



TMWA Board Meeting

Wednesday, January 19, 2022

Press Clippings

December 2, 2021 – January 11, 2022



Winter sunset on the Truckee River

NEWS

Reno comes one degree short of highest Nov. 29 temperature on record

Amy Alonzo Reno Gazette Journal

Published 6:04 p.m. PT Nov. 29, 2021 | Updated 11:07 a.m. PT Nov. 30, 2021

If you've noticed flowers budding and weeds popping up in your yard, you aren't the only one.

Northern Nevada is experiencing record and near-record warm temperatures for November. On Monday, the temperature in Reno hit 67 degrees, nearly breaking the record for the date of 68 degrees, set in 1995.

The temperature blew the average high of 51 degrees in November for Reno out of the water.

It's also been dry. The region recorded just 0.11 inch of precipitation this month – nearly a half-inch less moisture than the region usually receives in November.

The last time Reno saw any precipitation was Nov. 10, and "it's been bone dry since then," according to National Weather Service Meteorologist Scott McGuire.

The warm temperatures and dry conditions come on the heels of a colder-than-average and the wettest October on record for the region.

Reno measured 3.14 inches of rain at the Reno-Tahoe Airport in October – a whopping 2.64 inches more than usual. The city also saw an average temperature of 52.6 degrees, about 2.5 degrees below normal.

"For us to have below-average temperature and above-average precipitation is not common," McGuire said. "It was definitely a standout month for us."

For those who are worried, the Weather Service cautions that December through March are actually the wettest months in the region, and that the past several weeks of weather do not necessarily mean the winter will be warm and dry.

In the notable 2016-17 water year, when the city reported a total of 15.95 inches of precipitation, Reno experienced a cool and wet October followed by a warm and dry November. Then, the region was "slammed" with storms in January and February that brought 9 inches of precipitation, according to the Weather Service.

While there are no storms on the horizon, the Weather Service is keeping its eye on a potential system that could drop in the second week of December.

"There's a chance out there at least," McGuire said. "Once we start transitioning into December, we will start breaking down the ridge of high pressure."

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

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Water security under spotlight at meeting of global water experts post COP 26



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- Global leaders call on experts for urgent water data and research to inform climate mitigation and adaptation preparedness

29/11/2021



About the entity



International Water
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IWRA is a non-profit, non-governmental, international member-based association established in 1971. 2021 marks its 50th anniversary.

A threat to water is a threat to life – that’s the collective message from policymakers, scientists, academics and legal experts as they meet in Daegu, South Korea’s water hub, this week at the World Water Congress.

The World Water Congress is organised triennially by the Paris-based International Water Resources Association (IWRA) and, this year, is hosted jointly with the Ministry of Environment. **The theme of this week’s discussions is Foundations for Global Water Security and Resilience: Knowledge, Technology and Policy.**

The Congress comes just a few weeks after COP26 / UN Climate Change Conference in Glasgow and will provide an opportunity for water experts to re-convene to assess the increasing challenge presented by water insecurity arising from climate change. Key themes include:

- Managing water scarcity
- Reducing disaster risk
- Water sanitation and public health

It also provides a first opportunity for experts to reflect on lessons from the Covid-19 pandemic.

Speaking from Brussels at the opening ceremony of the World Water Congress **Commissioner Virginijus Sinkevičius, the European Commissioner for the Environment**, called on experts meeting in Korea for more data and research saying: “Water knows no borders. It is an area where cooperation is essential, across river-basins, countries and continents. That’s what makes the international World Water Congress so important, ensuring we are not divided by water, but brought together through regional cooperation... To understand the interconnections, we need more research and innovation. They will help develop the tools and rules we need and the solutions to deliver lasting change”.

Addressing assembled experts, **H.E. Mr. TIAN Xuebin, Vice Minister, Chinese Ministry of Water Resources** said: “With the (Congress’) theme of global water security and the resilience of water resource systems, it is particularly important to exchange policies, knowledge and scientific achievements, which attracts the attention of countries worldwide. To that end we are honoured to host the XVIII World Water Congress in 2023 in Beijing”.

Professor Gabriel Eckstein from Texas A&M University and IWRA

President said: “Water touches all aspects of our changing climate and how we live – from food to fuel, including managing a pandemic. The frontline preventative step during the Covid-19 pandemic is to wash our hands. But what do you do if you only have access to a dirty or contaminated water supply, or no water at all? Better understanding of the complexity of water resource management presents an opportunity to mitigate the risks that water insecurity presents. Knowledge is key, which is why this year’s World Water Congress is so important”.

Other ministers speaking at the opening ceremony include water ministers from Korea and Senegal.

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Federal watchdog warns secur US infrastructure 'in jeopardy' without action

BY MAGGIE MILLER - 12/02/21 05:52 PM EST

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A federal watchdog agency on Thursday released findings highlighting serious concerns around cybersecurity vulnerabilities in U.S. critical infrastructure, warning that these systems are "in jeopardy" if the government fails to take action.

The Governmental Accountability Office (GAO) released the [report](#), which highlights increasing threats to the nation's key systems over the past year to argue for the need for the federal government to take steps, including implementing a national cybersecurity strategy and enhancing federal protection of critical infrastructure.

"If the federal government doesn't act with greater urgency, the security of our nation's critical infrastructure will be in jeopardy," GAO wrote in a summary of the report.

The report was released in conjunction with a hearing on securing the nation's infrastructure held by the House Transportation and Infrastructure Committee on Thursday. Nick Marinos, the director of Information Technology and Cybersecurity at GAO, raised concerns in his testimony that the U.S. is "constantly operating behind the eight ball" on addressing cyber threats.

"The reality is that it just takes one successful cyberattack to take down an organization, and each federal agency, as well as owners and operators of critical infrastructure, have to protect themselves against countless

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numbers of attacks, and so in order to do that, we need our federal government to be operating in the most strategic way possible,” Marinos testified to the committee.

According to the report, GAO has made over 3,700 recommendations related to cybersecurity at the federal level since 2010, and around 900 of those recommendations have not been addressed. Marinos noted that 50 of the unaddressed concerns are related to critical infrastructure cybersecurity.

“Clearly, there is a lot more work to do, and we think that agencies need to move with a much greater sense of urgency to improve their cybersecurity protections,” Marinos testified.

The findings were made public in the wake of several high profile cyberattacks on critical infrastructure organizations over the past year. These included the ransomware attack in May on Colonial Pipeline, which temporarily crippled fuel supply to the East Coast, and the unsuccessful attempt by a hacker in February to poison the water supply in Oldsmar, Fla.

Treasury warns of delayed tax refunds due to 'enormous challenges' States carve out billions in budgets for electric vehicle surge

GAO has listed cybersecurity as a key area of government risk since 1987, finding in its most recent “high risk” report submitted to Congress earlier this year that government cybersecurity has “regressed” since 2019.

Marinos pointed to these continuing concerns by GAO in highlighting the urgent need for more action.

“In order for our nation to overcome its ever mounting and increasing array of cyber challenges, our federal government needs to do a better job of implementing strategy, oversight, and coordination among federal agencies and with the owners and operators that are on the front lines of this digital battle,” Marinos testified.

TAGS GAO HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE CYBERATTACKS

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TWEET



First big tranche of infrastructure dollars heading to states for water, lead pipes

EPA Administrator Michael Regan said it was the “single largest investment in water infrastructure” in the history of the federal government.



— National Guard members fill buckets at a public water distribution site after cold weather caused large numbers of water outages in Jackson, Miss., on March 4. Rory Doyle / Reuters

Dec. 2, 2021, 11:01 AM PST

By Josh Lederman, Kristen Welker and Peter Alexander

WASHINGTON – The first major infusion of federal cash from the [bipartisan infrastructure law](#) is on its way to states to overhaul the country's aging water infrastructure and dangerous lead pipes. The Biden administration announced Thursday that the Environmental Protection Agency will distribute \$7.4 billion to states, tribes and territories for 2022 focused on water infrastructure grants and loan forgiveness. The funding is part of a broader \$50 billion investment in water infrastructure from the infrastructure law, which will be doled out over five years.

EPA Administrator Michael Regan said in an interview that it is the "single largest investment in water infrastructure" in the history of the federal government.

"This law's investment in water is nothing short of transformational," Regan said. "We're less than three weeks post the president signing this, and we're hitting the ground running."

The money includes \$2.9 billion specifically earmarked to replace lead pipes — President Joe Biden has promised that every remaining lead pipe in the country will be eliminated under the deal. Another \$866 million will be designated to deal with "forever chemicals" and other water contaminants that threaten the drinking water supply, the EPA said.

After months of hard-fought congressional negotiations, Biden last month signed into law the \$1.2 trillion infrastructure deal, which includes \$550 billion in new investments, such as pipes and pollution remediation.

Explaining to the public exactly how it will benefit from the far-reaching deal has been a challenge for the Biden administration, [which deployed](#) the president to a crumbling bridge in New Hampshire [last month](#) and to a technical college in Minnesota on Tuesday to call attention to how individual communities could benefit.

Regan pointed to raw sewage backups in Detroit and hundreds of thousands of lead pipes that service homes and schools in Chicago as examples of urgent water infrastructure needs that would benefit from new federal funding.

"When I think about communities like Jackson, Mississippi, and I'm having conversations with 8- and 9-year-olds who are frustrated that they have to evacuate their school because their schools' water infrastructure is inadequate, obviously, your heart goes out," he said.

The Biden administration has only limited say in how the money gets spent. Some of the funding will flow through federal grants, which the administration can issue to specific projects. But the majority of the dollars will be distributed to [states](#), which will ultimately decide what projects they want to fund.

That has created a challenge for the administration to ensure that the money is spent in a way that meets its goals, such as focusing funds on underserved and disadvantaged communities, rather than on other priorities that states may have.

In a letter being sent to governors Thursday and obtained by NBC News, Regan said the federal government and the states "share the same goals" and implored them to focus their share of funds on low-income, disadvantaged and minority communities.

"The agency strongly urges states to maximize the potential to remove barriers and prioritize the distribution of grant funds to disadvantaged communities," Regan wrote. "It is a top priority for the EPA to ensure communities that have historically struggled to access ... funding are prioritized."

Josh Lederman



Josh Lederman is an NBC News correspondent.

Kristen Welker



Kristen Welker is chief White House correspondent for NBC News.

Peter Alexander



Peter Alexander is chief White House correspondent for NBC News.

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Inside the Sparks mayor's vision to replace warehouses with housing on the Truckee River

by Ben Margiott

Wednesday, December 1st 2021



Sparks' Cottonwood Park along the Truckee River as seen from the News 4-Fox 11 Sky Vision drone on Nov. 30, 2021.

SPARKS, Nev. (News 4 & Fox 11) — On a morning stroll through Cottonwood Park along the Truckee River recently, Sparks Mayor Ed Lawson made an observation.

"We're about the only two people walking around down here," Lawson said as we walked the river path.

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Inside the Sparks mayor's vision to replace warehouses with housing on the Truckee River

Hardly anyone was enjoying the gem of the Truckee Meadows. Perhaps, Lawson thought, it was because the sound of semi-trucks and forklifts drowned out the babbling river as it flowed out to Pyramid Lake.

Or maybe, he wondered, if it had to do with the fact virtually no one lives on the Truckee River shores in Sparks. Just 100 people live between Rock and Vista boulevards and between Interstate 80 and the Truckee River. All of them live at the Rivers Edge RV Park next to Rock Park, Lawson said.

Instead of weaving through houses, condominiums and apartments like in neighboring Reno, the river meanders through warehouses in the city's industrial area.

“*Everybody in America would love to have a river run through their city. And our has tilt-up concrete on it.*”

Lawson said that's why he's envisioning a new Sparks — one where people reside near the river instead of industry.

"Why don't we just see about moving our entire industrial center and putting people on the river? Because it's such a gem," he said. "It's a big idea, it's going to take a long time, it's going

Decades from now, Lawson envisions the Truckee River in Sparks as a high density population

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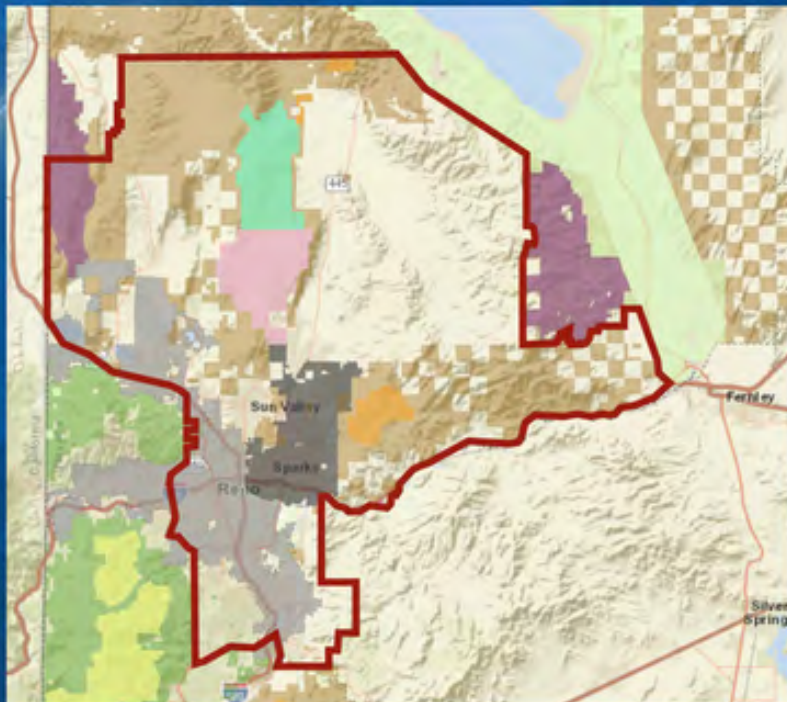


But the Sparks industrial area is full and Washoe County is practically out of easily developable land, said Scott Bensing, a consultant working to pass the [Truckee Meadows Public Lands Management Act](#).

