third of the electric load that runs



through the region, [according to its website](#). It also has spearheaded regional efforts to better balance power between utilities. NV Energy and others participate in what is known as the Electric Imbalance Market (EIM). It helps utilities [locate lower-cost power across the grid](#).

NV Energy has been participating in the program since 2015 (the utility says it has benefited its customers to the tune of \$151 million over that time) and it is open to a broader regional market.

“NV Energy is supportive of coordinated regional planning and markets,” Jennifer Schuricht, a spokesperson for the state’s largest utility, said in a statement on Wednesday. “NV Energy is actively participating in or monitoring several regional coordination efforts in the West.”

But there have long been concerned about how CAISO is governed and whether its current structure would allow for other utilities to have an equitable say in policy. And others are eyeing the Western market. The Southwest Power Pool (SPP), a regional transmission organization serving the midcontinent, is also looking to expand West with an imbalance market, similar to the EIM, to help utilities locate low-cost power. SPP is also looking at [creating an organized Western market](#), with a [“Markets+” option](#) that would allow utilities to retain some control.

At the same time, regional utilities are taking additional steps toward collaboration, even outside the context of a formal market: They are working to coordinate transmission planning, according to a Federal Energy Regulatory Order, and they are looking at coordinating the way in which they measure resource adequacy, a term that describes the ability to meet customer demand.

“I think there is more momentum in the West to do something than there ever has been in the past,” Brooks said in a phone interview on Wednesday. “I think the options have multiplied, and that creates a higher level of complexity of what [a regional market] looks like.”

One of the focuses of the task force will be how to integrate the state’s climate goals with a regional market. Cameron Dyer, a senior attorney with Western Resource Advocates, said a future regional market would only work with a thorough greenhouse gas accounting system. He noted that his group recently published a white paper [looking at how to account for emissions](#).

“One of our main interests is greenhouse gas emission reductions,” Dyer said. “What we see an RTO being able to do is give states within its footprint an opportunity to go faster and farther.”

*Hoover Dam  
on Thursday,  
July 15, 2021.*

*The dam  
holds back  
Lake Mead.  
Over the  
summer, the  
reservoir  
dropped to  
its lowest  
level since it  
was filled.  
(Jeff  
Scheid/The  
Nevada  
Independent)*

*Here's what else I'm watching this week:*

## WATER

**“It’s important to focus on what’s going out of Lake Mead, because that has the greatest impact on the [Colorado River] system.”** [Good in-depth overview](#) from the Water Education Foundation on some of the governance dynamics around current Colorado River negotiations.

- *Aspen Journalism’s* Heather Sackett [looks at how](#) record-low reservoir conditions on the Colorado River **set up the conditions that enabled policymakers to quickly develop a management plan**, building off of policy that had been considered for a long time.

“A federal agency’s preliminary determination that a proposed water pipeline in southwest Utah would have minimal effects on Nevada has some water activists and hydrologists crying foul,” the [Las Vegas Sun’s Jessica Hill writes](#) about a **proposed 50-mile pipeline from Pine Valley in western Utah to Cedar City**. Groundwater pumping in Pine Valley, a groundwater aquifer that is near the Great Basin National Park, could have an impact in Nevada, activists argue.

**Coming up:** A workshop series focused on drought in Nevada [begins next week](#).

## ENERGY

Many states are **pursuing nuclear power to cut greenhouse emissions**. From an [Associated Press story](#) by Jennifer McDermott this week: “Nevada officials don’t consider nuclear power a viable option because of the failed plan to store the nation’s commercial spent nuclear fuel at Yucca Mountain. Instead, they see potential for energy storage and geothermal energy.”

- In a tiny Wyoming town, **Bill Gates bets big on nuclear power**. ([Associated Press](#))

**Could Congress boost geothermal?** *POLITICO*'s Jonathan Custodio [talked with](#) Nevada officials about federal efforts to boost the geothermal industry. The infrastructure bill included \$84 million for demonstration projects, the story notes. Geothermal could also get a boost from a renewable tax incentive provision in President Joe Biden's proposed Build Back Better plan.

Burning Man is **pushing back against a geothermal exploration project** that could add two power plants near the town of Gerlach and the Black Rock Desert, where the festival is held. *The Reno Gazette Journal*'s Jenny Kane [has the story](#), and here's a [link to more documents](#).

- Pilot project aims to **convert oil wells into geothermal producers** ([Think Geoenergy](#))

"An **NV Energy program to expand solar access** to low-income Nevadans and disadvantaged businesses is off to a solid start, a program administrator says, and is expected to continue to grow in coming years," April Corbin Girnus [reports for The Nevada Current](#).

## MINING

"The Nevada Mining Association is **asking state officials to tweak proposed regulations** implementing a new tax on gold and silver mining, including changing the title and ensuring it won't be applied retroactively," my colleague Riley Snyder [reported last week](#).

**AngloGold eyes Nevada mines:** "South Africa's AngloGold Ashanti (NYSE: AU) (JSE: ANG) expects to start producing gold in Nevada, US, by 2025 at the latest, as the company officially took over Canada's Corvus Gold (TSX, NASDAQ: KOR) on Tuesday," [Mining.com reports](#).

i-80 Gold Corp. looks to be **a top Nevada gold producer**, [Elko Daily Free Press reports](#).

*The Nevada Independent is a 501(c)3 nonprofit news organization. We are committed to transparency and disclose all our donors. The following people or entities mentioned in this article are financial supporters of our work:*

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- Nevada Mining Association – \$21,500
- Jennifer Schuricht – \$1,400
- Chris Brooks – \$700
- David Bobzien – \$246



**Daniel Rothberg**

Daniel Rothberg is a staff reporter covering water, climate change and public land.



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## News Releases

### **WQA warns of door-to-door water testing scams**

#### ***Tests for water hardness do not reveal pollution or contamination***

**LISLE, Ill. (Jan. 19, 2022)** – The Water Quality Association says homeowners should be aware of possible scams involving door-to-door salespersons who offer free water tests and then claim the water hardness tests instead show the water is unsafe to drink. A recent incident involves a homeowner in Titusville, FL, who said she was persuaded to buy an expensive water filtration system after such a test was conducted in her home.

“This test, which is called a precipitation test, measures the level of hardness in the drinking water and is very effective when used for that purpose. But it does not show pollution or indicate a health concern,” said WQA Technical Affairs Director Eric Yeggy. This test uses chemicals or electricity to cause the hardness minerals in the water to turn color, generally a very dark brown or blackish color, Yeggy explained.

“If someone tries to convince you that [the dark color of the water] is a sign of pollution or dangerous chemicals in your water, then you're dealing with someone who's either unethical or does not know what they're talking about,” said Yeggy. “This test is a very simple and reliable way to determine the level of hardness of your water.”

WQA recommends homeowners have their water tested by a water treatment professional or a [certified lab](https://www.epa.gov/dwlabcert/contact-information-certification-programs-and-certified-laboratories-drinking-water) (<https://www.epa.gov/dwlabcert/contact-information-certification-programs-and-certified-laboratories-drinking-water>). WQA members in your area who have agreed to abide by a strict Code of Ethics which forbids the use of unethical and misleading sales tactics can be found using [WQA's Find Water Treatment Providers tool](http://www.wqa.org/nd-providers) (<http://www.wqa.org/nd-providers>). The Association offers other suggestions for finding reputable water treatment professionals [on its website](https://www.wqa.org/Improve-Your-Water/Solutions/Finding-the-Right-People) (<https://www.wqa.org/Improve-Your-Water/Solutions/Finding-the-Right-People>).

In addition, WQA recommends treatment products that have been tested and certified to industry standards. Consumers can visit WQA's product certification listings (<https://www.wqa.org/Find-Products#/keyword/?standards=26>) to search WQA's database of certified products.

*WQA is a not-for-profit trade association (<https://www.wqa.org/membership>), representing the residential, commercial, and industrial water treatment industry. WQA's education and professional certification programs (<https://www.wqa.org/profcert>) have been providing industry-standardized training and credentialing since 1977. The WQA Gold Seal certification program (<https://www.wqa.org/product-cert>) has been certifying products that contribute to the safe consumption of water since 1959. The WQA Gold Seal program is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC). WQA publishes a consumer-friendly website, BetterWaterToday.org ([le://wqa.local/FILE/Marketing%20and%20Communications/News%20Releases/2021%20releases/bettterwatertoday.org](http://le://wqa.local/FILE/Marketing%20and%20Communications/News%20Releases/2021%20releases/bettterwatertoday.org)).*

**wqa.org**

###

**Resources (<https://www.wqa.org/programs-services/member-resources>)**



AUDIO

## Runoff from land scarred by wild res can contaminate drinking water

*Fort Collins, Colorado, was forced to adjust its water treatment system to cope with polluted water.*

by YCC TEAM  
JANUARY 21, 2022

*Reporting credit: ChavoBart Digital Media*



(Photo credit: A. Torres, USDA / [CC BY 2.0](#))

Increasingly extreme wildfires are raging across the West – leaving behind barren, charred areas and threatening drinking water.

Jill Oropeza is director of sciences for water quality services for Fort Collins Utilities in Colorado. She says in a healthy forest, trees and shrubs buffer the impact of rain on the ground. Pine needles and detritus on the forest floor help retain water.

“That is the sponge that soaks up and holds a lot of that moisture and allows the precipitation to percolate downwards,” she says.

If this vegetation burns up, melting snow and rain run across the land instead of seeping into the soil. And as the water flows, **it picks up ash, sediment, and other debris.**

“And those substances in the soil itself and the ash are dissolved and carried in the river and into reservoirs,” Oropeza says.

She says Fort Collins was forced to adjust its water treatment system to cope with influxes of contaminated water. And it’s using helicopters to spread mulch in burned areas to help plants start growing again.

Doing so is expensive but critical to providing people with clean water as the climate warms.



**UN report: The world's farms stretched to 'a breaking point'**



**How solar farms could do double duty**

**California city finds a creative way to conserve water**





**NEWS**

# Dry January for Reno as city on pace to receive no measurable precipitation



**Amy Alonzo**

Reno Gazette Journal

Published 3:24 p.m. PT Jan. 25, 2022

Longing for a rainy afternoon at home watching movies or some fresh snow in the hills for sledding? You'll have to keep waiting.

Reno is on pace to receive no measurable precipitation in the first month of 2022. If the month does remain dry, it will be the first time in recorded history, dating to 1893, that the city received zero precipitation for January.

In 1966, just a trace of rain was recorded, and in 1991, just 0.01 inches were measured.

But the last measurable precipitation recorded in Reno was on Dec. 29, and the next several days look dry as well, according to National Weather Service predictions.

There is a chance of a small system moving in next week, but it's unclear if and when it will reach Reno. If it does reach Reno, it likely won't come before the last day of the month.

"Either way you look at it, it's going to go down as a dry January," according to meteorologist Scott McGuire.

And it's not just dry in Reno.

According to the National Weather Service, Tahoe City is wrapping up its third-driest January on record, with just 0.17 inches of moisture recorded this month. The driest January for the city was 2015, when just 0.03 inches of moisture was measured.

This year's dry January is especially notable following the epic storms that battered the region in late December.

"We've had whiplash from wet to dry," said Dan McEvoy, regional climatologist at the Western Regional Climate Center.

But it's not the first time the region has been caught in a drastic wet-dry cycle.

In both 2011 and 2013, exceptionally wet starts to the water years were followed by extremely dry Januaries.

In 2011, a La Nina year, storms picked up again in February. In 2013, the dry spell continued.

This year is a La Nina year, and climatologists are hoping precipitation will pick back up in February.

"Those long dry spells are hard to get through in the Sierra, but they are fairly common," McEvoy said.

But the dry stretch isn't helping the Western drought.

The 2020 water year was well below average and 2021 was the second-driest year on record for both California and Nevada, McEvoy said.

According to National Weather Service's Sacramento office, the northern Sierra's snow water content – the amount of runoff the region can expect to see during the spring melt – is still at 113 percent of normal and the central Sierra is at 109 percent. The numbers are still above average but not up at the 200 percent of normal they were at the start of the month.

"The next month is going to be critical," McEvoy said.

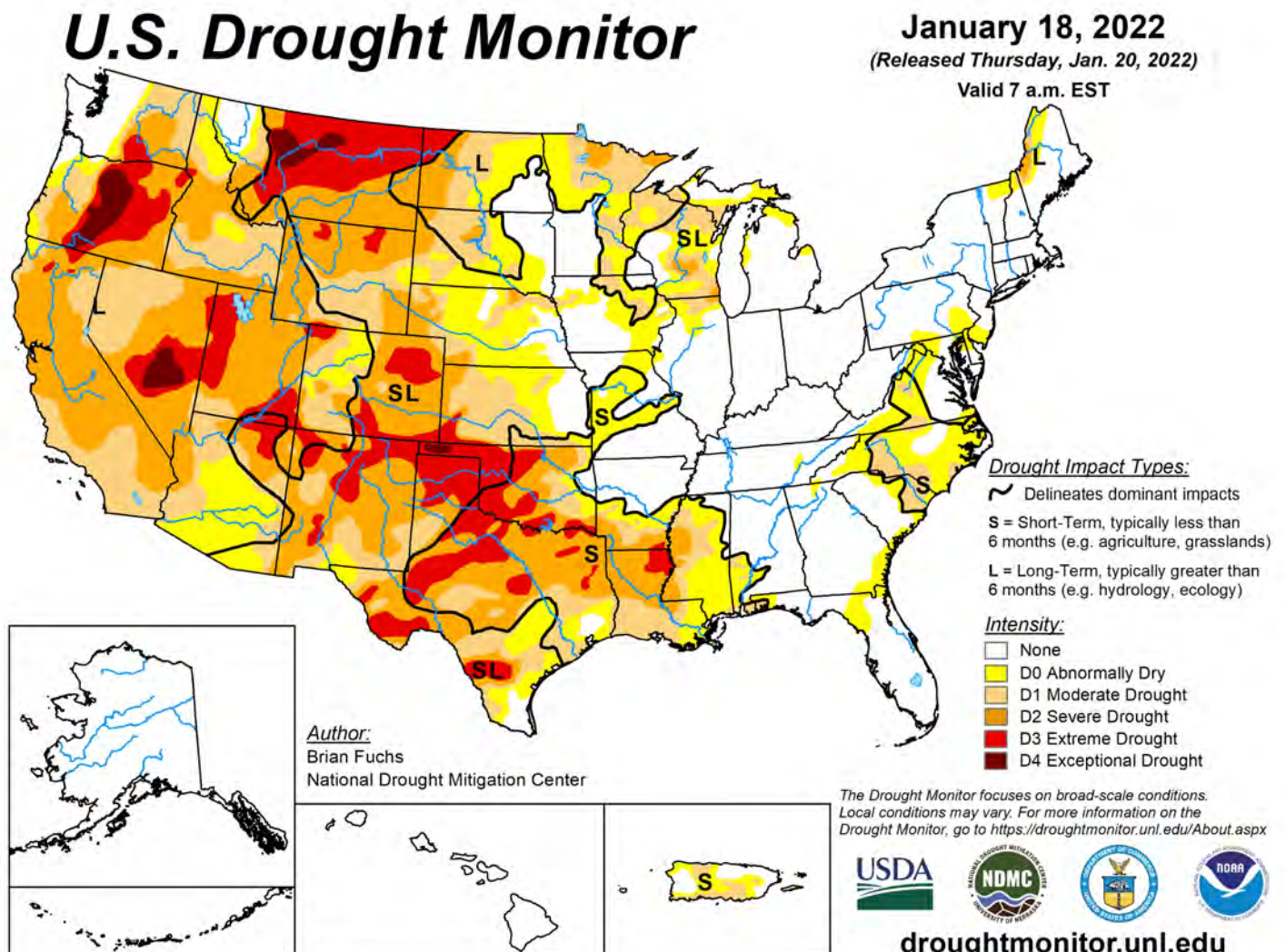
*Amy Alonzo covers the outdoors, recreation and environment for Nevada and Lake Tahoe. Reach her at [aalonzo@gannett.com](mailto:aalonzo@gannett.com). Here's how you can support ongoing coverage and local journalism.*



## Five Facts About the United States Drought Monitor

By Ciji Taylor, USDA, in cooperation with the National Drought Mitigation Center · Jan 26, 2022

This is likely no surprise to you, but drought persists across the western U.S. and is intensifying in some areas. No geographic area is immune to the potential of drought at any given time. The [U.S. Drought Monitor](https://droughtmonitor.unl.edu/) (<https://droughtmonitor.unl.edu/>) provides a weekly drought assessment, and it plays an important role in USDA programs that help farmers and ranchers recover from drought.



**Fact #1 - Numerous agencies use the Drought Monitor to inform drought-related decisions.**

The map identifies areas of drought and labels them by intensity on a weekly basis. It categorizes the entire country as being in one of six levels of drought. The first two, None and Abnormally Dry (D0), are not considered to be drought. The next four describe increasing levels of drought: Moderate (D1), Severe (D2), Extreme (D3) and Exceptional (D4).

While many entities consult the Drought Monitor for drought information, drought declarations are made by federal, [state](https://drought.unl.edu/droughtplanning/infobystate.aspx) (<https://drought.unl.edu/droughtplanning/infobystate.aspx>) and local agencies that may or may not use the Drought Monitor to inform their decisions. Some of the ways USDA uses it to determine a producer's eligibility for certain [drought assistance programs](https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/index) (<https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/index>), like the [Livestock Forage Disaster Program](https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/livestock-forage/index) (<https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/livestock-forage/index>) and [Emergency Haying or Grazing on Conservation Reserve Program acres](https://www.fsa.usda.gov/assets/usda-fsa-public/usdafiles/factsheets/crp_haying_grazing_factsheet.pdf) ([https://www.fsa.usda.gov/assets/usda-fsa-public/usdafiles/factsheets/crp\\_haying\\_grazing\\_factsheet.pdf](https://www.fsa.usda.gov/assets/usda-fsa-public/usdafiles/factsheets/crp_haying_grazing_factsheet.pdf)) and to "fast-track" [Secretarial drought disaster designations](https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/disaster-designation-information/index) (<https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/disaster-designation-information/index>).

**Fact #2 - U.S. Drought Monitor is made with more than precipitation data.**

When you think about drought, you probably think about water, or the lack of it. Precipitation plays a major role in the creation of the Drought Monitor, but the map's author considers [numerous indicators](https://www.droughtmanagement.info/find/guidelines-tools/handbook-drought-indicators-and-indices/) (<https://www.droughtmanagement.info/find/guidelines-tools/handbook-drought-indicators-and-indices/>), including [drought impacts](https://droughtimpacts.unl.edu/) (<https://droughtimpacts.unl.edu/>) and local insight from over 450 expert observers around the country. Authors use several dozen indicators to assess drought, including precipitation, streamflow, reservoir levels, temperature and evaporative demand, soil moisture and vegetation health. Because the drought monitor depicts both short and long-term drought conditions, the authors must look at data for multiple timeframes. The final map produced each week represents a summary of the story being told by all the pieces of data. To help tell that story, authors don't just look at data. They converse over the course of the map-making week with experts across the country and draw information about drought impacts from media reports and private citizens.

**Fact #3 - A real person, using real data, updates the map.**

Each week's map author, not a computer, processes and analyzes data to update the drought monitor. The [map authors](https://droughtmonitor.unl.edu/about/contactus.aspx) (<https://droughtmonitor.unl.edu/about/contactus.aspx>) are trained climatologists or meteorologists from the National Drought Mitigation Center at the University of Nebraska-Lincoln (the academic partner and website host of the Drought Monitor), the National Oceanic and Atmospheric Administration and USDA. The author's job is to do what a computer can't – use their expertise to reconcile the sometimes-conflicting stories told by each stream of data into a single assessment.

**Fact #4 - The Drought Monitor provides a current snapshot, not a forecast.**

The Drought Monitor is a "snapshot" of conditions observed during the most recent week and builds off the previous week's map. The map is released on Thursdays and depicts conditions based on data for the week that ended the preceding Tuesday. Rain that falls on the Wednesday just before the USDM's release won't be reflected until the next map is published. This provides a consistent, week-to-week product and gives the author a window to assess the data and come up with a final map.

**Fact #5 - Your input can be part of the drought-monitoring process.**

State climatologists and other trained observers in the drought monitoring network relay on-the-ground information from numerous sources to the US Drought monitor author each week. That can include information that you contribute.

The Drought Monitor serves as a trigger for multiple forms of federal disaster relief for agricultural producers, and sometimes producers contact the author to suggest that drought conditions in their area are worse than what the



latest drought monitor shows. When the author gets a call like that, it prompts them to look closely at all available data for that area, to see whether measurements of precipitation, temperature, soil moisture and other indicators corroborate producer-submitted reports. This is the process that authors follow whether they receive one report or one hundred reports, although reports from more points may help state officials and others know where to look for impacts.

There are multiple ways to contribute your observations:

1. **Talk to your state climatologist** – Find the current list at the [American Association of State Climatologists](https://stateclimate.org/) (<https://stateclimate.org/>) website.
2. **Email** – Emails sent to [droughtmonitor@unl.edu](mailto:droughtmonitor@unl.edu) inform the USDM authors.
3. **Become a CoCoRaHS observer** – Submit drought reports along with daily precipitation observations to the [Community Collaborative Rain, Hail & Snow Network](https://www.cocorahs.org/) (<https://www.cocorahs.org/>) .
4. **Submit Condition Monitoring Observer Reports (CMOR)** – [go.unl.edu/CMOR](https://survey123.arcgis.com/share/ff127a29aa23413c9cd2d9e8176c4669?open=menu) (<https://survey123.arcgis.com/share/ff127a29aa23413c9cd2d9e8176c4669?open=menu>) .

For more information, read our [Ask the Expert blog with a NDMC climatologist](https://www.farmers.gov/blog/disaster-planning-and-assistance/ask-expert-understanding-us-drought-monitor-qa-brian-fuchs) (<https://www.farmers.gov/blog/disaster-planning-and-assistance/ask-expert-understanding-us-drought-monitor-qa-brian-fuchs>) or visit [farmers.gov/protection-recovery](https://www.farmers.gov/protection-recovery) (<https://www.farmers.gov/protection-recovery>) .

[Ciji Taylor](mailto:ciji.taylor@usda.gov) (<mailto:ciji.taylor@usda.gov>) is a USDA public affairs specialist

Farm Service Agency

Natural Resources Conservation Service

Risk Management Agency

# Tahoe Regional Planning Agency approves Tahoe Keys Control Methods Test

Jan 26, 2022:



LAKE TAHOE, CA/NV — Today, the Tahoe Regional Planning Agency (TRPA) Governing Board voted unanimously to certify the Final Environmental Impact Statement and approve the *Tahoe Keys Lagoons Aquatic Weed Control Methods Test Project*. Following the Lahontan Water Quality Control Board's January 13th unanimous vote to approve the project, TRPA's decision clears the way for a range of proven and innovative weed control methods to be tested in targeted areas within the Tahoe Keys, located on the Lake's south shore.

"TRPA and the Lahontan Water Board's unanimous decisions highlight the strong scientific basis for the project's methods, monitoring and safeguards for Tahoe's natural environment," said Darcie Goodman Collins, PhD, CEO of the League to Save Lake Tahoe (Keep Tahoe Blue). "This test will provide essential information for developing a long-term strategy to address the Tahoe Keys infestation and stop its spread to Lake Tahoe."

Aquatic invasive species are recognized as the most pressing threat to the ecological health and beauty of Lake Tahoe. The Tahoe Keys are ground zero for the infestation of aquatic invasive weeds in the Basin, which has spread beyond the Keys' shallow lagoons, infecting more than 100 acres of the Lake itself. The *Control Methods Test* was designed to identify safe, effective methods to knock back the infestation in the Keys so it can be contained, minimizing the threat to the rest of the Lake.