"The public land that surrounds us might as well be ocean," Bensing said, referencing the fact that the federal government owns the vast majority of land in Washoe County.

“We essentially are in the last stages of running out of developable land.”

The measure, also known as the Washoe County lands bill, could open up to 10 to 15 thousand acres of federal land between Sparks and USA Parkway that the government would auction off to developers. Supporters are calling it an 'infill' project because they envision filling in the open area east of Sparks stretching to the Tahoe Reno Industrial Center.



Map shows the land (tan-colored) that could be auctioned off under the Truckee Meadows Public Lands Management Act.

But [critics call it urban sprawl that would degrade the quality of life](#) in northern Nevada.

an sprawl here

37°

52°

57°

This is simply a

 bankers and other people who want to make as much money as fast as they can by paying over

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Although the bill will certainly face some opposition, Bensing and Lawson said they believe the bill will ultimately get support from some environmental and conservation groups, such as the [Friends of Nevada Wilderness](#).

Bensing said he hopes the measure is introduced in Congress in spring or early summer 2022 and voted on by late fall or early winter of that year, so the government can begin auctioning off parcels in 2023.

If the bill passes, Lawson said, then it's up to individual companies to start moving to the wide open areas included in the lands bill. News 4-Fox 11 asked if the city would use any incentives or penalties to get companies to relocate.

"No, no. We're not going to pull any levers, we're not going to force anyone to do anything," Lawson said.

He hopes industry will be enticed by custom lots, proximity to the Tahoe Reno Industrial Center and the possibility of cheaper land. Not to mention, Lawson said, companies won't have to insulate their buildings up to 4 feet because the area isn't in a floodplain.

At least one developer is already interested in a housing project along the Truckee River, Lawson said, and he hopes the first housing project can open to residents in the next 5 to 10 years.

“ *It kind of feels like you're fighting for a river.*

To learn more about the [Truckee Meadows Public Lands Management Act](#), [click here](#).

Email reporter Ben Margiott at bjmargiott@sbgtv.com. Follow [@BenMargiott](#) on Twitter and [Ben Margiott KRN](#) on Facebook.

Mayoral Candidate Jenny Brekhus – A Conversation

Affordable Housing, Urban Development, and Infrastructure Challenges in Reno

By **Claire Carlson** - December 2, 2021



Jenny Brekhus on the left - image: Washoe Dems, cc 2.0

A resident of Reno since 1998 and an experienced city planner, Jenny Brekhus has been a city council member for Ward 1 for three consecutive terms, first elected in 2012. She will be running against Mayor Hillary Schieve in the 2022 election.

This interview has been edited and condensed for length and clarity.

What first attracted you to run for City Council in 2012?

Growing up, my dad was on the town council in my small Marin County hometown. Because of this, I knew what was involved with leading a city and realized I know as much about cities as anyone, especially with my city planning background. I felt that someone with an understanding of all the complexities that are involved with leading and directing a city would be a good attribute to have on the council. So in 2011, I started running and then in 2012, I was elected to Ward 1.

What are the big issues you plan to address with your mayoral run this coming year?

Well, I'm really running to restore the integrity of the office. I believe that Mayor Schieve has allowed special interests to fester at City Hall. And I think it's worked against the progress that

our city needs to move in the right direction because special interests weigh heavily on the direction, decisions, and focus of the council.

Another issue is transparency. Schieve has chided me for having private conversations with people making requests for the council, yet at the same time, she's not advocating for public processes to create plans that create policy. She has a closed door, movers and shakers approach to governance, and you just can't do that in a region that is growing to half a million people. There are too many interests at the table that need a voice. And if you don't even set the table for them to have a voice, you're locking them out.

Lastly, focus. I've been focused on the fiscal matters of the city. Schieve's focus has been on other issues that, even if they're good issues in and of themselves, seem to take over all the oxygen in the room, whether it's the space whale or her desire to be a cryptocurrency influencer.

We're a city that has had so much turmoil and needs to be focused on essential services like public safety, infrastructure, and the impacts of our decision-making on people's household budgets. The issues Schieve has focused on are on the edge of essential, and while they may be good focuses, they don't really move the ball forward.

sponsor



sponsor

Affordable housing is a big issue in Reno, with just a 1.6% vacancy rate for rentals and an average monthly rent of \$1600. How are you going to address this housing issue?

I think we're at a good moment. Since 2014, I've been advocating that homeless services need to be provided by Washoe County instead of the City of Reno, and recently that did happen. That frees up the city to work on housing production, which is what homeless and housing insecure people need. When you look at the federal roles, the state roles; it's more our wheelhouse to be the sponsor of these subsidies, while also making sure that the market is poised in the best position it can be to deliver the products that we need.

Now, this issue is challenging all over the country and there are not a lot of great models for how to approach it out there. But we had a good template with our Reno Master Plan, which I spearheaded when I was elected in 2012. And we have really stopped implementation on that.

Additionally, we have not been very measured in our growth. We have not gone to these outlying areas and decided in a strategic manner when we're going to invest in infrastructure, when we're ready to put the police patrols and fire out there. We've just more or less let everyone in every direction get any approval they want. And when you approve everything, nothing gets built.

There are people sitting with approvals for development, but they don't have the public infrastructure commitments there with them. And that's been a leadership deficiency of Schieve, because the recipe for responsible growth is already there in the master plan.

There are a lot of big players who are exacerbating this affordable housing issue, one of whom is Jeffrey Jacobs, a casino developer who has demolished many affordable living situations to make way for his Neon Line District project. How do you confront developers like Jacobs?

If you are going to do incentives or partnerships with developers like Jeffrey Jacobs, you need to get something in return. Yet, the only thing that appears to be in return in the Jacobs situation is campaign contributions to Mayor Schieve.

The decades-long development agreement made with Jeffrey Jacobs was a special interest deliverance with no real performance measures to reach our housing affordability goals in Reno. It just displaced a lot of people, some of whom were housed in motel units that have been destroyed by Jacobs to make room for his casino project.

If you are going to be a participant in the marketplace with partners, you have to be very sure that there's certainty and there's the deliverance of performance that benefits the public – something that did not happen with Schieve.

Transportation infrastructure is a challenge in Reno as the area has grown to nearly half a million people. How do we deal with some of the issues that come with this growth in an area poorly equipped with appropriate public transportation?

I have a long history with the transit system. Before I came onto the council, I was a Regional Transportation Commission (RTC) board appointee to the Citizens Advisory Committee for transit. So I know the system well. I knew the system well during times of distress like the Great Recession when it was sales tax dependent.

Of course, you're not going to see transit use in the Mountain West like that in coastal metros, but you still need to have it as a good option and work to increase its accessibility, and there are models for how to do it with a bus system. Yet we have completely reversed in any way an emphasis toward a functioning bus system and it has been one of the most distressing things I've seen since I've been on the council. It was completely avoidable and now it has destroyed something that was reasonably operating, impacting our most needy.

Here's what needs to happen, and I will do it within 30 days of taking office: I will pass a resolution that there be legislative changes to the region's fuel tax. The fuel tax is about 40 cents on the gallon and it keeps escalating. It is hitting people's pocketbooks and everyone knows that it needs to be stopped, and I'm going to stop it. The resolution will also say that out of that fuel tax we're going to get some money and put it into the transit system. The transit system is underfunded and I will make it a priority to get the system rebuilt to where it needs to be, which is on par with other western cities.

I'm also going to work to reform RTC. It's a very clubby special interest group that only has five members and not enough voices at the table. I will be proposing that it become a 10 member body and mirror the composition of the Truckee Meadows regional planning agency so that we will never allow the interests that have dominated over there to ignore a very important component of our region's transportation system and responsibilities.

Climate change is always a big part of any discussion about transportation, growth, and development. Do you feel like the objectives outlined in the Reno Sustainability and Climate Action Plan are being met, and what actions would you take to address some of the climate impacts affecting the city?

I think the Sustainability and Climate Action Plan is a very all-encompassing, broad plan, but I think it's a good scan of the issues. However, things have moved forward rapidly and every region is already experiencing climate change. Scenarios are starting to play out in almost every region. The one that we are seeing and experiencing is the warming temperatures, the drought cycle, and the air quality deterioration during smoke events. To me, those need to be front and center.

I sit on Truckee Meadows Water Authority and all things considered, we are doing pretty well water-wise in comparison to, say, Las Vegas, where the Colorado River is front and center – it's existential.

We are not at that point yet. But what we really are seeing is a change that we don't have experience dealing with, and it's making sure everyone has access to cooling environments when they need it and environments where they can be protected from air quality deterioration.

A difference between Hillary Schieve and me is that every five years the region's management disaster plan gets updated. And each year I bring in the issue about cooling centers and fresh air centers and have tried to get that into the plan. We have to have a focus on that. And what I see from Schieve is not a lot of focus on these issues.

I think the scenarios we're facing are so advanced that Reno is now at the forefront of some very rapid climate deterioration situations. So, it doesn't call for nice things like signing on to, you know, global agreements by the mayor. It calls for the mayor to really start to think about what air quality is doing to our public, both that which is locally created by transportation and

that which is created by other sectors. We're all attracted to the Reno area because of the geography. But that geography has come with an increased risk of proximity to fires and smoke and we need to start realizing what that is doing to our citizens.

Do you have any closing thoughts?

You know, I love being out on the campaign trail. I've run city-wide twice. And then one time just in the Ward. So I've been out there and I am so excited to go back out to every neighborhood in every area and hear from folks. As you step up to Mayor, you have to understand the complexity of the regional and neighborhood issues, and I'm really excited to get to know these areas even more as I go out over the next year. I am so excited to bring the opportunity for leadership to restore integrity to the council. What's been lost by Hillary Schieve's captured interests, by her being captured by the interest of her lobbying friend. She thinks that working out deals in private is the way to go and we just can't do public policy that way any longer. So the voters are going to have a very clear distinction come next year and I'm looking forward to getting out there on the trail with my family and my friends and my supporters.

Claire Carlson writes about the environment for Ally. [Support her work.](#)

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We are on a journey of steady growth and innovation. And we're just getting started. In 2022, we will expand our newsroom and launch new creative partnerships to amplify our residents' voices and surface community members' stories, questions, and concerns. Our goal – provide information relevant to our readers' needs.

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On behalf of all of us at the Sierra Nevada Ally, thank you for your generous support.

Joe McCarthy, General Manager

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EPA Invites 39 New Projects to Apply for Water Infrastructure Loans

Projects will help modernize water infrastructure for 25 million Americans while creating up to 49,000 jobs

December 3, 2021

Contact Information

EPA Press Office (press@epa.gov)

WASHINGTON — Today, the U.S. Environmental Protection Agency (EPA) announced that 39 new projects are being invited to apply for Water Infrastructure Finance and Innovation Act (WIFIA) loans and four projects are being added to a waitlist. The agency anticipates that, as funds become available, \$6.7 billion in WIFIA loans will help finance over \$15 billion in water infrastructure projects to protect public health and water quality across 24 states.

“Far too many communities still face significant water challenges, making these transformative investments in water infrastructure so crucial,” **said EPA Administrator Michael S. Regan**. “The WIFIA invited projects will deliver major benefits like the creation of good-paying jobs and the safeguarding of public health, especially in underserved and under-resourced communities. This program is a shining example of the public health and economic opportunities that will be achieved under President Biden’s Bipartisan Infrastructure Law.”

EPA’s WIFIA program will provide selected borrowers with innovative financing tools to address pressing public health and environmental challenges in their communities. Consistent with its announced priorities, the WIFIA program is making \$1.2 billion in loans available to support infrastructure needs in historically underserved communities. Additionally, 14 projects will help protect infrastructure from the impacts of extreme weather events and the climate crisis. New and innovative approaches, including cybersecurity, green infrastructure, and water reuse, are included in 24 projects.

By diversifying its geographic reach and the types of selected borrowers, the WIFIA program will also expand the types of projects it supports. For the first time, entities in Connecticut, Delaware, and Hawaii are invited to apply. Three small communities, with populations of 25,000 or less, are selected for WIFIA loans totaling nearly \$62 million. In addition, seven projects submitted by private borrowers and public-private partnerships totaling over \$1.5 billion in WIFIA financing are included.

EPA is also inviting state agencies in Indiana and New Jersey to apply for a total of \$472 million in WIFIA loans through EPA's state infrastructure financing authority WIFIA (SWIFIA) program. EPA's SWIFIA loans are available exclusively to state infrastructure financing authority borrowers, commonly known as State Revolving Fund (SRF) programs <<https://epa.gov/fedfunds/epa-state-revolving-funds>>, and will allow these programs to finance more infrastructure projects in their states. These programs will combine state resources, annual capitalization grants, and the low-cost, flexible SWIFIA loans to accelerate investment in drinking water and wastewater infrastructure to modernize aging systems and tackle new contaminants.

WIFIA Invited Projects:

- **Baltimore City Department of Public Works (Md.):** \$36 million for the Water Infrastructure Advancement 2021 project.
- **Charlotte Water (N.C.):** \$169 million for the Mallard Creek Sewer Basin Wastewater Collection and Treatment Improvements Program.
- **City of Ashland (Ore.):** \$36 million for a 7.0 Million Gallons per Day Water Treatment Plant.
- **City of Bellingham (Wash.):** \$136 million for the Post Point Resource Recovery Plant Biosolids Project.
- **City of Boise (Idaho):** \$272 million for Water Renewal Services Capital Investments Projects.
- **City of Chattanooga (Tenn.):** \$186 million for Wastewater Compliance and Sustainability Projects.
- **City of Cortland (N.Y.):** \$12 million for the Homer Avenue Gateway Project.
- **City of Memphis (Tenn.):** \$44 million for Stormwater Upgrades.
- **City of Oregon City (Ore.):** \$12 million for Water Rehabilitation, Resiliency and Improvement Projects.
- **City of Philadelphia (Pa.):** \$260 million for the Water Department 2021 project. **City of**
- **Port Washington (Wis.):** \$12 million for the Water Treatment Plant Improvement Project.
- **City of Santa Cruz (Calif.):** \$164 million for the Santa Cruz Water Program.
- **City of Westminster (Colo.):** \$130 million for the Water2025 project.
- **City of Wichita (Kan.):** \$181 million for the Wastewater Reclamation Facilities Biological Nutrient Removal Improvements Project.
- **County of Hawaii (Hawaii):** \$24 million for Hawaii Wastewater Treatment Upgrades.