"Environmental study shows that continuing with the status quo, and not testing possible solutions, would result in the worst harm to Lake Tahoe's water quality," said Jesse Patterson, the League's Chief Strategy Officer. "For 65 years, the League has worked to protect water quality, which means tackling the Keys' infestation is our priority."

For nearly a decade, the League to Save Lake Tahoe has taken a leadership role in efforts to address the invasive species problem in the Tahoe Keys, which includes helping develop, fund and implement innovative technologies. The Tahoe Keys Property Owners Association and TRPA have also dedicated years to the effort and invited the community to get involved, improving the proposed project along the way. The League is a strong supporter of the *Control Methods Test*, relying on the best available science, results from their pilot projects, and investigations into emerging methods to guide their position.

"We will monitor the project closely and raise a red flag if the health of the Lake or those who enjoy it is ever in question," said the League's Goodman Collins. "We'll also continue using our full set of tools to keep weeds contained in the Keys, and knock back infestations that pop up in the Lake."

###

**Media resources:** Photos

(<https://drive.google.com/drive/folders/1tbnLrg915v71y2XdmRJlmiG58xcO8cML?usp=sharing>)

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*The League to Save Lake Tahoe, also known by its iconic slogan "Keep Tahoe Blue," is Tahoe's oldest and largest nonprofit environmental advocacy organization. Our team of solutions-oriented Tahoe advocates use innovation, boots-on-the-ground action, and a holistic approach to solve the environmental challenges threatening the lake we love. In our 65th year, we continue pushing to Keep Tahoe Blue in an ever-changing world. Learn more at [keptahoeblue.org](https://www.keeptahoeblue.org).*



# Lower basin states unveil new water plan to bolster levels in Lake Mead

Aspen Public Radio | By [Halle Zander](#)

Published January 26, 2022 at 7:17 PM MST



*Heather Sackett / Aspen Journalism*

The famous “bathtub ring” surrounding Lake Mead shows the declining water levels in the reservoir in December 2021. Using the 500+ Plan, the lower basin states are aiming to save water in the reservoir.

Lake Mead, in southern Nevada, saw extremely low levels of water in 2021.

And so the lower basin states of California, Nevada, and Arizona developed a plan to address the diminishing in ow from the Colorado River.

It’s called the 500+ Plan.

The title refers to the goal of saving 500,000 acre-feet of water per year in Lake Mead.

And the plan is fully funded after just four months of discussions.

Aspen Journalism Managing Editor Heather Sackett recently [wrote](#) an article about the 500+ Plan. She also references a recent white paper that examined the window that water managers now have to come up with innovative solutions.

Aspen Public Radio reporter Halle Zander sat down with Sackett to discuss the plan and how it compares to conservation programs in Colorado and other upper basin states.



**Halle Zander**

Born and raised in Nashville, Tennessee, Halle grew up among the Appalachian mountains. She traveled to California to study environmental analysis at Pitzer College and then moved to Colorado.

[See stories by Halle Zander](#)



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# Kleinschmidt Awarded Orr Ditch Hydroelectric Project with Truckee Meadows Water Authority

NEWS PROVIDED BY

Kleinschmidt Associates (<https://www.einpresswire.com/sources/u440120>)

January 27, 2022, 16:00 GMT

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*Water Authority Generates Renewable Hydropower to Power Reno's Primary Water Treatment facility*

PORTLAND, OR, USA, January 27, 2022 /EINPresswire.com (<http://www.einpresswire.com/>)

-- Kleinschmidt Associates, an engineering, regulatory, and environmental consulting





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Truckee Meadows Water Authority

Orr Ditch Project, Reno, Nevada

**Not only will this project provide for a reduction in annual energy costs, it will also serve as a clean renewable backup energy source for the water treatment plant.”**

— *BRENT Eisert, TMWA  
Hydroelectric Generation  
Manager*

firm, has been selected by Truckee Meadows Water Authority (TMWA) to provide engineering services to support the Orr Ditch Hydroelectric Project as it moves forward to final design and construction.

For the last four years, TMWA and Kleinschmidt have worked together to study and advance the Orr Ditch Hydroelectric Project that will generate renewable hydropower (<http://www.kleinschmidtgroup.com/>) for use at TMWA’s largest water treatment plant. This project will save TMWA energy costs and

provide clean power to a key part of TMWA’s water treatment and delivery system.

“It’s so exciting to be able to use existing infrastructure to bring renewable hydropower onto the grid efficiently,” says Mike Parker, Engineering Market Leader at Kleinschmidt, “Systems like TMWA’s Orr Ditch Hydroelectric Project are part of a more significant trend of bringing hydropower online at existing nonpowered dams and conduits. These systems can have attractive project economics and have a streamlined permitting process through FERC’s Qualifying Conduit Hydropower Facility program. This combination of great value and simplified development makes this project a great opportunity and long-term value for water authorities and other owners.

Kleinschmidt was first approached by Brent Eisert, TMWA Hydroelectric Generation Manager back in 2018 with the concept of this project. “The project will utilize existing infrastructure and unused canal capacity for driving two new generators located below TMWA’s Chalk Bluff Water Treatment Plant.”, says Eisert, “Kleinschmidt was instrumental with their guidance through the approval process for the Qualifying Conduit Facility program and are continuing as a consultant assisting with the design of the new facility. Not only will this project provide for a reduction in annual energy costs, but it will also serve as a clean renewable backup energy source for the water treatment plant and will help in assuring the Reno-Sparks community a supply of high-quality drinking water.”

The project's final design began in early 2022, with an estimated completion date of late 2023.

#### About Kleinschmidt

Kleinschmidt Associates performs engineering, regulatory and environmental consulting for North American energy companies and government agencies who strive to protect and enhance the natural environment without compromising performance. We work at the intersection of regulatory requirements, environmental science, and engineering solutions to achieve our client’s objectives. For over half a century, Kleinschmidt has continually delivered new ideas that offer practical solutions to tough problems and sensitive issues. Our goal is to bring energy, water, and the environment into balance so future generations will thrive.

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[Reno News & Review](#)  
[January 28 at 4:35 PM](#)

Kayakers, rafters and others want the ruins of the Ambrose Dam removed from the Truckee River. They must first navigate bureaucratic obstacles. <https://loom.ly/498zzRc>

### GROUPS WANT DERELICT DAMS REMOVED AFTER 100 YEARS AS A TRUCKEE RIVER HAZZARD

A Truckee River irrigation dam at Ambrose Park that was operative for only two years has been a hazard to river users for a century.

Kayakers, rafters and government agencies are getting together to facilitate removal of the concrete and steel ruins, a project that would cost about \$500,000. First, advocates of the plan have to navigate a patchwork of local, state and federal stakeholders.

So many agencies have a say on what happens along the river,” said Charles Albright, a kayaker and advocate for the Truckee River. “The first step is to get all the agencies and groups talking and getting everyone on board. Then we’ll have to get the money and the permit.”

The City of Reno, Washoe County, state departments and commissions, irrigation groups, a public utility, the U.S. Army Corps of Engineers and others hold sway over decisions affecting the river. Although a 2001 Truckee River planning document recommended the Ambrose Dam be removed, no action has been taken since. In the meantime, the concrete blocks and twisted iron rebar have been hazards to navigation, Albright said.

The massive blocks cross the river like giant stepping stones and water craft go between the obstacles.

## Hazard to navigation

Experienced kayakers usually can navigate the ruins without getting in trouble, Albright said, but many river users are novice rafters or adults and children who just grab an inner tube and start floating down the stream. Often, he said, rafters and tubers tie their floating devices together. When they reach the concrete blocks, one tube may go to one side of a block and another tube to the otherside, with the rope hanging up on the concrete.

James Leonesio, a Reno firefighter who has been a part of the Swift Boat Rescue Team for 20 years, said river rescues are common in the spring and summer. In 2017, which was a high-water year, the team responded to 123 calls for river rescues. he said, The Ambrose Dam, he said, “is definately a hazard.

“People get hung up and trapped in the middle of the river,” he said. “Younger kids pop their inner tubes, panic and then we have to go out in the water to get them... A lot of kids go floating down the Truckee; this (dam) could be a death trap.”



**The derelict Ambrose Dam on the Truckee River is on the west side of Ambrose Park.**

## **Built in 1918**

The Ambrose Dam was built in 1918 to divert water into an irrigation ditch. But the river undermined the structure in less than two years, rendering the dam useless. The wooden gates of the dam have long been swept away, leaving the concrete and steel portions standing like columns across the Truckee. Kayakers can paddle between the obstacles, but rafters and tubers have a tougher time avoiding the concrete blocks and rebar.

“Man-made obstacles are always a problem.” Said Theresa Lorejo-Simsiman of American Whitewater. “You just don’t know what’s under the water.”

While river groups and agencies favor the removal of the dam, there’s been some push-back from residents who use the deeper water near the structure as a swimming hole.

“And it is a good swimming hole, but it’s also dangerous,” Albright said. “There are a lot of sharp edges out there.”



 JANUARY 31, 2022

# Among Winter Olympic cities, Tahoe will soon be too warm to host

by Lisa M. Krieger



Credit: Pixabay/CC0 Public Domain

Towering Squaw Peak has groomed generations of America's most elite winter Olympians, from racer Tamara McKinney and freestylist Jonny Mosely to six members of this year's Alpine Team U.S..

But Lake Tahoe's snow will be too patchy and too wet to host future Winter Olympic Games, according to a new analysis, dashing hopes of repeating the 1960 honor that built the region into a powerhouse of winter sports.

Because of climate change, the resort—formerly Squaw Valley but now named Palisades Tahoe—is no longer a dependable site for the Games, with the risk of scant and soggy snow during more than half of February, according to an international team of researchers led by the University of Waterloo in Canada.

With continued high emissions, by mid-century the Olympics will be too hot to handle for the resort. And estimated 50% to 89% of its February days will have insufficient or wet snow and 25% to 50% of days will be too rainy or warm for competition. By 2080, it will be unreliable nearly 90% of the month.

"It is one of the more vulnerable locations to climate change," said Waterloo researcher Natalie Knowles, a former Truckee resident and ski racer who now investigates the impact of global warming on winter sports.

Without a rapid shift away from burning fossil fuels, "things are extremely unreliable—in terms of having the right snow, the right weather," she said. "There's an inconsistency that's difficult to compete on."

The report comes just as the world prepares for the 2022 Winter Olympics in Beijing, starting Feb. 4. It will be the first Winter Games to use almost entirely artificial snow. Snowmaking is becoming as much of an Olympic tradition as gold medals: In 2014, 80% of the snow in Sochi, Russia, was manufactured; four years later, that rose to 90% at South Korea's Pyeongchang Games.

But even artificial snow isn't enough to save sites, like Palisades Tahoe, that will be too warm. And the storied history of other Olympic sites—including France's Chamonix and Austria's Innsbruck—also appears to be coming to a close, the report concluded.

By the end of the century, if the pace of global warming continues, only one former host venue—the mountainous northern Japanese city of Sapporo—will have enough snow to host the Winter Games.

However, if the Paris Climate Agreement emission targets can be achieved, the number of reliable host cities jumps to eight: Salt Lake City, Lake Placid, Vancouver, Calgary, Lillehammer, Oslo, Nagano and Sapporo.

Using climate data from previous Winter Games locations and applying climate-change models to predict future winter weather conditions, the team found that the average February daytime temperature of host cities has steadily increased—from 32.7 °F in the 1920s until the 1950s, to 43.3°F in the first half of this century, including in Beijing. It takes the perfect mix of cool temperatures and moisture-rich air to create a natural snowstorm.

Using this data, the team assessed the likelihood that each site would have below-freezing nighttime temperatures and at least a foot of snow, either natural or manmade.

Once planned, the Olympics can't be canceled. But it's hard to deploy a contingency plan. In 1980, Lake Placid staffers shoveled truckloads of snow onto barren cross-country ski trails. Vancouver airlifted buckets of snow on artificial moguls made of hay bales. In the southern Russia resort city of Sochi, , skiers landed in puddles. Even at Lake Tahoe, desperate organizers faced with dry slopes before the 1960 games brought in Native Americans to perform snow dances and a snow seeder to pump clouds of silver iodide particles into the sky—before a storm delivered 7 feet of powder, just in time.

Moreover, unreliable conditions aren't safe or fair for athletes competing in outdoor events.

Off-course downhill skiers, who approach speeds of 100 miles per hour, may hit rocks, grass or trees. Big air snowboarders could descend from the sky into dangerous "bomb holes." Swings in temperature would make a slalom course unfair—either fast and icy, or slow and slushy, depending on the skier's time slot.

Climate change is often blamed for wildfires, flooding, mudslides and hurricanes. But it also threatens a sporting culture that defines winter life.

In the future, ice skating may have fewer Wayne Gretskys. As average temperatures continue to rise, the cities of Boston, Chicago, Detroit, Montreal, New York and Toronto could lose up to one-third of their current outdoor skating days, according to a National Hockey League and RinkWatch analysis of climate models and data.

For alpine climbing, a shrinking season means more people on fewer routes. Traversing a glacier is more treacherous, as crevices widen. Frequent freeze-and-thaw cycles pry away loose rocks, triggering debris falls. And when ice sheets melt and shift, they trigger avalanches. We may lose some iconic routes.

The American ski season shrunk by an average of 34 days between 1982 and 2016 and levels of snow cover saw an average drop of 41%, according to a study in the journal *Geophysical Research Letters*. February—winter's apex, the Olympics month—may be less reliable.

For Olympic organizers, "the risk of hosting an event, with scheduled events within two weeks, is much more difficult," said Knowles.

Reminders of Squaw Valley's 1960 Games still shine at the resort, with the Olympic flame burning at the base of Squaw Valley Road and Olympic rings greeting all who drive into the village.

With 6,600 skiable acres and more than 270 trails, it continues to inspire. Future Olympians practice 100-gate slaloms down Red Dog Face, build endurance on 3.2-mile Mountain Run and hone their balance on the resort's vast off-piste terrain.

To cope with climate change, the resort is investing in new snow-making technologies that make snow at warmer temperatures. It is also taking steps to reduce emissions on the mountain, such as a transit system to reduce driving and renewable diesel fuels in some of its grooming machines.

"Climate change is on the minds of anybody who loves this sport," said Palisades Tahoe spokesperson Alex Spychalsky. ""Our whole industry relies on being able to access the right conditions."

But as the planet warms, Olympic prospects dim.

"It's unthinkable," said Mike Reitzell, president of Ski California, representing the state's resorts. "As a nation, having the Olympics here is so glorious and unifying. It's hard to imagine that the day may come when we just don't have the capability."

"Change needs to happen faster than what's happening," he said.

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GOVERNMENT

## Truckee Meadows lands bill is being advanced again

By Bob Conrad | January 31, 2022

**T**he Truckee Meadows Lands Bill received a negative reception two years ago when it was brought before the public. That was after years of crafting and various workshops to solicit feedback of what such a bill could entail.

More than 100 people [packed a room in February of 2020](#) at the Reno-Sparks Convention Center to voice concerns, sometimes yelling at government officials. About five people spoke in favor of the proposed bill.

Concerns included lack of water, property allegedly being turned over from federal governments to developers, and impacts on ranching, mining and wildlife. After the meeting, Washoe County officials said they would regroup to consider the feedback.

Then came the pandemic. Public discussion of the bill went on hiatus.

The Economic Development Authority of Western Nevada, in late December however, published a study that pushed for passage of the bill.

Mike Kazmierski of EDAWN said the region is running out of land that can be developed. A lands bill could change that. Last week he issued a call for support of the Truckee Meadows Lands Bill.



Community members gathered in February 2020 to discuss the proposed Truckee Meadows Lands Bill.



The bill would allow for federal land within “disposal boundaries” to be auctioned to the highest bidders. “The main reason for the study was to quantify the need for more land in the region and provide the data needed to support the passage of the Truckee Meadows Public Lands Management Act,” Kazmierski said. “Once approved, the Act will allow for the auction of federal land just east of the C Sparks to increase our land supply, with the proceeds of the sales used to provide resources for park river protection, Lake Tahoe, wetlands and other enhancements to our quality of life.”

Kyle Roerink with the Great Basin Water Network (GBWN), who attended the meeting two years ago and was critical of where it was at the time, expressed skepticism of the renewed interest in a bill.

“Recent records obtained by GBWN demonstrate that politicians and lobbyists have been engaging behind closed doors on this bill for the past year — excluding many of the concerned community members that have been engaged on this public lands sell-off attempt for more than a decade,” he said. “These records also demonstrate that special interests want to sidestep and undermine our bedrock environmental laws.”

The EDAWN study was supported by the City of Reno, Washoe County and the City of Sparks, along with developers and industry groups.

The study had a clear message: “Northern Nevada developers, especially residential, will face challenges in finding desirable parcels to accommodate projects by 2027 if nothing is done to expand regional access to lands, or sooner if the [Bureau of Land Management] fails to release lands as needed.”

*“The region’s most powerful players want to implement the same growth model in Washoe County that Las Vegas has used since the late 1990s. Is this what Washoe really wants?”*

U.S. Senator Jacky Rosen is the lead on the legislation for Nevada’s congressional delegation.

“Senator Rosen’s office is continuing to engage in conversations with local stakeholders to produce updated discussion draft and legislation in the coming months that will build consensus for public lands conservation and smart economic development across Washoe County,” her spokesperson said in an emailed statement.

Sparks Mayor Ed Lawson said he has been regularly talking about the bill since last March and the bill will be submitted in Congress by year’s end.

Lawson said many concerns about the bill from two years ago have been addressed.

“The area of disposal is much smaller,” he said. “We’re asking for less land. There are some strategic places the U.S. Forest Service wants to keep. The BLM wants to keep a couple strategic places. There is an area of environmental concern to the east of Sparks. It’s roughly 10,000 acres. We were not going to touch that.”

Lawson said he hopes that proceeds from the bill can be used for conservation and river preservation projects.

Brain Bonnenfont with the Center for Regional Studies at the University of Nevada, Reno, confirmed land is becoming scarce, and consequently, the price of housing will continue to increase.

“There should be zero doubt that one day greater Reno-Sparks will run out of suitable, privately-owned land for development due to our topographic challenges,” he said. “It is important to note that the [EDAWN] land study focuses on land for detached single-family subdivisions only.

“Yes, there is infill land and a need for attached (‘missing middle’) and multifamily product, but the demand for single-family (detached) product will not end as we grow.”

Bonnenfant added that, regardless of government policies and economic conditions, land will continue to be scarce. As a result, housing and other developments will be increasingly more expensive.

“One way to alleviate the rising costs of housing, outside of bringing more supply, is to obtain vacant federally-owned land where it is cheaper to build,” he said. “The region’s economy and quality of life

enjoy a much higher rate of success if a blueprint for land acquisition and purposing is brought forward now and not when it’s an emergency.”

That’s where the lands bill could come in.

Congressman Mark Amodei, reached by phone today, said he was unaware of the bill’s progress. Getting a lands bill introduced in Congress could take more time due to the upcoming election, he said.

Roerink with the Water Network said any efforts to advance the bill need more input.

“We need leaders to engage in an open, public-stakeholder driven process so there can be frank discussions about the future of our water supply, social infrastructure, economic growth and public services,” he told This Is Reno. “The region’s most powerful players want to implement the same growth model in Washoe County that Las Vegas has used since the late 1990s. Is this what Washoe really wants?”

Similar to the concerns he had two years ago, Roerink said concerns about water availability need to be addressed.

“We are taking a hard look at the state of the Truckee River, regional groundwater trends and storage capacity to help ensure the public has the best understanding of what is happening as it relates to our water supply for the coming decades,” he added. “We need to think about the margin of error as it relates to actual impacts on water, wildlife and other climate change impositions. No officials are talking about that. It is business as usual.”



**Bob Conrad** Publisher & Editor

Bob Conrad is publisher, editor and co-founder of This Is Reno. He has served in communication positions for various state agencies and earned a doctorate from the University of Nevada, Reno in 2011, where he completed a dissertation on social media, journalism and crisis communications. In addition to managing This Is Reno, he holds a part-time appointment for the Mineral County University of Nevada Extension office.

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# Nevada Utilities

## Growth Continues Amid COVID, Cybersecurity Concerns

February 1, 2022 By Chris Sieroty — Comments

A recent cyberattack on the [Delta-Montrose Electric Association \(DMEA\)](#) in Colorado that shut down 90 percent of its internal controls and erased 25 years of historical data is a reminder for Nevada utility companies that bad actors are constantly targeting their infrastructure. It also comes at a time when these companies are experiencing increased demand for service as the state continues to attract new residents and businesses, while drought conditions have led to a new agreement to reduce water consumption from Lake Mead.

DMEA officials said the cyberattack, which began on Nov. 7, 2021, affected internal systems, support systems, payment processing tools, billing platforms, and other customer-facing tools. It also affected the phone and email systems but not the power grid and fiber network. It took the network more than a month to fix the systems affected by the cyberattack and to begin accepting customer payments again.

The attack on DMEA wasn't the first cyberattack on energy infrastructure, and it won't be the last. Executives with Nevada utility companies agreed that the potential impact to their infrastructure from a cyberattack was not just a threat but a reality.

"We are very focused on the threats of a cyberattack," said Doug Cannon, president and CEO of [NVEnergy](#). "We have all seen the media reports. This is a threat we are aware of and take very seriously."



Cannon said the company employs various defenses to protect their grid but declined to comment on the specific tools NVEnergy deploys to protect their infrastructure state-wide. Cybersecurity risks have increased due to bad actors targeting Nevada companies, as well as the ongoing shift to a remote workforce due to the coronavirus pandemic that often leaves companies with less robust security measures in place.

"Cybersecurity is one of the highest issues we have at the moment," said John Hester, president and CEO of [Southwest Gas](#). "We are constantly monitoring for threats. We have also partnered with our peer natural gas distribution companies to compare experiences and share information." Hester explained that the company has taken a number of initiatives, including using minimal consumer data with their account, to minimize the risk to customer information and their systems.

Hester also confirmed he recently travelled to Washington, D.C. for a classified briefing with other natural gas distribution companies from the [U.S. Department of Homeland Security](#) about what they are seeing and how companies can protect their systems. "It's a threat that will continue for the foreseeable future," Hester said.

Mark Foree, general manager with the [Truckee Meadows Water Authority](#), agreed saying security has become more important. "We are increasing our security in a lot of different ways," Foree said, without identifying the steps the company has taken.

Nevada has not been immune to ransomware attacks over the last two years, with three incidents impacting students personal information collected by the Clark County School District, patient data at a southern Nevada hospital and payroll systems at several healthcare facilities.

When asked how vulnerable utilities in Nevada are to cyberattacks, Craig Stevens, senior manager of government relations and regulatory affairs at [Cox Las Vegas](#), said they are, "fully committed to protecting our network and our customers who rely on it against cyberattacks. We have a sophisticated security plan in place, which is highly confidential," Stevens said.

John Entsminger, general manager with the [Las Vegas Valley Water District and Southern Nevada Water Authority \(SNWA\)](#), stressed that the "security of our community's water supply and infrastructure is of the utmost importance."

"While we do not share our cybersecurity measures, from a water infrastructure standpoint, we are monitoring our water system around the clock to ensure that we can respond to emergencies like leaks and main breaks," Entsminger said.

"We also keep a very close eye on the quality of the drinking water within our systems, collecting more than 30,000 water samples a year and conducting more than 300,000 analyses on those samples at our water quality laboratory, he said.