- **EPCOR Foothills Water Project Inc. (Ore.):** \$76 million for the Lake Oswego Wastewater Treatment Replacement Project.
- **Fishers Island Water Works Corporation (N.Y.):** \$14 million for Water System Improvements.
- **Gainesville Regional Utilities (Fla.):** \$14 million for the Sanitary Sewer Replacement and Improvement Project.
- **Helix Water District (Calif.):** \$16 million for the Drinking Water Reliability Project. **King County (Wash.):** \$287 million Master Agreement.
- **Marin Municipal Water District (Calif.):** \$11 million for Marin Water. **Metropolitan St. Louis Sewer District (MSD) (Mo.):** \$278 million for MSD Project Clear - Deer Creek Watershed / Lemay Service Area System Improvements.
- **Metro Water Services (Tenn.):** \$186 million for the Process Advancements at Omohundro and K.R. Harrington Water Treatment Plants Project.
- **Narragansett Bay Commission (R.I.):** \$28 million for Field's Point Resiliency Improvements.
- **New Castle County (Del.):** \$32 million for the Christina River Force Main Rehabilitation Project.
- **Project 7 Water Authority (Colo.):** \$39 million for the Ridgway Water Treatment Plant.
- **Rialto Water Service LLC (Calif.):** \$68 million for Microgrid and System Improvements.
- **San Francisco Public Utilities Commission (Calif.):** \$618 million for Wastewater Capital Plan Resilience Projects.
- **Santa Clara Valley Water District (Calif.):** \$575 million for the Pacheco Reservoir Expansion Project.
- **Santa Clara Valley Water District (Calif.):** \$80 million for the Safe, Clean Water and Natural Flood Protection Program.
- **Santa Margarita Water District (Calif.):** \$22 million for Recycled Water Conversion. **Sharyland Water Supply Corporation (Texas):** \$14 million for Sharyland Water Supply Corporation Water System Infrastructure Improvements.
- **South Central Connecticut Regional Water Authority (Conn.):** \$20 million for Lake Whitney Dam and Spillway Improvements.
- **Tualatin Valley Water District (Ore.):** \$16 million for the Water System Upgrades Program.
- **United Water Conservation District (Calif.):** \$52 million for the Santa Felicia Safety Improvement Project.
- **Upper Santa Ana River Watershed Infrastructure Financing Authority (Calif.):** \$177 million for the Watershed Connect project.
- **Village of New Lenox (Ill.):** \$70 million for Phase 1 Improvements projects.

Waitlist Projects:

- **American Infrastructure Holdings (S.D.):** \$20 million for the Sioux City Biosolids to Fertilizer Project.
- **Lake Restoration Solutions, LLC (Utah):** \$893 million for the Utah Lake Restoration Project.
- **Northern Water (Colo.):** \$464 million for the Northern Integrated Supply Project - Glade Reservoir Complex.
- **Southland Water Agency (Ill.):** \$479 million for the Southland Water Agency Infrastructure System.

Background on WIFIA

Established by the Water Infrastructure Finance and Innovation Act of 2014, the WIFIA program is a federal loan and guarantee program administered by EPA. WIFIA's goal is to accelerate investment in the nation's water infrastructure by providing long-term, low-cost supplemental credit assistance for regionally and nationally significant projects.

Since the first WIFIA loan closed in 2018, EPA has announced 63 WIFIA loans that are providing over \$12 billion in credit assistance to help finance approximately \$26 billion for water infrastructure while creating more than 73,000 jobs and saving ratepayers over \$4.5 billion. EPA received 50 letters of interest from public and private entities as well as State Infrastructure Financing Authorities in response to the 2021 WIFIA Notice of Funding Availability (NOFA) <<https://epa.gov/wifia/wifia-funding-currently-available>> and the 2021 State Infrastructure Financing Authorities WIFIA NOFA

<<https://www.federalregister.gov/documents/2021/04/29/2021-08865/notification-of-funding-for-credit-assistance-under-the-state-infrastructure-finance-authority-water>>.

For more information about the WIFIA program, visit: <https://www.epa.gov/wifia> <<https://epa.gov/wifia>>.

For more information about the SWIFIA program, visit <https://www.epa.gov/wifia/what-swifia> <<https://epa.gov/wifia/what-swifia>>

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DECEMBER 3, 2021

Survey: Social acceptance of water reuse isn't the biggest challenge

by Cranfield University



Credit: CC0 Public Domain

European surveys have revealed that the perceived "yuck factor" typically predicted as a public reaction to wastewater recycling may not be as bad as thought.

An anticipated negative perception of water recycling, or wastewater reuse projects, is frequently cited as a stumbling block when delivering large-scale water recycling projects.

However, the surveys have revealed that the public is more open to wastewater recycling than the water sector has historically believed.

Distributed to over 2500 participants in the UK, Spain and the Netherlands, surveys carried out by Cranfield University focused on the use of recycled water for drinking purposes, and the use of recovered nutrients to grow food.

The intention was to find up-to-date views on the state of acceptance of wastewater recycling (direct potable reuse), especially with more projects coming online.

The results showed that in the Netherlands, 75 percent of respondents supported, or strongly supported the use of recycled water for drinking, compared to 67 percent in the UK, and 73 percent in Spain.

Dr. Heather Smith, senior lecturer in Water Governance at Cranfield University, believes this is due to the perceived closer connection between clean water and wastewater than recovered nutrients and food.

"We looked at the drivers behind people's reactions, and there is a powerful influence from what we call social norms. Opinions on both recycled water and food were strongly affected by their beliefs in their immediate networks."

The surveys were part of the Horizon2020 (H2020) NextGen collaboration that aims to drive the circular economy through a wide range of water-embedded resources, including water, energy and materials.

The four-year H2020 project brings together a partnership of 30 organizations to demonstrate technological, business and governance solutions for water in the circular economy.

Jos Frijns, resilience management & governance team leader at KWR, the co-ordinating organization behind NextGen, adds that acceptance varies depending on a utility's established trust.

"An element in the acceptability of wastewater recycling relates to trust. Trust in the water quality and personal experience but also trust in the organizations delivering the service."

He added: "In the Netherlands, there's high trust in governmental agencies related to environmental control and quality. That helps in citizens trusting reuse initiatives, and that might be a much more important factor in improving acceptability than just informing and educating."

Frijns said that there has been a recent shift in water reuse, especially in the public sector.

Provided by [Cranfield University](#)

Citation: Survey: Social acceptance of water reuse isn't the biggest challenge (2021, December 3) retrieved 14 December 2021 from <https://phys.org/news/2021-12-survey-social-reuse-isnt-biggest.html>

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<https://www.wsj.com/articles/white-house-readies-plan-to-boost-cybersecurity-of-water-supply-11638565221>

PRO CYBER NEWS

White House Readies Plan to Boost Cybersecurity of Water Supply

Utilities are reviewing a proposal to help detect hacks and share data with authorities



Security experts say defending the U.S. water supply should take on urgency because of growing threats to the water sector. Anaerobic digestion units at the Hyperion Water Reclamation Plant in Los Angeles are shown.

PHOTO: DAVID MCNEW/SHUTTERSTOCK

By [David Uberti](#)

Dec. 3, 2021 4 00 pm ET

The Biden administration is readying a proposal to shore up the cybersecurity of the U.S. water supply, a system maintained by thousands of organizations with sometimes glaring vulnerabilities to hackers.

The plan broadens a White House initiative to persuade key industrial companies to upgrade technology for detecting cyberattacks. U.S. officials hope water utilities will analyze and voluntarily report such data to help authorities monitor threats to different types of critical infrastructure.

The White House previously said it would expand the program to water utilities this year as part of a push to prevent hackers from breaking into the increasingly digitized control systems of industrial firms.

Water-sector trade groups are evaluating the draft blueprint and potential technology needs, how U.S. officials would support the effort and the types of data the government wants, said Kevin Morley, manager of federal relations for the American Water Works Association.

“It gives visibility to our federal partners,” said Mr. Morley. “But how is that information shared back for the net good of the sector, or other sectors, for that matter?”

The White House launched its Industrial Control Systems Cybersecurity Initiative in April during a 100-day “sprint” to shore up the security of electric utilities. The program was expanded in August to include natural-gas pipelines.

Adding the water sector to the program would mark the latest attempt to harden privately or publicly operated infrastructure that historically has operated with few cyber regulations.

Security experts say defending the water supply should take on urgency because of growing threats to the sector and the dated technology of some utilities. In February, a hacker accessed an Oldsmar, Fla., water utility's control system and attempted to increase the amount of lye used to treat the water to a potentially dangerous level. U.S. officials in October warned of "ongoing malicious cyber activity" against water utilities, citing three ransomware attacks this year.

As a part of the White House plan, the Environmental Protection Agency, which oversees the cybersecurity of water utilities, will work with the Cybersecurity and Infrastructure Security Agency to help utilities improve their ability to spot such attacks, an EPA spokesman said.



Pinellas County Sheriff Bob Gualtieri, right, at a press conference in February after a hacker accessed an Oldsmar, Fla., water utility's control system. PHOTO: WTSP

"The draft plan outlines roles and responsibilities that leverage the expertise and resources of EPA, CISA, and water sector partners," he said in a statement.

The White House National Security Council floated the draft plan on Nov. 10, said Michael Arceneaux, managing director of WaterISAC, a nonprofit that shares information about security threats within the water sector.

"Assuming the initiative gains traction among water and wastewater utilities, the sector associations will be working to help our members make informed choices about the sharing options available to them," he said.

A National Security Council spokeswoman said the Biden administration hopes to expand its work to the water sector soon but declined to comment on when it intends to launch the initiative. CISA declined to comment.

The administration has revamped U.S. cyber policy after federal agencies were breached through compromised SolarWinds Corp. software last year and a spate of ransomware attacks disrupted a major fuel pipeline company this spring. Along with unveiling first-of-their-kind regulations for the pipeline and rail sectors, U.S. officials have pushed for companies to take part in voluntary partnerships such as the Industrial Control Systems Cybersecurity Initiative.

Implementing such programs could be challenging for the water sector, said Robert Powelson, president of the National Association of Water Companies, a trade group representing investor-owned utilities. More than 50,000 entities maintain the U.S. water supply, he said, while security experts have criticized the EPA for lacking cyber staff and expertise to oversee such a fragmented sector.

The EPA, which has no binding cybersecurity standards for water providers, has said it has the tools it needs to help utilities defend themselves.

Ultimately, the water sector needs regulations administered not by the EPA, but through a model similar to the electric sector, said Mr. Powelson, a former commissioner of the Federal Energy Regulatory Commission, which regulates the interstate transmission of electricity.

“For people in our [water] sector to say, ‘We should have voluntary standards,’ that to me is hogwash,” he said.

Write to David Uberti at david.uberti@wsj.com

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WATER UTILITY MANAGEMENT

Digital Transformation of Water Lifecycle Management

How water utilities are transforming their digitalization efforts. [Stephen Major](#)

Dec. 6, 2021



The goal of digital transformation is sustainable lifecycle water management. Currently, water hazards that impact public health and the environment are increasingly common due to budget constraints that limit water utilities' ability to effectively maintain long-term assets.

The complexity of managing water supply, while always difficult, is increasing. The rapid growth of urban populations and more extreme weather events, both drought and flooding, often associated with climate change, are leading to an increased focus on the sustainability of our raw water from rain, wells, rivers and lakes.

Meanwhile, water utilities continue to struggle to ensure they have the budgets needed just to keep their long-lived assets well maintained and operational. Water has historically been undervalued, with societal expectations that it is a fundamental right, not a commodity to be paid for. As a result, under-investment over the life of these assets is not unusual, which raises issues around water quality and availability. It is increasingly common to see incidents such as sewage overflows that potentially pose acute water and wastewater hazards and impact public health and the environment.

Having a consolidated and unified end-to-end operational view of the performance and health of utility assets is one of the biggest challenges facing utilities. This is largely a legacy of the fragmented way in which systems have grown over time. Sub-systems are often purpose-built solutions optimized for specific use cases, which must be managed separately. They feature proprietary operational systems with their own way of discovering devices, maintaining security and running diagnostics and analytics, if these capabilities are even supported. Add to this proprietary communication protocols, and it makes it difficult to integrate an end-to-end solution at all, let alone deploy it at scale.

The complexity has grown over time as the result of incremental innovations, each one creating its own efficiencies; nonetheless, the net result today could be much more efficient if properly integrated as a whole. Digital transformation of utility systems is all about the integration of the sub-systems and the communication and sharing of data between them, enabling greater insights. Paired with artificial intelligence (AI) and machine learning, the end-to-end management of our water infrastructure will have huge benefits for meeting the business and social goals of sustainable water management.

Real-time awareness from management to consumers

The dream of many utility managers is to have fingertip access to all the metrics they need for their entire operational network. This would give them awareness of their above and underground inventories, the condition of all their assets and overall efficiency, and would help them to make better decisions based on full situational awareness. Ideally, it would also help them to predict problems and failures before they occurred and to react faster to faults, enabling them to launch crews with a full readout on the situation they were being deployed to fix.

Similarly, imagine the same kind of data being made available to the consumer. The household would become much more informed about their daily consumption patterns with the availability of more real-time granular data providing greater insights, empowering customers to change their consumption behavior to enable a more sustainable future. It could monitor appliances and help to conserve water, as well as identifying potential leaks, and manage recycling and storage.

The key to these capabilities and services lies in digital sensors, wireless communications and the integration and analysis of data using open data models and systems. There is enormous potential for innovations in a wide variety of use cases, from operations to end user consumption. But getting the most of digital's potential without creating even more complexity will require more than a little forethought and planning about digital architectures.

Open data standards

The first requirement is to ensure that the equipment you choose is based on widely adopted and, if possible, open standards. The days of standalone, proprietary systems are over. Communications systems such as your low-power wide area (LPWA) field network need to be IP-based because this will ensure that communications between devices and the network will support the widest range of possible applications into the future.

At the software level, one of the most difficult tasks will be to reconcile the data being generated by the various legacy systems. For this, you need to adopt higher-level data standards based on open-source data sets to abstract the different asset and device types, and the protocols supported, providing normalization of data so it can be effectively utilized. Although there are many different open source and proprietary solutions to choose from, there is real interest in the water utility industry to develop interoperable, open-source systems, since this will enable greater innovation through community collaboration.

Having an interoperable way to capture and model the data from your various assets then opens the possibility of creating a digital twin of your end-to-end system. This model functions as a data platform enabling the rapid development and deployment of new software-based applications and innovative business models.

It provides a holistic awareness that can be used to optimize applications and sub-systems in ways that don't pass on inefficiencies to other parts of the system.

This openness should extend to sensing and operational device data, which should be vendor-agnostic. All utilities should be able to use common data management and analytics systems with any device, and pressure needs to be put on device vendors to commit themselves to these common standards.

These recommendations are based on the experience in other fields where the move to digital transformation is more advanced, such as in smart cities, manufacturing and transportation. They reflect a larger technological revolution, often referred to as Industry 4.0, which is driving the intelligent digitization and interconnection of all industrial and smart city infrastructure. It will transform how people, systems and devices interact.

IoT and wireless communications

One of the key technologies that is making digital transformation possible is digital sensing of physical processes. Industrial internet of things (IIoT) is the bridge between a utility's physical and digital realms. It literally transforms the physical into the digital, which then makes it possible to model the physical process as a digital twin. Then AI and machine learning analyze the massive amounts of data being collected and find patterns, draw conclusions and recommend specific actions to be taken.

One of the challenges is how to connect the thousands of sensors and devices and have them communicate with the utility edge cloud where much of the local processing will be done. The logistics of wiring sensors is daunting, thus there is much interest in new wireless technologies.

Standards-based LPWA communications are enabling low-cost, ubiquitous access to low-power IIoT sensors and their data. Cellular technologies based on 3GPP open standards, including private wireless, with support for narrowband IoT and 5G, will be able to support massive numbers of sensors, offer improved coverage, scalability and support for low-power sensors. The advantages of cellular technologies are their reliability, security and the possibility to leverage them for other utility communications such as push-to-talk radio, drone operations, video surveillance, augmented reality and machine-to-machine communications.

Sustainable lifecycle management

The goal of digital transformation is sustainable lifecycle water management. In pursuit of this, digital collection, capture and processing can be leveraged to automate many of the processes that are currently done manually. This could be specific device management to optimized system performance, or alerting staff to potential failures, automatically adjusting water reserves to meet forecasted usage surges or responding to cybersecurity threats systematically. There are a host of other possible use cases such as leakage control, pressure management, water efficiency, water re-use (from grey water to rainwater and effluent), water conservation and demand management.

Along with automation, digital transformation is also focused on augmenting the intelligence and decision capabilities of system managers and staff. Visual, contextual presentations of system-related data can be powerful tools for understanding how the system is operating. The software analytics can be set up to make estimates of the next best action, which can help personnel to narrow down the problem and improve the quality of the decisions made.

The results of digital transformation are already exciting, but its full implementation will be nothing short of total operational transformation. By connecting water resource

management, operations and citizens with supply, distribution, wastewater, and irrigation systems, water supply managers can optimize the whole lifecycle of water. This will enable more intelligent management of assets and a more holistic management approach that will improve water quality, while providing a more environmentally sustainable system.



Infrastructure act will pump \$3B into nation's ailing dams

While not sufficient to cover all needed repairs and upgrades, the new legislation marks a massive investment into hydropower and dam safety.

Published Dec. 7, 2021



Julie Strupp
Editor

The recently signed federal Infrastructure Investment and Jobs Act includes about \$3 billion for dam safety, modernization and removal, as well as for hydropower projects. While that sum is not enough to cover all needed repairs and upgrades for the nation's aging dams, it does mark a significant uptick in funding, according to experts.

The act addresses problematic dams in three ways:

- rehabilitating them for safety and efficiency.
- retrofitting them to enhance electricity production and protect marine wildlife.
- removing the ones that no longer provide much benefit and harm the environment.

There are over 91,000 dams in the U.S., and they are used for flood protection, hydropower, water supply, irrigation, mining and recreation. As of 2019, about 15,600 of them are classified as high-hazard-potential structures — meaning their failure would likely result in a loss of human life and property damage, according to the American Society of Civil Engineers (ASCE). About 2,300 have been labeled "deficient" and in urgent need of repairs.

Rehabilitating all of the nation's high-hazard dams could cost over \$20 billion, according to an Association of State Dam Safety Officials report. As for removing dams, the cost is unique to the project and can vary widely, so it's difficult to predict exactly how far the money will go. Nonetheless, it is clear that the act provides for a massive and much-needed increase in funds.

"This legislation is long overdue and everyone in the industry is eagerly anticipating funding being released to address the extensive infrastructure needs of our dams," said Sharon Powers, executive director of the U.S. Society on Dams, in an email. "Once federal and state agencies know what funding levels are coming their way, the work will begin to identify rehabilitation projects."

Until 2019 there was no national program solely focused on keeping dams owned by local and state governments up to date, according to the AP. While the Federal Emergency Management Agency (FEMA) has funneled about \$400 million for projects involving dams over the past 10 years, this was primarily to fix damages from natural disasters, not upkeep or modernization.

Funds for critical repairs

In 2019, FEMA's Rehabilitation of High Hazard Potential Dams Grant Program was created to improve dams overseen by government entities nationwide. The infrastructure act adds \$585 million into the High Hazard Potential Dams Grant Program — more than 18 times what it gave out from 2019 to 2021, according to the AP — with \$75 million specifically for dam removal.

The new FEMA funds also include \$148 million for state dam safety offices, much more than the roughly \$7 million distributed annually to all states. Many of these offices are underfunded and stretched thin. For example, after dam failures in Michigan forced 10,000 residents to evacuate and caused \$175 million in damages, a 2020 state dam safety program report found the safety office was extremely understaffed and that the state had not invested in dam safety in decades. With these new funds, states can hire more staff to assess dam safety and develop emergency action plans to help protect those who live downstream.

As of 2019 56.4% of U.S. dams were privately owned, according to the ASCE, and repairs on these types of dams can be difficult as regulators have little leverage over owners who don't have the money or desire to make repairs. Now, there are funds available to private owners for this purpose.

Preparing for climate change

Besides a landmark investment in infrastructure, the act is also the country's biggest climate preparedness investment to date. It contains hundreds of millions of dollars for nature-based strategies to make road and bridge projects more resilient and resistant to flooding due to extreme weather and related dam and levee failure. Its hydropower investments are also a boon for the environment.

Currently only about 3% of U.S. dams, or 2,500, produce electricity, a key source of renewable energy. According to a 2016 report from the U.S. Department of Energy's Wind and Water Power Technologies Office, the country could grow its hydropower capacity by a third by 2050 and avoid \$209 billion in costs from greenhouse gas emissions damages by upgrading dams that produce power and adding that capacity to ones that don't. The act moves towards that goal with funds to do just that.

How the money will be distributed and where it will go

A variety of federal agencies will oversee the surge in dam and other infrastructure funding, and are charged with administering new grants and creating new programs. Local and state government agencies, including water utilities and transportation departments, must identify and execute projects in their area. That may include hiring new people and sometimes mobilizing their own financial resources.

There are buckets of funds for dams throughout the legislation:

Infrastructure act funding for dams

\$553 million	Department of Energy (DOE) Water Power Technologies Office grant program to support grid resilience, dam safety upgrades and environmental enhancements at existing hydropower facilities
\$125 million	DOE Water Power Technologies Office incentives to add hydropower capacity at existing dams and conduits
\$75 million	DOE Water Power Technologies Office hydropower efficiency improvements at existing hydropower projects
\$500 million	For dam safety in accordance with the Reclamation Safety of Dams Act of 1978
\$100 million	Through the Bureau of Reclamation for dam rehabilitation, reconstruction or replacement

\$100 million	Dam rehabilitation, reconstruction or replacement through the Bureau of Reclamation for western water infrastructure
\$118 million	Natural Resources Conservation Service Small Watershed Rehab Program Grants
\$75 million	Safety projects to maintain, upgrade and repair dams identified in the National Inventory of Dams with a state, local government, public utility, or private owner, of which \$64 million is for the grants themselves and \$11 million is set aside for administration of the program
\$400 million	National Oceanic and Atmospheric Administration Community Based Restoration Grant Program
\$200 million	Bureau of Indian Affairs for safety of dams, water sanitation, and other facilities
\$585 million	High Hazard Potential Dam Rehab grants for states, of which \$75 million is designated for dam removal and \$148 million is for state dam safety offices
\$200 million	U.S. Fish & Wildlife Service National Fish Passage Program
\$67 million	FEMA Operations and Support for dam safety activities and assistance to states under sections 7 through 12 of the National Dam Safety Program Act
\$148 million	State assistance grants related to the National Dam Safety Program Act
\$115 million	U.S. Army Corps of Engineers Aquatic Ecosystem Restoration Program
\$10 million	U.S. Forest Service Legacy Roads & Trails for removal of non-hydropower federal dams

SOURCE: Infrastructure Investment and Jobs Act

In addition, the act permits some Congestion Mitigation and Air Quality Improvement Program funds to be used for modernization and rehabilitation of locks and dams that are connected to highways, so long as they are "likely to contribute to the attainment or maintenance of a national ambient air quality standard."

The act is not a quick-hit stimulus effort, but rather a generational investment that will require high levels of coordination between different levels of government, according to Brookings. How quickly the funds reach localities depends greatly on the types of projects they're seeking and the programs directing resources to them — programs built from scratch, for example, will take longer than those already built to receive federal funds. While it may be years before the impact is visible, dam safety advocates, environmentalists and contractors alike have expressed excitement about the investment.

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Nevada to receive \$71 million in water infrastructure funding



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Nevada Appeal Capitol Bureau

Tuesday, December 7, 2021 (/news/2021/dec/07/nevada-receive-71-million-water-infrastructure-fun/)

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(<http://twitter.com/intent/tweet?text=http://nevadaappeal.com/news/2021/dec/07/nevada-receive-71-million-water-infrastructure-fun/>)

Nevada will receive \$71.6 million in 2022 through the Bipartisan Infrastructure Law for water infrastructure repairs and upgrades.

The letter to Gov. Steve Sisolak from EPA Administrator Michael Reagan urges the state to focus on projects that remove lead from drinking water as well as chemical contaminants.

The funding is part of the \$50 billion in the infrastructure package for water programs and initiatives nationwide.

Reagan's letter said nearly half of the funding is in the form of grants or principal forgiveness loans to encourage investing in underserved communities.

The 2022 allocation is the first of five years of water infrastructure investments.

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Reclamation launches \$500k snowpack estimation competition

The Bureau of Reclamation has used crowdsourcing to launch the "Snowcast Showdown" competition, offering a \$500k prize purse for snowpack estimation across the western U.S.

Dec. 7, 2021



Today, the Bureau of Reclamation announced a new crowdsourcing competition, the "Snowcast Showdown," which is being implemented by DrivenData, Ensemble, and HeroX.

The competition will look for innovative methods of estimating a large-scale snow water equivalent (SWE), tasking competitors to provide spatially-distributed estimates of SWE over the western U.S. during the 2022 winter season. Participants will compete for a prize purse of \$500,000.

Seasonal mountain snowpack is a critical water resource throughout the Western US. During winter, snow accumulates in mountain headwaters. When temperatures rise in the spring and summer, snowpacks melt, serving as a freshwater source for major streams and rivers which feed Reclamation reservoirs. Therefore, knowing how much water is stored in winter snowmelt is essential to forecasting spring and summer water supplies.

The Bureau of Reclamation is the largest wholesaler of water in the western U.S. and the second largest producer of hydropower in the U.S. Reclamation delivers water to more than 31 million people per year and provides irrigation water to one out of five Western farmers.

"Our technology must advance to meet the particular challenges of climate change and extreme weather," said Greg Lipstein, Principal at DrivenData. "These kinds of Challenges channel the efforts of skilled experts around the world to push forward the tools available to our nation's public agencies and water managers."

While there are multiple technologies to monitor snowpack, none adequately address all of the needs of Reclamation. Over the past several decades, ground-based instruments including SNOwpack TELemetry(SNOTEL) stations have been used to monitor snowpacks.

Ground measures can provide accurate SWE estimates but they are spatially limited, especially at high elevation, and are challenging to maintain. Airborne methods to estimate SWE are highly accurate, but are expensive and currently have limited spatial and temporal coverage. Satellite remote sensing methods are also emerging, but are not yet operational. Thus, new and improved methods are needed to accurately measure SWE and inform critical water management decisions.

The Prize

Prizes will be split across two challenge tracks. The Prediction Competition Track is a machine learning competition, where participants train models to estimate SWE at 1km resolution across 17 states in the Western US. \$440,000 will be awarded in the Prediction Competition Track, with separate prizes for overall performance and performance across three specific geographies.

The second challenge track, the Model Report Competition, is a model analysis competition which will award a \$60,000 prize purse to the top three teams.

The competition's hosts have stated that the the competition is open to anyone aged 18 or older and can participate as either an individual or as a team. Participants may originate from any country, as long as United States federal sanctions do not prohibit participation. Additional eligibility requirements or limits can be found in the challenge rules.

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GOV & POLITICS

SAWS Board approves largest smart water meter rollout in nation



by **Lindsey Carnett**
December 7, 2021



SAWS approved the installation of smart meters across the water utility's full-service area during its Tuesday board meeting. Credit: Bria Woods / San Antonio Report

San Antonio's water meters are about to get smarter.