## Strong Growth and Crucial Projects

While utility companies are focused on external threats to their infrastructure, they are doing so during a period of massive growth as more businesses and residents move into the Silver State. “We continue to experience significant growth throughout our service territory that includes part of Nevada, Arizona, and California,” said Hester with Southwest Gas. “We had 37,000 new customers over the last year, including 16,000 in Nevada.” Hester said demand for natural gas is as high as it has ever been over the last decade.

“The demand is due to new homes and new business, plus we’ve expanded into new territories,” Hester said. “We are now in Mesquite which, up until two years ago, had no natural gas.” Hester explained that increased demand from residential units and businesses, especially commercial businesses, and light manufacturing, made it financially viable to expand into Mesquite.

Senate Bill 151, which passed unanimously through the Nevada State Legislature in 2015, allowed the city of Mesquite to pursue a natural gas pipeline and required the Public Utilities Commission of Nevada to adopt regulations to allow Southwest Gas to expand its infrastructure into the city. Hester said the company built a permanent service line to connect Mesquite to its Kern River natural gas pipeline, 14 miles north of the city.

“There had been talks with the city about bringing natural gas but what we ultimately did was work with the legislature to get Senate Bill 151 passed that provided for the gas company to bring service to communities that were unserved or underserved,” Hester said.

Hester said customer growth remains strong with no downturn expected soon.

**Valley Electric Association** CEO Mark Stallons was unavailable for comment. The Pahrump-based cooperative that serves more than 6,800 square miles in southern Nevada and small parts of California has spent the last few years improving its infrastructure and service in rural parts of the state.

Those projects include a partnership with **Switch** and **Churchill County Communications of Fallon** to provide fiber-optics to rural communities along the route from Las Vegas to Reno. The company has also taken advantage of renewable energy with solar power by forming **SolPower**, a fullservice company to assist residents and businesses who choose to install solar.

It’s a comparable situation in northern Nevada, where the influx of new residents and businesses over the last decades has driven up demand for natural gas, water, and electricity. That demand has caused utilities to invest heavily in new plants and new technologies.

Foree, with Truckee Meadows Water Authority, identified the Mt. Rose water treatment plant as an important infrastructure addition to help protect groundwater resources in the region. Due to a previous dependence on wells and the resulting decline in area groundwater levels, Foree said the plant will be used to augment the area’s water supply.

He said they have additional upstream reservoirs throughout the region, while also relying on Lake Tahoe and the Truckee River to meet the needs of residents and businesses. Foree described Lake Tahoe as the kingpin of their supply, adding that their 20-year resource plan found that even in very dry conditions there is enough supply to meet demand.

Foree stressed that the utility doesn’t get any of its water from the Colorado River, and while the water level in Lake Mead in the southern part of the state has declined in recent years, Lake Tahoe is a sustainable resource to help meet the region’s ongoing demand for water.

Entsminger has said that growth in the Las Vegas basin is possible but requires decreasing existing water demand and tightly controlling new demand, but the utility will have to walk a line to accomplish its goal without impacting the region’s growth. “Water conservation will remain a top priority for us in 2022,” Entsminger said.

“We expect to continue experiencing warmer and dryer conditions in the Colorado River Basin, which will influence the river’s flows and water levels in Lake Mead,” he said. “As a result, we anticipate additional shortage reductions to our water supply in the years ahead.” But, Entsminger said, if “our community remains focused on water conservation, we can continue to sustainably meet southern Nevada’s current and future water needs.” Entsminger said they work on a 50-year water resource plan every year.

“The plan considers a variety of variables that could influence our water supply over the next half-century, including climate change and drought conditions, Colorado River shortages, future population growth and projected water demands,” he said. And, that plan Entsminger said shows us that under a variety of supply-and-demand scenarios we can continue to have economic growth and diversification in southern Nevada if we continue reducing water demands of the existing customer base and tightly control water demands for any new commercial or residential customers.

For example, southern Nevada has reduced its consumption of Colorado River water by 23 percent over the past two decades while at the same time our population has increased by 800,000 new residents. “So, it’s a matter of balancing our water supplies and our water demands, and water conservation continues to be the fulcrum,” Entsminger said.

Entsminger recently signed the 500-plus plan, a memorandum of understanding among the United States and Colorado River officials within the lower Colorado River Basin states, including Nevada, Arizona, and California. The 500-plus plan aims to keep an additional 500,000-acre feet of water in Lake Mead over the next two years to help prevent the reservoir from dropping to critically low elevations.



The additional water – enough water to serve about 1.5 million households annually – would add about 16 feet total to the reservoir’s level. Entsminger stressed that the plan does not affect their ability to continue meeting southern Nevada’s water needs and will help protect water levels within the lake.

“This is the first year that Lake Mead is operating under shortage conditions and, as a result, southern Nevada’s Colorado River allocation is being reduced by 7 percent this year,” Entsminger said. “Arizona is also taking a shortage reduction to its allocation. If Lake Mead water levels continue to decline, we will see further reductions in future years,” he added.

## Getting Connected

The process for new utilities customers to get hooked up for service has remained mostly unchanged in recent years. Despite an increase in requests for service from developers and **businesses who need natural gas, electricity, and water services for their projects state-wide**. Hester said in areas with established gas service, they deal directly with developers.

“We send an energy advisor to meet with them to make sure there is existing infrastructure. We also look at what the incremental demand of the new project will be and if they are eligible for tariffs, which allow for potential incentives,” Hester said. He added the developers and companies may get some credits for the new business that there are bringing Southwest Gas.

“[Tariffs] also protect current clients from pushing up rates. Then we sign a contract and start the flow of gas.” Those tariffs, Hester explained, make sure that growth pays for itself, covering the costs of the facilities to expand the system.

According to Southwest Gas, manufacturing, agriculture, hospitality, mining and medical are industries that have shown the most demand for service.

“Mining has been moving off of diesel and onto natural gas,” Hester said. “Those who don’t want natural gas can have an all-electric home or use propane, but they do it at a cost.”

Despite Nevada’s continued growth, Hester said they’ve been able to keep prices in check with the average homeowner in southern Nevada paying \$46 a month.

Entsminger said it’s important that any new businesses in southern Nevada understand that water efficiency is imperative.

“About 40 percent of our community’s water supply is used indoors where it hits a drain and flows into the wastewater collection system. Through highly advanced wastewater treatment processes, nearly all of our indoor water use is reclaimed and safely returned to Lake Mead.”

Entsminger stressed that every gallon returned allows us to take another gallon out of the lake. “This sustainably extends our limited water resources to serve the entire community,” he said.

The remaining 60 percent of southern Nevada’s water supply is used outdoors for commercial and residential landscape irrigation and evaporative cooling at large commercial buildings and facilities.

Water used in these two processes is consumed and only used once. It is not reclaimed, recycled, or used again, according to the company.

“While existing development codes already prohibit the installation of grass in commercial developments, the SNWA Board of Directors recently passed a resolution to also prohibit the use of evaporative cooling in new commercial buildings,” Entsminger said. “These actions —coupled with current and future conservation measures — will help minimize the impact that new commercial development can have on our community’s water supply,” he said.

Filed Under: **Building Nevada**

Tagged With: Churchill County Communications of Fallon, Clark County School District, Colorado, Cox Las Vegas, Craig Stevens, Delta-Montrose Electric Association (DMEA), Doug Cannon, John Entsminger, John Hester, Lake Mead, Las Vegas Valley Water District and Southern Nevada Water Authority (SNWA), Mark Foree, Mark Stallons, Mesquite, SolPower, Southwest Gas, Switch, Truckee Meadows Water Authority, U.S. Department of Homeland Security, Valley Electric Association

## Groundwater plan approved to help reduce climate change risks to NorCal's water supply

The plan approved for the North American Subbasin will ensure the quality of the water and the reliability of groundwater levels.



Updated: 7:22 PM PST Jan 28, 2022

**Heather Waldman**   

Meteorologist

**SACRAMENTO, Calif.** — The south Sacramento Valley is at risk of seeing a groundwater deficit within the next 50 years. That's according to predictive models run by the Sacramento Groundwater Authority (SGA).

The main culprit for the deficit is climate change. Rising global temperatures are altering large-scale weather patterns to the point where the rainy season in Northern California is becoming less consistent. Meanwhile, the region's demand for water is increasing.

That's exactly why the SGA and four other groundwater sustainability agencies in parts of Sutter, Placer and Sacramento counties developed a long-term plan to maintain the region's groundwater supply for generations to come.

SGA Executive Director James Peifer said the plan's approach is similar to how you would use a checking account.

"You don't want to overdraw it. You want to make a deposit before you make a withdrawal. We can do that with the groundwater basin and it'll be a really helpful way for us to adapt to climate change," Peifer said.

Peifer said that as long as the plan is working, most won't notice the impact. At its core, the goal of the plan is to avoid major water restrictions by carefully balancing that water supply "bank account."

The plan calls for proactive actions with well permits and land use to maintain a balance between surface water and groundwater. Groundwater levels will be monitored regularly and the plan will be resubmitted every five years to ensure things stay on a promising track.

# Truckee River advocate pushes for removal of dilapidated Ambrose Dam — a hazard to rafters



**Amy Alonzo**

Reno Gazette Journal

Published 6:00 a.m. PT Feb. 1, 2022

Charles Albright has spent the past five decades caring for and developing recreational opportunities on the Truckee River.

Now, the self-described “paddling guru” has a new cause he’s championing – the removal of a dilapidated dam at Ambrose Park that he, and others, say is a danger to rafters and tubers on the Truckee.

Albright is in the early stages of raising awareness about the dam's hazard potential, lobbying local and state officials to see steps need to be taken next.

“This dam doesn’t need to be in the river anymore. It’s an attractive nuisance,” Albright said. “It’s a safety hazard, for sure.”

The dam at issue was built around 1918 by a local ditch company but fell apart within a couple of years of construction, according to Albright. Since then, the dam has eroded, leaving large cement blocks and sharp metal poles behind.

During times of low flow, the cement and metal jut above the waterline by several feet and are visible. But during high water, the items are often submerged, creating hazards for rafters, kayakers and tubers.

“This is a potential hazard we have to deal with every year,” said Reno Fire Department Firefighter and Water Entry Team member James Leonesio. “They’re just kind of a death trap.”

The city’s Water Entry Team handles about 40 calls per year. In 2017, a high-water year, the team responded to 103 calls. The team also responds to an average of one to two drownings per year on the Truckee River, although none of the drownings have been at Ambrose Dam, Leonesio said.

Leonesio estimates about 99 percent of the calls the team responds to are from tubers who aren’t prepared for rapids, cold water and obstacles in the river such as Ambrose Dam.

Should you be worried?: More than 45,000 of America's bridges are in 'poor' condition

Albright said he has reached out to city and county staff to raise awareness about the hazard the dam poses. His actions are forward thinking, according to Leonesio.

“Something bad (usually) has to happen before action happens. This is being proactive,” he said. He added that from Truckee to Sparks there are about a half-dozen dilapidated dams that need attention or removal.

Ambrose Park is managed by Washoe County, but the county doesn’t regulate the river. The county has never considered removing the dam, according to spokesperson Bethany Drysdale, because it doesn’t have the authority to do so.

Regulation falls under state and federal jurisdiction, according to Nevada State Engineer Adam Sullivan. “I’m glad there’s some attention on it. It’s a worthwhile pursuit,” he said. “Removing the structure for the purposes of public safety is something we support.”

The U.S. Army Corps of Engineers and U.S. Water Master would be involved in any possible changes to Ambrose Dam, Sullivan said.