Following the completion of a successful **pilot program** in November, SAWS' board of trustees unanimously approved the roll out of smart meters across the water utility's full-service area Tuesday.

City-wide rollout will kick off in 2022, and cost roughly \$215 million, according to staff. Installing approximately 600,000 electronic meters and communication devices across SAWS service area will take about four years, and will be the largest deployment of smart or ultrasonic “static” water meters in the nation to date, said Mary Bailey, vice president of customer experience.

Because they don’t have any moving parts, the new meters are less susceptible to wear and tear, which also makes them consistently accurate for longer, she said.

The new meters could save customers and SAWS both money and water.

They’ll help customers potentially save water by monitoring and then adjusting their use during a billing period, and by alerting them quickly to any potential problems — like a sudden increase in continuous water use, which could indicate a leak. Saving water could mean saving money.

For SAWS, sending out fewer trucks and employees to manually read meters should lower labor costs, while the meters themselves can help the utility catch leaks.

“This investment in technology is a tremendous step for SAWS and will help us become even more cost-efficient,” Board Chairwoman Jelynn LeBlanc Jamison said. “Not only will customers have more tools to control their bills, but we’ll be able to reduce lost water, helping us meet ambitious water conservation goals that ensure plentiful water supplies for our growing city.”

The pilot program installed 1,560 static water meters and retrofitted 900 meters with electronic registers around three areas of San Antonio: Stone Oak, Westover Hills, and the downtown business district.

“The pilot accomplished everything we’d set out to do,” Bailey told the San Antonio Report. “I think we were even able to do things that hadn’t been

originally planned.”

Static meters consistently outperformed the retrofitted meters, Bailey said. Because of this, SAWS will focus on installing the new static meters rather than doing any retrofitting, Bailey said.

“We saw a lot of problems with the retrofitting and felt like there’s really not any value to that,” Bailey said.

Much like CPS Energy’s smart meters — which the electric utility rolled out between 2014 and 2017 — SAWS’ new meters will allow customers to see hourly information about their water use and associated costs through an online portal in near-real time. Currently, customers can only see their water use once a month, when bills arrive.

Both San Antonio utilities partnered with Itron to be their smart meter contractor, a move SAWS said will provide economic and operating efficiencies. Itron provides the utilities with the entire infrastructure — an integrated system of smart meters, communications networks, and data management systems that enables two-way communication between utilities and customers. SAWS will run its new metering system on the same wireless network as CPS Energy.

Static meters showed to be consistently more accurate in SAWS-performed lab tests, Bailey said, and can detect lower flows than SAWS current meters. Extended testing by SAWS showed existing meters failed to pass industry minimum flow test standards, while static meters consistently passed them, she added.

While this could mean the meters pick up previously undetected water use, it shouldn’t affect bills unless the improved reading moves the customer into a **higher-use block**, which is unlikely, said Anne Hayden, communications manager of SAWS. SAWS instead hopes it will help customers detect low-flow leaks they can fix to help save water, Hayden said.

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LINDSEY CARNETT

Lindsey Carnett is the Science & Utilities reporter for the San Antonio Report. [More by Lindsey Carnett](#)

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'Death trap' in the desert: What to do if you find PVC pipes used to mark mining claims

Amy Alonzo Reno Gazette Journal

Published 9:06 a.m. PT Dec. 9, 2021 | Updated 11:00 a.m. PT Dec. 13, 2021

If you run across a chunk of hollow PVC pipe driven into the ground in the Nevada wilderness, wildlife agencies and conservation groups ask that you remove it. You could be saving the life of a bird or small animal.

Hollow PVC pipes used to mark mining claims throughout the West tend to attract cavity nesters – birds that rely on confined spaces for secure breeding grounds. The birds fly into the tubes and are unable to escape the smooth-sided cylinders, eventually dying from dehydration or starvation.

It's been a decade since Nevada's Legislature deemed the tubes illegal and authorized the removal of any markers people might find on public land, but potentially hundreds of thousands of markers remain throughout the state.

The areas with the greatest densities of markers are near historic mining districts, said Christy Klinger, biologist with the Nevada Department of Wildlife. Klinger has identified 55 bird species in the pipes, as well as bats, lizards, snakes and other wildlife.

In Northern Nevada, the Mountain Bluebird, Nevada's state bird, is one of the most susceptible to becoming trapped in the pipes.

Historically, mining claims were marked with piles of rocks or wooden stakes. But in the 1970s and '80s, PVC became a cheap and visible way to mark claims. The white pipes stood out in the beige desert hills.

But then people started noticing a problem – cavity nesting birds and other wildlife were getting trapped in the pipes.

Pushed by conservation groups, in the early '90s the Nevada Legislature ordered claimants to cap their markers or change them out, but the legislation was ineffective, Klinger said. Claimants ignored the legislation, or caps would blow off in the wind.

Conservation groups persisted, and in 2011, Nevada's Legislature authorized the removal of the tubes by the general public. Anyone who finds a PVC marker on public land can legally remove it and lay it next to where it once stood.

The legislation drew a flurry of media attention and wildlife campaigns, then fizzled, Klinger said. Part of the problem is there isn't a comprehensive database of where the claims are or how they are marked, she said.

There are likely hundreds of thousands of markers still standing throughout the West, posing an ongoing hazard for wildlife, according to Chris Cutshaw, Northern Nevada stewardship manager for Friends of Nevada Wilderness.

"A lot of folks who are keeping their claims active went and switched them out," Cutshaw said. "But a lot of them were just abandoned."

In a 2013 report, the Bureau of Land Management referred to the mine markers as “death traps for cavity nesting birds.”

The agency reported there were more than 200,000 active mine claims and more than 800,000 abandoned claims on BLM-managed land in Nevada.

Over a roughly two-year period, the BLM and partnering state agencies and volunteer groups knocked down nearly 13,000 markers on one million acres across the state. For every two markers, one dead bird was found.

A study by the American Bird Conservancy of Nevada mining markers from around the same period found 879 dead birds in 854 markers, as well as 113 reptiles and mammals.

Ash-throated flycatchers and mountain bluebirds were the most recovered carcasses from the pipes. Others included woodpeckers, sparrows, shrikes, kestrels and owls.

Earlier this year, volunteers with Friends of Nevada Wilderness headed out to Gabbs Valley to remove markers. In just one day they removed 279 markers, finding almost 300 dead birds as well as bats, lizards and bees.

While some markers were empty, one had about 30 birds in it while another had about two dozen.

“On this trip we averaged at least one bird per marker. If you’re talking about hundreds of thousands of mining claims in Nevada, that turns into a big issue,” Cutshaw said.

Klinger said anyone who comes across a standing, uncapped marker should remove it and lay it next to where it once stood. She also recommends turning it upside down to empty any contents and then filling the hole with rocks and dirt to prevent it from serving as a pitfall for other wildlife.

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



Fly fishing on the Truckee River. (David Calvert/The Nevada Independent)

Indy Environment: State officials are updating Nevada's water plan — and they want to hear from you

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

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

It's been two decades since the state released a comprehensive water plan.

The last plan was accepted by the Legislature by 1999, when the state's population was 1.8 million. It preceded two decades marked by bouts of extreme drought across the state. And since it was approved, Nevada has continued to grow, and the fingerprints of climate change have become more apparent, affecting when and how water cycles through the environment.

At the same time, there remain structural challenges in allocating what has always been the country's most arid state, a scarce resource. In many places across the state, there are more rights to use water than there is water to go around — this, amid increased demand to use it.

For obvious reasons, the plan could use an update, and state water officials are working their way through the process of doing that. But before they get started, they are asking for public comment in an online survey that will run through December 15. After receiving feedback, the state plans to set up a steering committee that will provide input in crafting a plan, a drafting process that could take several years as state officials consult with water users across the state.

Last week, I spoke with two officials in the Division of Water Resources about the process and what they hope to achieve with the plan. The agency, led by the state engineer (Nevada's top water regulator), is responsible for allocating, administering and adjudicating water rights across the state.

Bunny Bishop, the chief of the division's water planning and drought resiliency section, and Micheline Fairbank, a deputy administrator at the agency, are both involved in updating the state plan.

What is the purpose of the plan and the survey? Updating the plan, Bishop said, has its roots in the 2017 legislative session, which requested that the state agency hire staff for a water planning and drought resiliency section.

"The goal of our section is to bring that into current times — to get a contemporary plan," she said, noting the need to ideally update the plan every five years moving forward. "On top of that, there's also a need for some drought resiliency. We've had to deal with that quite a bit the last year. The purpose of the plan is to bring things up to date. A lot of things have changed. There's new science. There's new data. Some of the issues are the same, [but we can] kind of take a look at where we're at and address where we need to go in the future."

As for the survey, Bishop said it is the first stage in seeking public comment for the plan "on what are the important issues to Nevadans about water resources, and water planning and water resource management."

How will the plan be used? Fairbank stressed that she does not want the plan to become a "shelf queen," languishing inside a dusty drawer at a government office somewhere.

"We've been having communications and conversations with a lot of our other stakeholders throughout the Western United States, both other states, tribal entities [and] federal entities," she said. "One of the things that is a common thread of that conversation is that water plans need to be something that is functional and usable, and that helps formulate a basis to make policy decisions."

Bishop said the plan could serve as a tool for local communities seeking references and guidance as they develop their own water planning strategies.

What does the state expect to gain from this process? Both Bishop and Fairbank suggested that the planning process itself could prove to be, in some ways, as valuable as the plan itself.

"Sometimes the process is even more important than the plan that results itself because in that process, you bring stakeholders to the table, and they talk," Bishop said. "And they talk about their issues and their concerns and where they agree and where they disagree."

A big part of water planning, Fairbank added, is to understand water availability, especially as the climate changes. Understanding the data — and gaps in the data — could help the agency as it looks to acquire funding to update its water budgets, which estimate water availability.

"The other piece of it too is then also understanding the impacts of climate change on the availability of water resources and how that's going to be changing water resources because that is a significant component of the planning process, particularly when we think about reliance on our surface water sources and we have earlier runoff," Fairbank said.

What kind of comments would be valuable to receive? Fairbank said the focus of the survey is to understand what the top priorities are for Nevadans and what is important to them when it comes to water. Bishop said the agency is looking for input from everyone, not just water managers who interact often with the state.

"We're hoping to reach a really wide audience," she said. "We're getting quite a bit of response from people who are in the industry, per se, that are involved in water resources. But what does John Smith in rural Nevada think about? And what are his concerns?"

[We're] just trying to get a very good overview of all the different concerns about different issues, statewide, from all different sectors."

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Interior Secretary addresses West’s worsening drought crisis



U.S. Interior Secretary Deb Haaland is ordering a federal panel tasked with naming geographic places to implement procedures to remove what she called racist terms from federal use. (Evan Vucci | AP)

By [Associated Press](#)

Published: Dec. 12, 2021 at 3:18 PM PST



LAS VEGAS (AP) - U.S. Interior Secretary Deb Haaland was in Las Vegas on Sunday to address the worsening drought crisis in the West.

Haaland and Assistant Secretary for Water and Science Tanya Trujillo held a listening session with local elected officials, business leaders and stakeholders to hear about the impacts that the ongoing drought is having on their communities.

Haaland also touted the Bipartisan Infrastructure Law that invests \$8.3 billion in water and drought resilience that will fund water efficiency and recycling programs and rural water projects.

The law also invests \$2.5 billion in Indian Water Rights Settlements to help the Interior Department fulfill its obligations to tribes.

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PPIC

PUBLIC POLICY
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BLOG POST · DECEMBER 13, 2021

Are California's Cities Conserving Enough Water?

Alvar Escriva-Bou, Kurt Schwabe, and Annabelle Rosser

As California's latest fast-moving drought accelerated earlier this year, California governor Gavin Newsom called on residents to participate in a 15% voluntary reduction in water use in July. Unfortunately, Californians haven't yet achieved the savings he requested. In September, for instance, statewide water use in cities and towns fell just 3.9% compared with the same month last year, and overall savings between July and October were just 5.6%. Some recent encouraging news showed the beginning of a shift, with water savings in October reaching 13%.

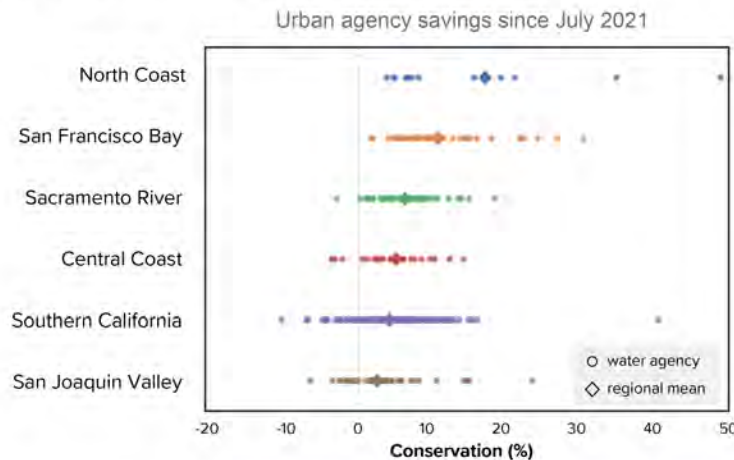
Still, there's been some concern that residents are backsliding around water conservation, especially compared with the last major drought, when average savings ultimately reached nearly 25%. But the data show a more nuanced picture, which may be useful to examine more closely as California confronts a possible third year of drought.

Not our first drought rodeo

During the 2012-16 drought, then-Governor Brown also initially called for voluntary savings, and water use declined by 11% statewide between June 2014 and May 2015, compared to the same months in 2013. But as drought conditions progressed, he ordered a statewide conservation mandate—and the State Water Board set mandatory savings requirements for all urban water suppliers.

So far, the Newsom administration has taken a more tailored approach, allowing water agencies themselves to assess the ability of their supplies to meet demands, and to take actions in line with their local conditions. And what the data show is that agencies that have reported that they're facing bad conditions have already conserved a lot of water since last year—in some cases, exceeding the 15% cut the governor requested. These agencies are in regions that have been hit hardest during the current drought: the North Coast and the Bay Area (Figure 1). A similar pattern emerged during the voluntary conservation phase of the last drought, when agencies facing worse conditions pushed for more aggressive savings.

Figure 1. Agencies saving the most water are concentrated in the drought-stricken North Coast and Bay Area



FROM: PPIC Blog, December 2021.

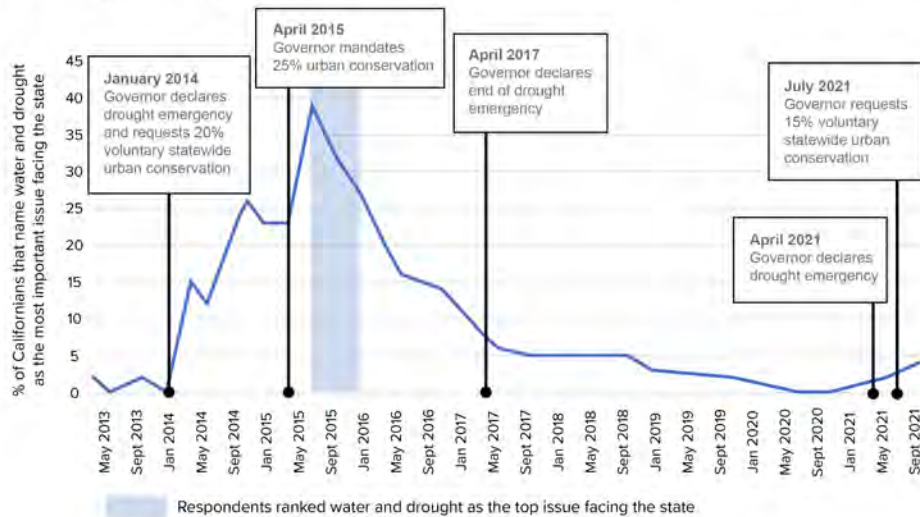
SOURCE: SWRCB Urban Water Supplier Monthly Reports, December 2021.

NOTES: This chart shows how much urban agencies have conserved between July and October 2021 compared to the same period in 2020. Urban agencies that did not report data during these periods were excluded from the analysis. Water savings are organized by region (Southern California includes the South Coast, South Lahontan, and Colorado River; San Joaquin Valley includes Tulare Lake and San Joaquin River; and Sacramento River includes North Lahontan and Sacramento River). The regional mean is weighted by service area population.

There are also some compelling reasons why water agencies may have struggled to achieve the kinds of savings they did during the last drought. For one thing, there's the issue of getting the public's attention. In a year that's seen a surfeit of major news stories, the drought simply hasn't registered in the public consciousness in the same way the previous drought did.

Following Governor Brown's January 2014 drought emergency declaration, water and drought rapidly rose in public consciousness—by March of that year 15% of Californians ranked water and drought as the most important issue facing the state, and this share rose to nearly 40% after he announced mandatory conservation in April 2015 (Figure 2). In 2021—when drought conditions were similar to those in 2014—drought hasn't even hit the top five concerns. The ongoing global pandemic, coupled with issues around housing, wildfires, and the economy, seem to have left little room for the drought in people's minds.

Figure 2. Californians were more concerned about water during the last major drought



FROM: PPIC Blog, December 2021.

SOURCE: PPIC Statewide Surveys March 2013 through September 2021.

NOTES: This chart represents the percentage of adult respondents who named "water, water availability, and drought" when asked what they thought was the most important issue facing people in California today. Data is compiled from 27 statewide surveys beginning in March 2013 and ending in September 2021.

Secondly, most water agencies are starting from a vastly different baseline of water usage than where they were early in the last drought. Water usage dropped a lot by late 2015, and for most communities, many of those savings have stuck (Figure 3). Over a third of the state's agencies are using at least 15% less water than they did in 2013, and 71% of agencies are using at least 10% less. That has made achieving water savings more difficult for some agencies during the current drought because per capita usage is already low, and many of the easier water-saving adjustments have already been adopted.

It's also important to note that the summer of 2021 was the warmest on record. This affected agencies with more outdoor use—particularly inland agencies, where temperature shifts and impacts on demand are larger.

Finding the right approach if the drought continues

As a possible third year of drought looms, we're already seeing signs of change: two of the largest urban water wholesalers in the state, Metropolitan Water District and San Francisco, announced drought emergencies last

month. The state is also adopting stricter conservation measures, like the proposed ban on some wasteful outdoor water uses, and signaling the potential for conservation mandates if this winter's rains do not materialize.

While we don't yet know what the winter skies will bring, it's clear that the state and local agencies will need to work together to manage a third year of severe drought. Now is the time to keep watching, while preparing to take swift action in the early spring. Aligned state and local action and messaging could help cut through the noise of increasingly congested news cycles.

As water use rises, Water Authority updates resource plan

by Jeff Gillan

Monday, December 13th 2021



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LAS VEGAS (KSNV) — Clark County Commissioner Marilyn Kirkpatrick, the chair of the Southern Nevada Water Authority Board, says board members will have a discussion next week about where our water will come from.

That's the most important job the Water Authority has: how to keep the tap flowing in a city in the driest desert in the country.

Next Monday, the Water Authority board will take up what's called a "resource plan."

"We do a lot of bonding for infrastructure, and part of our bonding relies on a plan on how we're supposed to have water for the next 50 years," Kirkpatrick told me Monday.

They do the resource plan every year. Kirkpatrick tells me it's not a guarantee of 50 years of more water; it's more a roadmap of how to get there.

"90% of the water supply for 76% of the state's population is in peril," Water Authority general manager John Entsminger told county commissioners last week during a zoning meeting.

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RELATED | [Report: S Colorado River Basin states overusing water from Colorado River](#)

At that meeting, commissioners decided to ban evaporative cooling for new businesses, which are the big cooling towers that use thousands of gallons of water. Older businesses will have to retrofit.

It's one way to save more water, as Lake Mead hits historic lows.

Fed by the Colorado River, things aren't looking good.

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LIVE

The Water Authority's job is getting harder. From 2010 to 2020, Clark County saw 400,000 new residents. Just during the pandemic, our population has grown by 200,000 people more.

The county is on a growth spurt. Water use is going up.

"What I will tell you is when it comes to growth, we have to find a delicate balance, right? So I don't have the means to retrain all the construction workers who are working today. However, on the other side, what are some things we can do as far as our infrastructure to make sure all this water gets back into the lake," says Kirkpatrick. For every gallon we send down a drain, we can recycle the water back to the lake for future use.

But Kirkpatrick says a discussion about growth will happen while we do other things, too: take out more grass and cut our use of water.

Currently, each person in Southern Nevada uses about 113 gallons of water a day.

The Water Authority says that our use needs to drop to a per capita use of 86 gallons a day to improve our sustainability.

We also need to understand that every drop is precious.

On November 1st, you were supposed to turn your irrigation clock to water one day a week.

The Water Authority says only 50% of us have done that, in a drought that shows no sign of letting up.

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News Feature | December 13, 2021

Details On Biden's Plan To Protect Water Systems From Hackers Emerge



By [Peter Chawaga](#)

As hacking attempts have become a larger threat to some of the country’s most critical infrastructure, President Biden’s administration is getting ready to follow through on promises to tighten cybersecurity efforts and better protect that infrastructure.

“The Biden administration is readying a proposal to shore up the cybersecurity of the U.S. water supply, a system maintained by thousands of organizations with sometimes glaring vulnerabilities to hackers,” [The Wall Street Journal](#) reported. “The plan broadens a White House initiative to persuade key industrial companies to upgrade technology for detecting cyberattacks. U.S. officials hope water utilities will analyze and voluntarily report such data to help authorities monitor threats to different types of critical infrastructure.”



U.S. authorities [recently revealed](#) that at least four ransomware attacks had infiltrated water and wastewater facilities in recent months, with bad actors nearly managing to poison drinking water in Florida, California, and Maryland.

“The move comes amid deep concern about the damage hackers could do to critical infrastructure, with an attack that damages or contaminates water supplies being extremely dangerous,” as [The Washington Post](#) put it. “Water utilities are especially vulnerable because their cybersecurity often depends on the resources of their jurisdictions.”

Those recent hacking instances have apparently motivated authorities to seek ways that water systems can better protect themselves, and potentially ways that their jurisdictional resources can be improved. Trade groups within the water sector are reportedly now evaluating the White House’s draft and determining how federal officials could help systems better report the data on these attacks.

“As a part of the White House plan, the Environmental Protection Agency, which oversees the cybersecurity of water utilities, will work with the Cybersecurity and Infrastructure Security Agency to help utilities improve their ability to spot such attacks,” per the *Journal*.

But the White House has declined to set a specific date for when the initiative would be launched, and it appears to have obstacles of its own. The EPA has not placed cybersecurity requirements on utilities, and it may be a challenge to get such a wide network of systems to comply with a large program like this voluntarily.

“Implementing such programs could be challenging for the water sector,” the *Journal* reported. “More than 50,000 entities maintain the U.S. water supply ... while security experts have criticized the EPA for lacking cyber staff and expertise to oversee such a fragmented sector.”

Still, as the threat of cyberattacks on these critical systems increases, any federal efforts to curb that threat will almost certainly be welcomed by drinking water and wastewater utilities.

To read more about how drinking water and wastewater utilities manage the threat of cyberattack, visit Water Online’s [Resiliency Solutions Center](#).

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Authority's water meter shortage crisis averted

By SARAH FAY CAMPBELL | Dec. 14, 2021 - 8:29 PM



The Coweta Water and Sewerage Authority is no longer facing a shortage of water meters for new customers.

In late October, the authority's meter supplier, Sensus, notified it that the meters ordered in May wouldn't be available for another six months. That meant the authority wouldn't have enough meters to serve the new homes that are already in the pipeline, as well as other new construction that wasn't already on the books.

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When staff got that news, they got to work searching for alternative meters. The authority uses a remote-read system, where meters send signals to a tower, and can be read in the office. With the meter shortage, there was the thought that they might even have to start installing manually read meters, if that was all they could find.

But it didn't come down to that; the authority found a company, Master Meter, that was able to provide meters that will work with the Sensus system and towers. The authority has also lined up vendors who can supply manual meters, just in case.

The authority has no plans to switch to Master Meter permanently, but the meters can remain in the system long term, according to Authority CEO Jay Boren. Or, if there was an opportunity to sell them down the road, the authority could replace them with Sensus meters.

While the authority was able to find meters to avert a crisis, Boren said the issue is still a concern because he doesn't like having a hodgepodge of meters in the system. Some utilities, which are still in the process of switching to remote-read meters like Sensus, have put those programs on hold because of the supply issues, he said.

Boren said they had multiple meetings with Sensus, but it was clear the company wouldn't be able to provide what the authority needed in the short term. Plus, "our concern is in six months; it's not going to just go away," Boren said of the shortage of meters. The authority averages about 100 meters a month, he said.

The authority and most other utilities don't keep large stocks of meters on hand; instead, they order to keep just enough in stock.

But in this case, the authority has placed two large orders with Master Meter.

"If we don't use them, we'll just sell them," Boren said.

NEWS > ENVIRONMENT

Bucks Lake receives protection through conservation easement

By [CHICO ENTERPRISE-RECORD](#) |

December 14, 2021 at 4:00 a.m.

QUINCY — After a six-year process, Bucks Lake now has protection via a conservation easement courtesy of the Feather River Land Trust.

The lake is a PG&E-run reservoir in Plumas County that has historically been used recreationally. A conservation easement grants the site protection from land development while still allowing for the public to access the body of water.

A press release issued Friday by the land trust said the final papers were turned in Nov. 23 at the Plumas County Recorder's Office at which point the conservation easement was official.

Bucks Lake and the wilderness surrounding it houses more than 30 species considered to have special statuses such as the Willow flycatcher, Sierra marten, the Quincy lupine and the mountain yellow-legged frog, the release said.

"The easement prohibits lakeshore subdivision and large building developments that could impact native plants, animals and historical/cultural sites," the release said. "The conservation easement at Bucks Lake adds to a larger landscape of protected lands, with adjacent Plumas National Forest and the Bucks Lake Wilderness creating connectivity for wildlife and plant communities."

After it went bankrupt in 2003, PG&E was required to conserve at least 140,000



“Approximately 44,000 acres of these watershed lands are within the upper North Fork Feather River Watershed,” the release said. “(The Feather River Land Trust) has been working to permanently conserve these Feather River Watershed lands, including Bucks Lake, Mountain Meadows Reservoir, Tásmam Koyóm (Humbug Valley), Butt Valley, Lake Almanor and others, with conservation easements.”

The area protected consists of 2,154 acres of land and water as well as 300 acres of meadows, forests and wetlands.

PG&E will retain ownership of the land and continue to operate the reservoir.

Tags: [Newsletter](#), [PG&E](#), [Water](#)



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WEATHER NEWS

Here's what it would take to fill California's reservoirs and end the drought this winter

BY RYAN SABALOW

UPDATED DECEMBER 14, 2021 11:38 AM



Drone video shows Folsom Lake on Oct. 20, 2021, when its surface elevation stood at 370 feet – the lowest level since December 2015. The reservoir is 22% full. A storm is forecast to bring a few inches of much-needed rain to the Sacramento region. BY [HECTOR AMEZCUA](#)

A powerful atmospheric river is delivering widespread rain across the Sacramento Valley and steady snow in the Sierra Nevada. Here's the latest news.

EXPAND ALL

[Dire warnings](#) about communities and farms running dry next year. [Headlines proclaiming](#) a potentially dry La Niña winter. Reservoirs already so low [they look like sets for post-apocalyptic movies](#).

California seems poised for a continuation of its crippling drought next summer.