*Amy Alonzo covers the outdoors, recreation and environment for Nevada and Lake Tahoe. Reach her at [aalonzo@gannett.com](mailto:aalonzo@gannett.com). Here's how you can support ongoing coverage and local journalism.*

# Losing Winter

## Amid Snow and Ice Declines, What Happens to Sierra Lakes in the Winter?

by Kat Kerlin | February 02, 2022



*Ireland Lake in California's Sierra Nevada is among the small alpine lakes UC Davis researchers monitored to learn about how the lakes behave in the winter. (Adrianne Smits/UC Davis)*

- Scientists placed a network of sensors in remote mountain lakes to
- Study is the first to look at ice cover and under-ice conditions in small Sierra Nevada lakes



ow small mountain lakes spend their winters is largely unknown to scientists, despite winter representing nearly half the year in such environments. A study by the University of California, Davis, helps demystify what happens above and below the ice.

[The study](#), published in a [special issue](#) of the Journal of Geophysical Research: Biogeosciences, is the first to look at ice cover and under-ice conditions in small Sierra Nevada lakes, which number in the thousands.

Such baseline knowledge is critical for understanding how high-elevation lakes respond to climate change and to the loss of ice and snow. Despite heavy snowfall this winter, climate projections estimate the Sierra snowpack could drastically shrink or even disappear by 2100.

“Winter is a big part of the year. We don’t understand it, and we’re losing it,” said lead author Adrianne Smits, a National Science Foundation postdoctoral scholar at UC Davis. “Lakes in many cold regions of the world are losing ice cover fast, and very few studies examine what happens to them in winter. People assume they’re hibernating or dead, and the more we learn, we find that’s completely false.”



*Small alpine lakes like Ruby Lake, shown here in 2018, respond differently than larger lakes to changes in loss of ice and snow. (Adrianne Smits/UC Davis)*

## A sense of snow

For the study, researchers placed a network of underwater sensors in 15 remote mountain lakes throughout the Sierra Nevada to try to understand what type of lakes may be the most sensitive to loss of snow and ice cover. Placed during the more accessible warmer months, the sensors took hourly measurements of water temperature, dissolved oxygen, the timing of ice formation and breakup, and other climate variables for up to five winters.

The study found that most mountain lakes will have shorter ice cover, warmer water and higher oxygen concentrations as winters warm. But small and large lakes will respond differently to the loss of ice cover and snow, with small lakes being more susceptible to changes between wet and dry years.

Other findings include:

- Snowfall and air temperature determine when ice breaks up and how long it lasts.
- Lake size and shape control oxygen and temperature immediately after ice forms, but late winter conditions depend on other variables that dictate how long ice covers the lake.
- Small, shallow lakes experience low-oxygen conditions more so than large, deep lakes. However, shallow lakes are also more dynamic because heavy snowfall causes ice to submerge, changing oxygen levels as water is displaced by ice.

The findings can help inform conservation management related to water resources, endangered and threatened species, and summer algal blooms, which thrive in years with early ice breakup.

“We are used to mountain lakes being crystal clear, but they are likely to become increasingly ‘green,’ with large algae blooms around the shoreline,” Smits said.

## Remote work

At least 12,000 small lakes are scattered throughout the slopes and valleys of the Sierra Nevada. Getting to them is challenging even when not socked in with ice and snow — a key reason they are understudied.

For Smits, a typical field visit included an all-day drive, then backpacking 8 to 15 miles each way while carrying more than 50 pounds of gear. In

addition to the data, she was rewarded with spectacular views and a landscape few others experience. One of the more arduous treks became Smits' favorite site, Boundary Lake, along the edge of Yosemite National Park. She saw it in lush, wet years and in dry years with smoke-filled air. Remnants of the Rim Fire made the hike a slog through broken trail and a scramble into the forest. But at the end was a quiet beauty under a blue and pink-streaked sky that she had all to herself.

"It's really amazing to be able to go to places like that for work," said Smits, who is also an artist whose [paintings](#) are clearly inspired by a love for the natural world. "These lakes are beautiful and all different in their own way. I used to think the Sierra was just pine trees and granite, but that's not the case."

## On the record

The network includes two long-term study sites: Castle Lake, which UC Davis limnologist Charles Goldman began studying more than 50 years ago, and Emerald Lake, studied since the 1980s by the study's senior author Steven Sadro, a UC Davis professor in the Department of Environmental Science and Policy. The sites anchor points tied through time, creating a historic record that can greatly inform climate research.

"We know climate change is causing ice cover to decrease," Sadro said. "What are the implications of that? What is the climate sensitivity of lakes? It's not a one-paper answer. This will be at least a decade of work to characterize the basic function in the lakes. But we're learning more that will help us make more accurate predictions about why and how the system will change."

Additional co-authors include Nicholas W. Gomez of UC Davis and Jeff Dozier of UC Santa Barbara.

The study was funded by the National Science Foundation's Division of Earth Sciences.

This study and several others contributed by Sadro and Smits in the winter limnology special issue of JGR: Biogeosciences stemmed from the American Geophysical Union's [Chapman Conference](#), "Winter Limnology in a Changing World," held in 2019.

*Topaz Lake glistens under a dramatic, cloud-swept sky in California. (Steven Sadro/UC Davis)*

## Media Resources

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# Global early warning system will enable communities to adapt to changing water availability

by UK Centre for Ecology & Hydrology



Credit: Pixabay/CC0 Public Domain

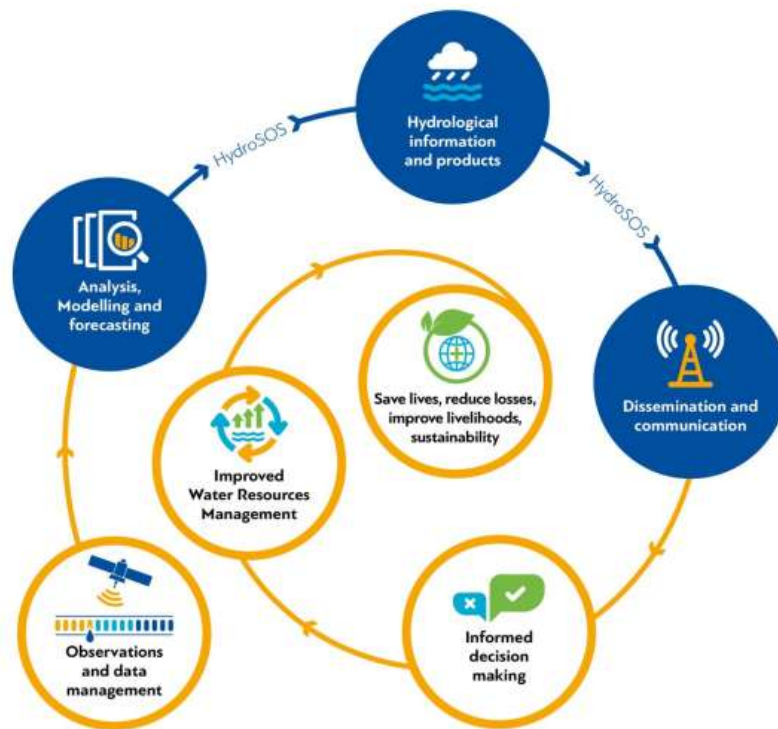
More than two billion people face severe water shortages and a similar number have been affected by flooding over the past 20 years, with these challenges expected to rise in coming years due to climate change, growing populations and increased economic activity. Therefore, a global initiative led by the World Meteorological Organization (WMO) and coordinated by the UK Centre for Ecology & Hydrology (UKCEH) will enable communities across the world to better adapt to our changing water cycle.

The Hydrological Status and Outlook System (HydroSOS) will provide regular data on the status of water resources—including groundwater levels, river flows, reservoirs, lakes and soil moisture—in local catchments across the world. It will also assess whether these conditions are normal for the time of year and predict whether the situation is likely to get better or worse over coming weeks and months.

When the system is operational, this detailed information will be distributed by National Hydrological and Meteorological Services (NHMSs) to key sectors such as central and local government, water and energy companies, agriculture and industry, on at least a monthly basis. This will provide an early warning of forthcoming water shortages and flooding, thereby supporting more effective management of public water and energy supplies, guiding farming practices and helping countries prepare for natural disasters, including planning emergency relief efforts.

WMO estimates there may be a 40 per cent gap between global water supply and demand by 2030. Other experts have estimated drought costs up to USD 8 billion a year from losses in agricultural and related businesses, and damage from flooding is USD 80 billion a year.

Elena Manaenkova, Deputy Secretary-General of WMO, says that "HydroSOS will increase communities' resilience to the impacts of climate change by improving water and food security as well as reducing poverty. Therefore, it is a key initiative in accelerating global progress towards several UN Sustainable Development Goals, particularly SDG6—Clean Water and Sanitation for All."



HydroSOS will provide regular hydrological data, thereby informing more effective and sustainable management of water resources. Credit: None needed.

WMO has approved the development of HydroSOS following a five-year pilot project led by UKCEH. This scoped the requirements for the system, drew up guidelines for consistent reporting of hydrological conditions and established there was sufficient international interest in the initiative.

A key feature of the system will be the way in which it supports the development of scientific capacity within hydrological and metrological organizations around the world, helping these agencies to generate and share high-quality information about their water resources.

WMO, with the support of UKCEH, which produces hydrological summaries and projections for the UK, is now developing implementation plans to turn HydroSOS into a reality. Scientists and funders across the world who are interested in being part of HydroSOS are therefore now being asked to come forward and collaborate to enhance global capacity to monitor, predict and report water-related information for their respective countries and regions.

HydroSOS will provide WMO Members with equipment to measure and report water data. The hydrological information gathered will inform action and strategies aimed at reducing economic losses and deaths due to droughts and floods.

Professor Alan Jenkins of UKCEH, who now leads the initiative for WMO, says that "having reliable hydrological information is critical for making effective and timely decisions to ensure people have enough water for drinking, crop irrigation, energy needs and economic activity. However, at local level in many parts of the world, there are substantial data and knowledge gaps regarding water availability and vulnerability to water-related threats."



# Mountain Democrat

PLACERVILLE, CALIFORNIA



The multiple methods control test could begin in Spring 2022 with methods being tested in different areas of Tahoe Keys for monitoring. Aquatic herbicides will be applied only once in areas closed off with double “turbidity” curtains. Photo courtesy of Tahoe Keys Property Owners Association

## News

# Tahoe Keys invasive weed control to be put to the test

By Tahoe Regional Planning Agency

**LAKE TAHOE** — The Tahoe Regional Planning Agency Governing Board in late January approved a project to test innovative methods to address the largest infestation of invasive weeds in the Lake Tahoe Basin.

An infestation of aquatic invasive weeds in the Tahoe Keys lagoons in South Lake Tahoe is accelerating and poses a threat to Lake Tahoe if not controlled, according to a news release from TRPA. The Tahoe Keys Property Owners Association proposed the test project in targeted areas of the 170 acres of waterways. The area is approximately seven times greater than all other Lake Tahoe marinas combined.

The unanimous board vote clears the path for a combination of weed treatments — ultraviolet light, a one-time application of EPA-certified aquatic herbicides and a process to aerate the lagoon bottom with small bubbles to reduce plant growth. The association worked with scientists, community members, environmental agencies and nonprofit organizations in a multi-year, collaborative process that was thorough, scientifically rigorous and inclusive, the agency said.

“If left unchecked, aquatic invasive weeds in any part of Lake Tahoe threaten our entire ecosystem,” TRPA Executive Director Joanne S. Marchetta said. “With climate change increasing water temperatures we have an urgent need to deploy science-based solutions to combat these emergent threats.”

Aquatic weeds cover more than 90% of the Tahoe Keys lagoons and provide sources of continuing infestations around the lake, including popular recreation areas like Emerald Bay. Treating the Tahoe Keys lagoons is the No. 1 priority for the multi-agency Lake Tahoe Aquatic Invasive Species Coordinating Committee.

Following decades of failed attempts to control the weeds with conventional methods, in 2017 the Tahoe Keys Property Owners Association applied to water quality agencies for a permit to explore what tools might “knock back” the

infestation to a controllable level so it can be maintained by non-herbicidal methods. The environmental analysis determined that Lake Tahoe is not at risk from this test of mixed methods.