And that might well be the case.

It also might flood.

Experts who study California's weather patterns say it's too early in the rainy season to make any predictions about the state's water supply.

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They say that even though the water situation appears bleak — and residents and farms could very well be rationing water next summer — there also have been plenty of years when Californians have looked out at low reservoirs at this time in December only to see them full to the brim by spring.

“One way of putting it is that California is a state of extremes, hydrologically speaking, and we often swing from very wet to very dry,” said Jeanine Jones, California’s drought manager for the Department of Water Resources. “That’s just part of our climate system, and it’s also something that we expect to be enhanced by climate change.”

WHAT’S AN ATMOSPHERIC RIVER?

California’s boom-and-bust rainy season is so difficult to predict due to the powerful storms that form in the Pacific Ocean and strike the West Coast.

These storms are known as atmospheric rivers. [A “strong”-sized one was forecast to hit the north state beginning late Saturday night](#) and blanket the Sierra with snow through Tuesday.

The storms form when high-powered winds drag a fire hose of tropical moisture across the ocean’s surface.

The 500-mile wide conveyor belts of water can last for days and can hit California in wave after wave. They provide up to half the state’s rain and snowfall each year. The largest storms can produce as much rain as a major hurricane.

The biggest of these storms have played havoc on the state for much of its recorded history, including a relentless 1862 downpour that forced Gov. Leland Stanford to take a rowboat to his Sacramento inauguration.

In the decades since, similar storms have killed dozens of Californians, inflicted billions of dollars in damage, and in 2017, blasted apart the spillways at Oroville Dam, the nation’s tallest. Nearly 200,000 people were evacuated.

They can be drought busters.

The state’s last drought, which spanned five years, officially ended due to the storms that hammered Oroville Dam.

A similar drought in 1977 was busted in just one season.

That year, Shasta Lake, the state’s largest reservoir, was down to 13% of its total capacity — the lowest it’s been since the dam was completed in 1945. By the spring of 1978, the lake was nearly full, thanks to atmospheric rivers.

“The difference between a wet year and some of the wettest years on record and some of the driest years on record, is just a few storms,” said Jay Lund who heads the [UC Davis Center for Watershed Sciences](#).

More precisely, said Jeffrey Mount, a watershed [expert at the Public Policy Institute of California](#), all it usually takes to end a drought is between five to seven storms between Dec. 1 and the end of February.

“And most of our really, really big storms appear close to Christmas and into early February,” Mount said.



Atmospheric rivers have a significant impact the U.S. west coast. Snow, rain and flooding due to the weather phenomenon can cause major damage to property. BY SACRAMENTO BEE

CLIMATE CHANGE UNCERTAINTY

Yet predicting how many atmospheric rivers will form and when they'll hit in a rainy season is impossible.

While modern weather forecasting has grown much more precise, anything over 14 days still remains a guess, the experts said. That includes whether California and other parts of the Pacific Rim are in a La Niña weather pattern or not.

There is data to suggest that a La Niña does tend to make Southern California drier, but in the north state, where California gets most of its water supply, the data shows up on state hydrology charts as “shotgun-blast-type distribution,” said Jones, the Department of Water Resources drought manager.

Meaning: It's anyone's guess whether the coming weeks and months will be wet or dry.

The good news is that the atmospheric river storm that hit Northern California in late October and brought record rainfall to downtown Sacramento helped prime the region for potentially drought-busting storms later.

The storm soaked the drought-parched soil, so that water that falls as rain or snow now will be more likely to drain into the state's water storage reservoirs instead of soaking into the ground.

Don't like all this unpredictability? The experts say you'd better get used to it as the climate changes.

One recent study warned of “[precipitation whiplash](#),” in which drought or drought-like conditions will alternate with intensely rainy winters.

Experts say that global warming makes droughts more extreme since it decreases [if not outright eliminates](#) the state's vital snowpack, and higher heat makes soils drier. At the same time, rising temperatures also put more moisture into the atmosphere, making California more prone to floods.

“We may have fewer atmospheric rivers overall,” Jones said, “but the ones that we may have may be a lot wetter.”

The Bee's Phillip Reese contributed to this story.

This story was originally published [December 12, 2021 5:00 AM](#).

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Ryan Sabalow covers environment, general news and enterprise and investigative stories for McClatchy's Western newspapers. Before joining The Bee in 2015, he was a reporter at The Auburn Journal, The Redding Record Searchlight and The Indianapolis Star.

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Largest Lake Tahoe Invasive Plant Removal Project Begins

Collaborative Funding Makes It Possible to Restore 17 Acres of Wetlands

The USDA Forest Service Lake Tahoe Basin Management Unit (LTBMU), in partnership with the Tahoe Regional Planning Agency (TRPA), has begun the largest invasive plant removal project at Lake Tahoe. This new project will remove 17 acres of invasive plants in the Taylor and Tallac creeks and marshes as part of a comprehensive restoration of one of the last natural wetlands in the Lake Tahoe Basin. Left unchecked, aquatic invasive plants can have devastating effects on Tahoe's ecosystem and recreational resources.

"Invasive plant eradication projects have typically been measured in single acres," said Sarah Muskopf, Aquatic Biologist with the Forest Service. "Using new technologies, including larger mats, reduces the cost of implementation and allows us to meet restoration objectives more efficiently."

barriers starve invasive weeds such as Eurasian watermilfoil of sunlight and are commonly used in the Tahoe Basin to control infestations.

“Wetlands improve our region’s natural resiliency in the face of climate change by filtering runoff and other pollutants. The restoration of these marshes pays dividends in keeping the lake clear and improving wildlife habitat,” said Kat McIntyre, forest health program manager with TRPA.

This project falls under the Lake Tahoe Environmental Improvement Program (EIP), an unparalleled collaboration working to achieve the environmental goals of the region. Funding is provided by federal Lake Tahoe Restoration Act allocations as well as \$100,000 in private contributions from the Tahoe Fund.

“We are thrilled to be able to support this absolutely critical invasive plant removal project thanks to the support of the Merrill Family Foundation,” said Amy Berry, CEO of the Tahoe Fund. “It is inspiring to see our public agency partners take on a project of this size as they continue to tackle this ongoing threat to Tahoe’s water quality.”

The Forest Service asks recreators to respect the fencing around the project for public safety and to help ensure the project is successful. The project will not impede access to Kiva and Baldwin beaches and is anticipated to last through 2024.

To watch the new Taylor Tallac video, [click here.](#)

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Affordable Housing in Reno



Reno May Use Federal Funds to Address Housing Crisis

At a recent ProPublica event, Reno council member Devon Reese said the city will announce its plans to alleviate the city's housing crisis next month. The event followed a ProPublica investigation on redevelopment's impact on lower-income residents.

by Anjeanette Damon

Dec. 15, 2021, 12 p.m. EST

ProPublica is a nonprofit newsroom that investigates abuses of power. [Sign up for Dispatches](#), a newsletter that spotlights wrongdoing around the country, to receive our stories in your inbox every week.

Reno officials are preparing initiatives to address the city's affordable housing crisis, including potentially spending their entire allotment of federal pandemic recovery funds on housing, according to a city council member speaking at a [recent forum](#) organized by ProPublica.

[Council member Devon Reese](#) declined to provide details on plans that he described as “not fully baked” yet, but said conversations have included remodeling existing hotels or motels into housing, taxing property owners who hold vacant land and reopening a recently closed shelter to alleviate overcrowding at a new campus for the unhoused. He said about \$50 million in American Rescue Plan Act funding could be brought to bear on the crisis.

“How do we spend those dollars?” he asked, adding that the ProPublica forum had provided a venue to gather public input on that question. “My absolute belief is that a large portion of that — maybe all of it — will be spent on addressing housing needs.”

He expects the city will announce its plans next month.

The forum followed an investigation by ProPublica that documented how one developer, Jeffrey Jacobs, bought and demolished more than a dozen weekly motels in downtown Reno, displacing hundreds of individuals who relied on the motels for affordable housing. While Jacobs Entertainment paid to relocate many of the people who lived in those units, ProPublica found that not everyone ended up in better conditions.

Unlike some cities, Reno has no policies to deter demolition of affordable housing or to provide direct aid to those who lose their homes to redevelopment. Nor does the city have a detailed plan to address the housing crisis despite the council listing it as one of its six top priorities.

Reese acknowledged that the city has primarily focused on increasing homeless shelter capacity. But earlier this year, Reno worked with the neighboring city of Sparks and Washoe County to replace its shelter with a regional shelter. It will be operated by Washoe County, which state law tasks with providing social services. That transfer of responsibility has freed up city resources to devote to housing, Reese said.

“Now, having moved away from the sheltering piece, the city’s laser-like focus, I hope, will be on housing,” he said.

The forum, which was co-sponsored by the Reno Gazette Journal and Nevada Humanities, drew a standing-room only crowd to the Downtown Reno Library. It featured a panel discussion that, in addition to Reese, included an affordable housing developer, an outreach worker who lived outside for 10 years, a housing justice activist, a housing policy advisor and a lawyer for Jacobs Entertainment. It provided a rare opportunity for activists and policymakers to share a stage, while also offering a forum for those most affected by the crisis to speak directly to those in positions to address it.

One woman in the audience said her rent had recently doubled from \$800 to \$1,600 in one month.

“We all are going to be out,” she said, questioning why the city hadn’t implemented protections for tenants against rent gouging. “I’ve worked my whole life, and I’m worried about it.”

Reese said the city is exploring whether it can use anti-gouging laws to address such situations, but noted that the Nevada Legislature hasn’t given cities the authority to pass any form of rent control.

“I wish it were as simple as saying, ‘Hey, we are just going to do rent control.’ We don’t have that power at the city of Reno even if we wanted it,” Reese said.

The panelists’ diverse views led to tense exchanges. Asked to name the biggest barrier to affordable housing in Reno, Lilith Baran, a policy associate with the ACLU, said “greed.” Addressing Jacobs’ lawyer Garrett Gordon, Baran decried a system where businesses profit from people who are struggling to support themselves. “People should not be making money on taking other people’s wages and calling it rent,” Baran said.

“People are not willing to sacrifice what needs to be sacrificed to solve the problem,” she said. “We have poor people helping poorer people and then people at the top telling us how to do it effectively who have never helped any of these people.”

Gordon responded by noting his deep ties to the Reno community and expressing his desire to help.

“My clients have written very, very big checks to help different causes —that may not be your causes and we should probably talk about that — but different causes in this community,” he said to Baran. Jacobs, for instance, has donated \$1.5 million to the Reno Housing Authority in addition to the relocation assistance he provided some of his tenants.

“I think part of the problem here, and the barrier, may be this confusion and dysfunction of we are all in our little worlds and different bubbles, and finally today all of our bubbles are starting to come together.”

Gordon said more conversations among individuals like those on the panel should take place to figure out how to fix the problem.

Many in the audience came prepared to hold both the city and Jacobs Entertainment accountable for the crisis, speak out against recent city sweeps of camps for the unsheltered and demand Jacobs build more affordable housing as part of his proposed \$1.8 billion Neon Line District.

Jacobs has been working with the city to win regulatory relief and subsidies for the project, so far earning more than \$6 million in fee credits. But he is planning a much larger request for up to \$20 million in direct tax increment financing. Gordon said the company will have a detailed affordable housing proposal when it returns to the City Council to ask for the tax subsidy. “The next time we come forward with a vision,” he said, it “absolutely” will include “how we will make workforce housing and affordable housing pencil. It’s at the top of our list.”

Panelist Wendy Wigglesworth spent 10 years living outside before finding housing in a Reno motel four years ago. She’s struggled to get into subsidized housing, battling waitlists and income requirements. She now works as an outreach coordinator for a nonprofit that runs a shelter for women and families. She sees daily how difficult it is to find housing for her clients. But she said she’s optimistic the crisis can be addressed, because even those with vastly different perspectives all want to find a solution.

“To put it straight, I think we need to all leave our social statuses, our political beliefs, our religion and our assumptions about everybody we’re talking about at the door when we come in and have these meetings,” she said. “We are all in on the same goal. We just have to swallow that pride pill because it’s bullshit. Put that away, take that big coat off and then everybody is just like humans, all on the same page, realizing all these other humans who don’t have homes are still family, still humans just like us.”

Anjeanette Damon

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John Entsminger, general manager of the Southern Nevada Water Authority and Eric Witkoski, executive director of the Colorado River Commission of Nevada, sign an agreement in Las Vegas on Dec. 15, 2021. (Jeff Scheid/Nevada Independent)

Indy Environment: “Sobering moment” -- States sign cutback plan as Colorado River faces risks

Good morning, and welcome to the Indy Environment newsletter.

The newsletter will be off for the next two weeks during the holiday. Hope everyone gets some rest, and gets to spend some time seeing family and friends. See you back in the new year!

I’m in Las Vegas this week for a major Colorado River conference (more on that below). I’ll be writing more about the Colorado River — and the outcome of the conference — this weekend.

As always, we want to hear from readers. Let us know what you’re seeing on the ground and how policies are affectig you.