“The Tahoe Keys Property Owners Association has been actively managing this weed infestation for over 40 years and has invested millions while the infestation has only gotten worse,” association President David Peterson said. “One method alone is not going to work. For the sake of the entire Lake Tahoe ecosystem we need to test all tools to address the scale of the invasive species problems in the Tahoe Keys.”

University of California, Davis, professor emeritus Dr. Charles Goldman was among the scientists to speak in support of the project. “Aquatic herbicides have come a long way and this is the appropriate measure at this time,” he said. Goldman famously sounded the alarm of Lake Tahoe’s declining clarity in the 1960s and his work prompted the states to create the bi-state TRPA to stop harmful development practices.

“Collaboration over the course of many years brought us to this important vote,” TRPA’s Marchetta said. “It’s yet another example that if we trust each other and rely on science, we can collectively make the best decisions to protect Lake Tahoe for future generations.”

Earlier this month, California’s Lahontan Regional Water Quality Control Board voted unanimously to certify the environmental analysis and issue a special permit for the project. Following the approval, testing and monitoring could begin in cordoned areas of the Tahoe Keys lagoons this spring. Learn more about the project at [tahoekeweeds.org](http://tahoekeweeds.org).

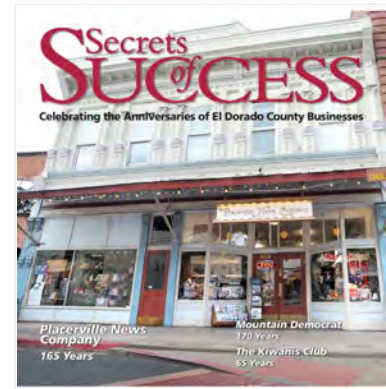
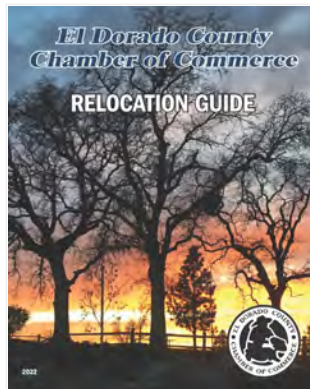
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## Report: The number of people in Nevada homeless shelters up 261%

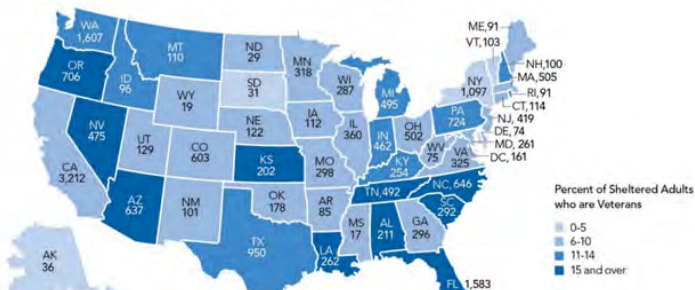
by Abigail Vaerewyck

Wednesday, February 9th 2022



### 3.2 State-Level Estimates of Sheltered Veterans

Exhibit 5-4. Sheltered Veteran Estimates by State, 2021



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FILE: A look inside the Cares Campus in Reno just before opening in 2021. (KRNV)

— A new report puts N  
the spotlight. The eye-c

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our homeless population has grown since 2007.

The numbers just released by the U.S. Department of **Housing and Urban Development** puts the silver state second for highest change in sheltered, chronically homeless people from 2007-2021.

Nevada's sheltered homeless population, people who are experiencing homelessness in facilities rather than on the streets, is growing. There has been a 261% increase in just in the last 14 years.

**Exhibit 6-6. Largest Changes in Sheltered Chronically Homeless Individuals by State, 2007-2021**

Change 2020-2021			Change 2007-2021		
State	#	%	State	#	%
<b>Largest Increases</b>					
California	3,930	48.9%	California	6,016	101.1%
New York	830	17.2%	New York	3,249	134.6%
Minnesota	687	92.1%	Colorado	1,074	265.8%
Virginia	399	74.3%	Washington	781	58.6%
Vermont	318	240.9%	Nevada	498	260.7%
<b>Largest Decreases<sup>a</sup></b>					
New Mexico	-306	-47.5%	Texas	-2,318	-70.5%
Pennsylvania	-226	-18.4%	West Virginia	-949	-89.7%
Maryland	-217	-30.3%	Ohio	-931	-58.2%
Texas	-185	-16.0%	Massachusetts	-912	-44.4%
Missouri	-96	-19.5%	New Jersey	-734	-46.4%
<b>Excludes Puerto Rico and U.S. Territories</b>					

The 2021 Annual Homeless Assessment Report (AHAR) to Congress - Google Chrome 2\_9\_2022 9\_18\_59 PM (2).png

The report also shows high numbers for veterans saying the rate for of all veterans

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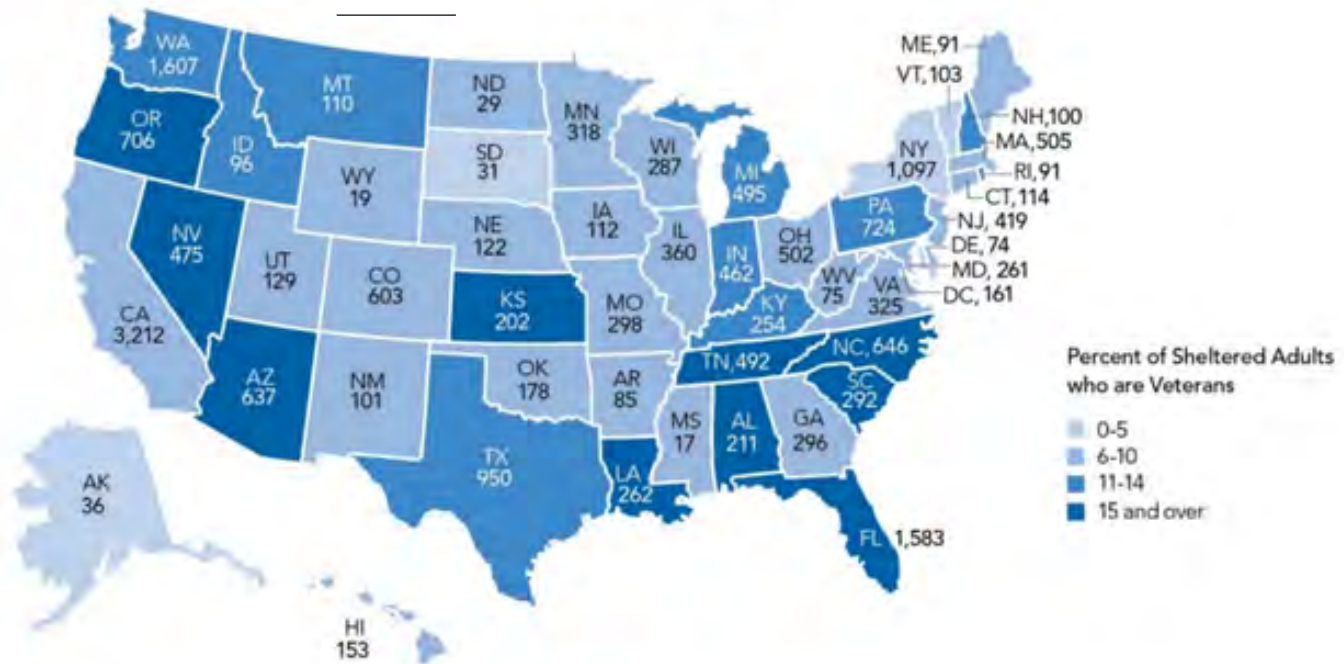


## estimates by State, 2021

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The 2021 Annual Homeless Assessment Report (AHAR) to Congress - Google Chrome 2\_9\_2022 9\_22\_05 PM (2).png

With programs like the **Cares Campus**, **Rise** and the **Karma Box Project**, here in Reno we're seeing more people in need getting shelter. Karma Box Project's executive director, Grant Denton, says that he's seen less people experiencing homelessness on the streets and instead in shelters.

“ We have programs that are that are growing and evolving, to be able to fit the needs of these folks

The report showed that Nevada was one of the only states to not have change in the number of unaccompanied youth experiencing sheltered homelessness. To view the full report, [click here](#).

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*Palisades Tahoe on Dec. 20, 2021. (Daniel Rothberg/The Nevada Independent)*

## Indy Environment: What is the future of snow? Grappling with climate change and warmer winters

*Good morning, and welcome to the Indy Environment newsletter.*

*As always, we want to hear from readers. Let us know what you're seeing on the ground and how policies are affecting you. Email me with any tips at [daniel@thenvindy.com](mailto:daniel@thenvindy.com)*

*If you received this from a friend, [sign-up here](#) to receive it in your inbox.*

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Between the Winter Olympics and our dry January, I've been thinking a lot about snow over the last few weeks. Last month, Reno [saw no measurable precipitation](#) for the first

noticeable, matched with warm temperatures that make it feel more like spring than winter.

Maybe it's the weather whiplash that makes it feel especially noticeable. The water year started out strong. Reno saw [record rainfall in October](#), followed by large storms in December around Lake Tahoe and the West, boosting snowpack to above 100 percent of normal for that time of the year. Since then, with no new snow in many places, the snowpack has fallen to [just below — or very close — to the average](#) in the Sierra, much of Nevada and across much of the West.

Snow has also been on my mind because the Winter Olympics started this week. Skiers and snowboarders in Beijing are riding on what is [effectively entirely man-made snow](#), a first for the winter games and an artificial process that requires a lot of energy, water and chemical inputs.

Over the weekend, driving down U.S. 395, which runs adjacent to the Eastern Sierra, I saw at least one message on a hotel sign echoing the often-repeated sentiment: **Please, more snow.**

Although the water year is far from over — a lot can happen later in February and March — I've heard plenty of chatter, including in my own interviews and reporting, about what it all means.

There's the data and the science. **This was the second-driest January on record for both Nevada and California** (where much of Western Nevada's water originates), according to the [National Oceanic and Atmospheric Administration](#). Multiple scientific studies have pointed to a less reliable, and in many years, less robust snowpack in the Sierra and other parts of the West. [In 2018, one study](#) found that since 1915, Western snowpack had already declined by about 21 percent. [Another study forecast](#) back-to-back, low-to-no snow years in the Sierra and the West.

But the story extends beyond the data. There is a qualitative story, too. The aridity affects us on the ground, on a personal level — our attitudes and the way we think about climate change.

**Speaking for myself, it makes me think about the future.** What will our snow look like in 20, 50 years? What does it mean for enjoying the winter? For our water supply? Our economy?

Heather Hansman, a skier and the author of [Powder Days: Ski Bums, Ski Towns and the Future of Chasing Snow](#), has [written a lot about these questions](#). I talked to her briefly on Wednesday about how people are looking at the winter, outdoor recreation and the future.

Hansman said she was recently talking to someone about the water year conditions and how they compare to years past. The conversation, she said, went something like this: "I'm trying to remember if other years have been this bad. Does it just feel bad because we're in it right now?"

But, she added, there seems to be greater recognition across the West that something needs to happen, that our personal experiences can shape how we take action. Whereas people were had been in denial about climate change, a conversation around the outdoor recreation industry — not to mention among water managers — is being forced by what we see in front of us.

**"We've been avoiding the hard stuff for a while," Hansman said.**

Mountain towns and regions with snowpack-reliant ecosystems *are* starting to prepare for the future and adapt (though perhaps slowly in many cases). Of course, the conversation goes far beyond outdoor recreation. It intersects with the economy (many local towns rely

The nature of all of this is cumulative. **The impacts often add up gradually, in ways that are hard to see or visualize, until they suddenly appear.** Take the Colorado River Basin, which supports much of the Southwest (including Las Vegas) and is [in need of more snow](#) to boost dwindling reservoir levels. Last week, [water forecasters predicted](#) that inflows into Lake Powell, an important indicator of water supply, would be 78 percent of average, a 20 percent drop from January. Even the economic effects can seem to be slow-moving — until they suddenly arrive.

Last month, the Loughborough University's Sports Ecology Group and Protect Our Winters, a nonprofit focused on climate advocacy, [put out a report looking](#) at the way changing climate is expected to affect the Olympic games. Using climate forecasting, it looks at whether cities and regions that have hosted the games in the past will be suitable to host the games in the future.

That data draws on a [2014 paper](#) that evaluated minimum temperatures and the probability of maintaining an adequate snow depth. The findings suggest that one location that might not be able to reliably host the games in the future is Lake Tahoe, home to the Olympic games in 1960.

"There's still going to be some great seasons," said Nat Knowles, a researcher at the University of Waterloo who used to compete as a competitive skier and lived near Tahoe for several years.

"But," she added, "the average snowpack is going down."

Knowles said it means a future where the snowpack is less reliable and more uncertain — the snow melt could start earlier, more precipitation might fall as rain rather than snow. **Still, when Knowles looks at forecasts for the future, she does not get trapped in the gloom-and-doom that characterizes so many of these conversations. She sees them as a call to action.**

"The thing I've always found helpful about them is there is a really drastic difference between a high emissions future and a low emissions future," Knowles said during a phone interview this week. "I don't think that fear-mongering is a useful way to talk about any of this stuff."





*Beginning skiers at Mt. Rose Ski Tahoe outside of Reno on Jan. 2, 2019. (Daniel Rothberg/The Nevada Independent)*

*Here's what else I'm watching this week:*

“A federal appeals court has **lifted a temporary ban on construction of a Nevada geothermal power plant** opposed by a tribe and conservationists who say the site is sacred and home to a rare toad being considered for endangered species protection,” the [Associated Press's Scott Sonner writes](#).

The *Reno Gazette Journal's* Amy Alonzo [looks at an early effort](#) to remove a **dilapidated dam** on the Truckee River that can be a hazard to kayakers and rafters.

**The groundwater connection:** As Arizona looks to pump groundwater, some experts question whether doing so is sustainable in the long term, as [KUNC's Alex Hager reports](#).

“**The Great Salt Lake is in trouble. ... We have to do something.**” That quote comes from a Republican Utah lawmaker in an [excellent piece](#) by the *Associated Press's* Lindsay Whitehurst and photojournalist Rick Bowmer about efforts to save the lake — and whether the proposed recovery strategies go far enough.

Citi [says](#) “**high lithium prices are here to stay.**” That matters because, as we've reported recently, there is [a rush in Nevada](#) to develop new lithium extraction and recovery projects.

The *Sierra Nevada Ally's* Scott King [interviewed](#) Kirsten Stasio, **the founding executive director of Nevada's “green bank.”**

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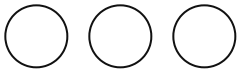
Travel // Tahoe

# Dog poop piles up in Tahoe as some owners, Public Works pass on picking it up

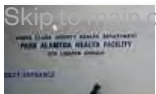


Julie Brown, SFGATE

Feb. 10, 2022



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**Next Up:** Only one Bay Area county won't drop mask mandate...



A golden retriever runs along a snowy Lake Tahoe beach.

TravisLincoln/Getty Images/iStockphoto

I went for a walk the other day on Truckee's River Legacy Trail. It's a paved pathway that edges the Truckee River, veering east from the middle of town. It was a sunny, warm day and the parking lot was full of people and their dogs.

A small puppy took timid steps on the snowbank. A pack of dogs ran around in circles. I put my dog on his leash and met up with my friend and her dog. Just as we set off for our casual walk along the trail, we passed a sign that asked trail users to pick up after their dogs. My friend stopped to grab one of the black plastic bags from the dispenser; I checked the green canister attached to my dog's leash and

saw that I had plenty of dog poop bags. We set off across the bridge that crossed over the Truckee River.

About five minutes down the pathway, the smell hit us. It was sour and thick and pungent, and it didn't take long to figure out the source. A quick glance around the snowbanks revealed the many small piles of dog waste, like brown polka dots on a white canvas. This was clearly the spot where, after Truckee's dogs had warmed up with a few minutes of trotting, they did their business. And sure enough, my dog was on the same track.

Dog poop has always been a nuisance in Tahoe. Most people do pick up after their dogs, but when a few people don't, it piles up quickly.

But this felt worse than before. I've walked along the Legacy Trail many times, but on this day, the smell was full-on, impossible to ignore. I had never seen so much dog poop along the edges of the trail. In the past two years, given the surge of visitors and residents who are moving here, Tahoe's been overwhelmed by nuisance issues. More people, more problems. Trash and litter are a big one. But so is dog poop. And dog poop isn't just a problem that disintegrates and goes away. When it runs downstream, into the the watershed, it can turn into a major environmental issue. The Legacy Trail is immediately adjacent to the Truckee River, which supplies water to nearly half a million people.

"That's an ongoing issue when people who are not courteous to other users of the trail, who are not properly managing dog waste," said Dan Wilkins, director of Truckee's Public Works Department. "It's a problem on the Legacy Trail, it's a problem on other trails as well."

Dog poop is an issue everywhere in the Tahoe Basin. The lakefront bike path on the east shore has the same problem. So does the riverfront bike path along Highway



89 between Alpine and Tahoe City. The snowbanks near the trailheads for popular winter walking spots like Paige Meadows are also stained with small piles of poo.

Maybe it's the melting snowbanks, revealing the layers of dog poop that had been left behind for weeks on end. But when snow melts, the dog poop issue in Tahoe always seems to get worse. Ski resort parking lots are especially gross — a winter's worth of dogs playing in the snow, and when it all melts, piles of poo drain into dirty puddles in the asphalt. Avoiding the mess is like playing a game of hopscotch — in ski boots.

Most people do pick up after their dogs — it's easy and embedded into our psyche more now than it was 10 or 20 years ago. But still, this is a tragedy of the commons. The few who don't pick up after their dogs, for whatever reason, make a mess that the rest of us have to smell.

Maybe it was snowing hard and your dog ran far off the trail into the snowbank to do its business, and you thought that it was nature, so it wouldn't matter if you didn't pick it up.

Maybe you had the right intention and you bagged your dog's poo in a little baggy but didn't feel like carrying it on your walk. So you left it by the side of the trail, thinking you'd grab it on the way back to the car, and then you forgot and walked right past it.

Maybe you got caught in that awkward moment when you didn't have a bag, when the dispenser on the leash was empty and you forgot to refill it before your walk.

I'm guilty as charged. I pick up after my dog 99.9% of the time, but I've definitely been caught in situations where my dog ventured too far into the snow, or I forgot to bring a bag.

According to the Environmental Protection Agency, dog poop is a toxin. It doesn't just decompose and go away. It's full of pathogens and nutrients, and bacteria like E. coli and fecal coliform that are harmful to ecosystems. When dog waste gets into the watershed, the nutrients cause algae and weeds to grow, making water green, smelly and unswimmable. The pathogens make people sick.

Dog poop is also, simply, gross.

A single gram of dog poop contains 23 million fecal coliform bacteria, on average. There are hundreds, thousands of dogs in the Tahoe Basin on any given day — Tahoe is a dog's paradise. And they all have to poop.

The dog poop issue is one that officials in Tahoe are talking about constantly, to figure out solutions to change behavior and set up an expectation among dog owners that it is our responsibility to pick up after our dogs.

Officials agree that this isn't an issue specific to visitors, or to locals. It's people from all groups: longtime locals who refuse to acknowledge that cultural norms have changed, visitors who naively think they're in the wilderness and dog poop is au natural.

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Educating people to pick up after their dogs has been the biggest effort made by officials to curb the problem. Take Care Tahoe is a collaboration between more than 50 partners in the basin — from land managers to tourism agencies, research institutions to nonprofits — and they’ve been focusing on messaging and culture change around sustainability in Tahoe. Take Care Tahoe posted the sign at the start of the Legacy Trail asking dog owners to pick up after their dogs, with a dog baggy dispenser. They’re also working with experts on behavior change to find more solutions that will curb the issue.

“Education is one component of it, but all of our research and just common sense says, you need more than just telling people what to do,” said Amy Berry, CEO of the Tahoe Fund, a philanthropic organization that has been leading the Take Care Tahoe initiative.

At a recent workshop, Take Care Tahoe mapped out every step that a person takes that leads them to either pick up after their dog or leave their dog’s waste behind. Then, they brainstormed all the steps it could take to change that behavior. One of the ideas that came out of this process came from the recognition that trash cans are usually located at the beginning of a trail, but dogs need to warm up a bit before they do their business, so maybe trash cans should be located farther down the trail.

Another idea came from the recognition that people are forgetful and unintentionally leave their dog poop bags behind. So maybe those bags in the dispenser shouldn't be black. Perhaps they should be neon orange or yellow instead, so the bags are harder to miss on the way back.

"It's design thinking," Berry says.

The next step is implementation, Berry says. And Take Care Tahoe is currently looking to launch pilot programs to implement these new ideas and measure their impact.

They're also trying to establish cultural norms in Tahoe that expect people to pick up after their dogs. Take Care Tahoe has billboards on many of the major highways that lead into the Tahoe Basin, including Interstate 80 and Highway 50. Now, those billboards include messaging that says: "Tahoe is number one at picking up number two."

In the meantime, who picks up all the dog poop left behind?

Wilkins, the Public Works director at the town of Truckee, says his staff takes out the trash. Sometimes, if they have the bandwidth and the staff numbers, they'll pick up the dog bags left behind on the sides of the trail. But the mounds of poo on the snowbank? That's usually left to melt with the snow.

"If I knew the answer it would be working better," Wilkins said. "So what we believe we can do reasonably, as the town, is encourage people to be responsible pet owners."

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## More Lake Tahoe News



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[GOVERNMENT](#)

## **Proposed “Portland Loo” for Bicentennial Park do**

By Bob Conrad | February 7, 2022

**T**he “Portal of Evolution” sculpture on the Truckee River downtown may have a new mate: A Portland Loo. The restroom proposed is the same kind of “Portland Loo” that was installed in 2020 at Brodhead Memorial Park.

The loos are designed for minimal maintenance.

“From August 2020 to September 2021, there have been 12,112 flushes at the [Brodhead Park] restroom, which is an average of 30 flushes per day,” a city of Reno staff report notes. “Through December 2021, from agencies that maintain the loo, there have been seven minor incidents that involved vandalism, including graffiti and issues with the door lock. All minor damages were quickly repaired.”

The One Truckee River Management Plan, which guides river programs and projects, proposes 10 Portland Loos along the river.

The second one is set to be installed at John Champion Park. The third installation is proposed to be near the pedestrian bridge at Bicentennial Park.





The Portland Loo installed at Brodhead Memorial Park.

It's already drawing opposition because of the proposed location. Downtown Rotary Club members wrote a letter of opposition to council members. The club has invested more than \$150,000 and volunteer hours toward improving the park.

"When the sculpture garden concept was developed in 2015, it was done so to change the negative activity that was happening in the park. It was a place walkers and families avoided. For that reason, our club was asked to join a partnership with the City of Reno: to improve an area that was long-forgotten and overridden with drug addicts and homeless," they wrote.

"This caged-in public restroom, designed to be indestructible to vandals and a deterrent to drug act does not belong next to beautiful artwork and gardens. It is not a normal restroom," they added. "Please, put the next Loo where it is needed now. There are many locations in downtown Reno where people who need these facilities congregate. Bicentennial Park is not one of them."

One Truckee River is scheduled to present its plans for the restrooms and river restoration efforts at Wednesday's city council meeting.



### Bob Conrad Publisher & Editor

Bob Conrad is publisher, editor and co-founder of This Is Reno. He has served in communications positions for various state agencies and earned a doctorate from the University of Nevada, Reno in 2011, where he completed a dissertation on social media, journalism and crisis communications. In addition to managing This Is Reno, he holds a part-time appointment for the Mineral County University of Nevada Extension office.