Email me with any tips at daniel@thenvindy.com

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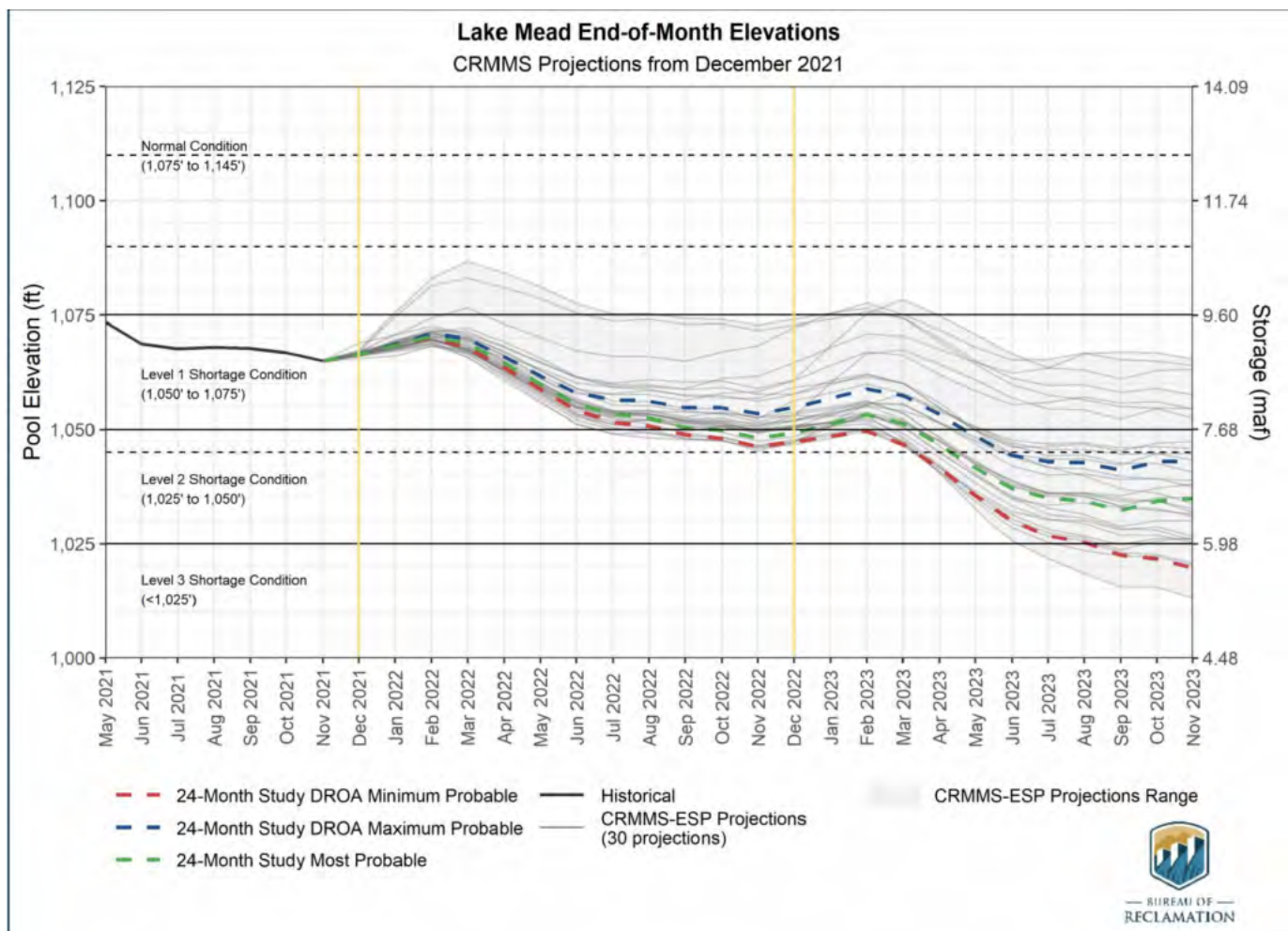
The message was clear from the outset: The situation on the Colorado River is serious. Speaker after speaker at the Colorado River Water Users Association conference in Las Vegas this week stressed the severity of the moment — and were using rhetoric to match it.

In opening remarks to the conference Wednesday, Southern Nevada Water Authority General Manager John Entsminger said that this was a “sobering moment” for a watershed that serves about 40 million people in the Southwest, spanning seven Western states and Mexico.

Pat Tyrrell, Wyoming’s representative for the Upper Colorado River Commission, said the issues facing the river today are “far more substantial” than they have been in recent decades.

At one point, Sara Larsen, interim executive director of the Upper Colorado River Commission, described it as an “unprecedented time” in the Colorado River Basin, one of “stress and challenges.”

The two largest reservoirs in the system — Lake Mead and Lake Powell — are far less than half full. Combined, they stand at about 32 percent, so low that the federal government declared the first-ever shortage on the river earlier this summer, triggering [cutbacks in Arizona and Nevada](#). Forecasts released at the conference show Lake Mead continuing to drop without further action.



Federal forecasts for Lake Mead's elevation over the next two years. (U.S. Bureau of Reclamation)

The conditions became more severe over the last year, as water managers watched far less water reach the system than forecasted. The shortage declaration, U.S. Bureau of

Reclamation Commissioner Camille Calimlim Touton told the conference Wednesday, is “a recognition that the hydrology that was planned for years ago, that we hoped we would never see, is here.”

It is against that backdrop that **water officials signed agreements aimed at preventing even more serious short-term consequences in the coming years.** The first was a strategy known as the 500+ Plan. It’s a memorandum of understanding among the United States and Colorado River officials within the Lower Colorado River Basin states: Arizona, California and Nevada.

The 500+ Plan aims to keep an additional 500,000 acre-feet of water in Lake Mead [over the next two years](#) (an acre-foot is the amount of water that can fill one acre to a depth of one foot). The idea behind the plan is that leaving water in the reservoir will help prevent it from dropping to critically low elevations, at which point there would be increased risks and real-world consequences for operating the Colorado River’s reservoirs, which also generate hydropower.

A second set of agreements was signed between the federal government, the Colorado River Indian Tribes and the Gila River Indian Community. Under those agreements, the Colorado River Indian Tribes and the Gila River Indian Community, working with the federal government, will also leave water in Lake Mead under the 500+ Plan.

“The Colorado River has sustained us for many, many generations and we continue to live and walk along the banks of the Colorado River,” said Amelia Flores, chairwoman of the Colorado River Indian Tribes. “It is time for all of us to help save this river, the Colorado River.”

Those agreements, in more ways than one, build off a [Lower Basin Drought Contingency Plan](#) (DCP) signed in 2019. The DCP included a provision requiring the three states to consult and agree to additional measures to stabilize Lake Mead in the short term. Those measures have now become the 500+ Plan. The 500+ Plan is also significant because it builds on partnerships that were created during the DCP negotiations.

“This level of the crisis demanded speed, which was only possible based on the strong working relationships that we developed when crafting the original DCP,” said Gila River Indian Community Governor Stephen Roe Lewis.

The 500+ Plan, he added during a signing ceremony Wednesday, “demonstrates the vital role that sovereign tribal nations can and are playing in helping to preserve the Colorado River.”

A third resolution was signed among water officials, the federal government, and NGOs including the Environmental Defense Fund and Business for Water Stewardship, a group representing major corporations such as Google and Target. That resolution did not single out specific actions, but it instead called for collaboration and “consensus-based solutions” in general terms.

Despite signing three agreements Wednesday, **Colorado River negotiators acknowledged that addressing the river’s issues will require a long-term approach.** The Colorado River faces an imbalance in supply and demand as the river, which once averaged about 15 million acre-feet of water, has seen far less to the system in recent years, closer to 12 million acre-feet.

Climate change is affecting the way that water cycles throughout the watershed. In recent years, inflows into the river, fed by snowpack, have registered below the 20th century average. Even in years with nearly average snowpack, water managers have watched into poor water years with low runoff because of arid conditions positive forecasts turn across the region.

“The 500+ Plan is, as some have opined, a temporary solution,” Tyrrell said on Wednesday. “Work toward longer-term solutions to the challenges worsening hydrology presents us is left for another day — the day which we all know is coming very soon. In the end, our overarching goal must be to work toward a sustainable future for the Colorado River Basin. Period.”



Hoover Dam on Thursday, July 15, 2021. The dam holds back Lake Mead. (Jeff Scheid/The Nevada Independent)

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

Snow is falling across the state: From [Lake Tahoe](#) to [Lee Canyon](#) outside Las Vegas, we got a much-needed storm on Tuesday. The snowpack across the state — and the West — plays a crucial role in our water supply, acting as a natural reservoir that stores water until it melts off throughout the spring. As the temperatures warm and the climate dries, the cycle of how this snow falls and melts is changing, and forecasted to continue changing into the future.

Interior Secretary Deb Haaland visited Springs Preserve: The [Las Vegas Review-Journal's Blake Apgar](#) and the [Nevada Current's Jeniffer Solis](#) have more about the visit this weekend.

Fernley lawsuit denied: A federal judge dismissed a [lawsuit filed](#) by Fernley over lining the earthen Truckee Canal. In the ruling, District Court Judge Miranda Du wrote: “Because Fernley and Intervenor lack prudential standing to bring their primary National Environmental Policy Act (“NEPA”) claims as their interests are economic rather than environmental, Fernley fails to state a claim for nuisance under federal common law, the Court declines to exercise jurisdiction over Fernley and Intervenor’s state-law declaratory judgment claims involving unsettled questions of state water rights, and as further explained below, the Court will grant both motions to dismiss.”

Implementing California’s big groundwater law: The *Los Angeles Times*’ Ian James [looks at the implementation of California’s Sustainable Groundwater Management Act, or SGMA](#). The state recently told six local agencies that their plans to manage groundwater were incomplete.

Conservationists sue USDA’s Wildlife Services: “Two conservation groups are challenging how the federal government culls and controls predatory wildlife on Nevada’s public lands, claiming in a lawsuit that an agency’s 2020 ‘no-impact’ environmental assessment of the program is flawed,” the *Las Vegas Review-Journal*’s Bill Dentzer [wrote this week](#).

“Death traps for cavity nesting birds:” The [Reno Gazette Journal's Amy Alonzo looks at](#) past and present efforts to regulate and remove PVC pipes that mark mine claims but can trap birds, including the mountain bluebird, Nevada’s state bird. Federal land managers in 2013 referred to the PVC piping marking mining claims in the state as “death traps for cavity nesting birds.”

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Judge Dismisses Fernley's Lawsuit Over Leaking Canal Repairs

A federal judge in Nevada has dismissed a rural town's lawsuit seeking to block the U.S. government's plan to renovate a 115-year-old earthen irrigation canal with changes that would eliminate leaking water local residents long have used to fill their own domestic wells.

By [Associated Press](#)

Dec. 15, 2021



By SCOTT SONNER, Associated Press

RENO, Nev. (AP) — A federal judge has dismissed a rural [Nevada](#) town's lawsuit seeking to block the U.S. Bureau of Reclamation's plan to renovate a 115-year-old earthen irrigation canal with changes that would eliminate leaking water that residents long have used to fill their own domestic wells.

The \$148 million project includes lining parts of the Truckee Canal with concrete to make it safer after it burst in 2008, flooding nearly 600 homes in Fernley about 30 miles (48 kilometers) east of Reno.

The bureau said it also will eliminate the waste of a resource that belongs to U.S. taxpayers by reducing seepage through the canal's dirt floor into the aquifer.

But Fernley said that will result in a drop in the water table, imperiling its municipal water supply and causing 71% of domestic wells to fail. It claimed it had a right to the water partly because it's been available to local residents since 1905 and the government never objected to its use of it.



FILE — Water is shown in an irrigation canal in Fernley, Nev. near Reno on March 18, 2021. A federal judge in Nevada dismissed a lawsuit Monday, Dec. 13, 2021, filed by the rural town that sought to block the U.S. Bureau of Reclamation's plan to renovate a 115-year-old earthen irrigation canal with modifications that would eliminate leaking water local residents long have used to fill their own domestic wells. (AP Photo/Scott Sonner, File)

THE ASSOCIATED PRESS





Its lawsuit filed under the National Environmental Policy Act (NEPA) argued the project is illegal because the government failed to fully consider the environmental impacts of reduced groundwater levels.

U.S. District Judge Miranda Du ruled in dismissing the lawsuit in Reno on Monday the townspeople lack legal standing to bring their claims under the environmental policy act because their interests are economic, not environmental.

She pointed to past rulings by the 9th U.S. Circuit Court of Appeals in San Francisco that have established a “zone of interests that NEPA protects as being environmental” and that “purely economic interests” do not qualify.

Fernley’s interests “are economic, not environmental — and they therefore fall outside the “zone of interests’ NEPA was designed to protect,” Du said.

Du said the law applies only if the plaintiff “demonstrates that the environmental health of its land interests is threatened by the agency’s action.”



Fernley argued that cutting off the canal recharge of the water table effectively constitutes harm to the physical environment.

But Du said that the townspeople's argument is "ultimately unpersuasive because it overlooks who they are: groundwater users who ... are concerned about having less groundwater available to use — for domestic and commercial purposes."

"While there is no question that it will be expensive and perhaps difficult for Fernley ... to procure alternate sources of water when defendants proceed with their challenged plan, a NEPA claim is not the appropriate vehicle for them to block (the) plan," she wrote.

Built in 1905, the Truckee Canal was part of the Newlands Project named after the Nevada congressman whose legislation led to creation of the Bureau of Reclamation. It was the first major irrigation project in the West — intended to "make the desert bloom" and attract settlers.

"You have an entire community that was built up through reliance on this recharge," Fernley lawyer David Rigdon told Du during oral arguments last week.

Justice Department lawyer Eve McDonald countered, "There is no water right to seepage."

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Tags: Associated Press, business, environment, courts, crime, lawsuits, Nevada, economy

Why the Second-Driest State Rejects Water Conservation

Utah has some of the highest per-capita water use and is the fastest-growing state. Yet a powerful group that steers Utah's water policy keeps pushing for costly infrastructure over meaningful conservation efforts.



Animation by Lisa Larson-Walker/ProPublica. Photo of Lake Powell by Ted Wood/Water Desk.

by **Mark Olalde**

Dec. 16, 2021, 6 a.m. EST

Co-published with **The Salt Lake Tribune**

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With rising temperatures and two decades of drought depleting the Colorado River, some Southwestern states are spending hundreds of millions of dollars to pay homeowners to tear out their lawns and farmers to fallow their fields.

But Utah, the fastest-growing and second-driest state in the nation, is pursuing a different strategy.

Steered by the state's largest water districts, with the help of their legislative allies, Utah has prioritized the pursuit of new pipelines over large-scale conservation programs. These districts — the public entities that supply water wholesale to cities and towns — have used their influence to secure funding for the costly infrastructure projects, and they have done this while opposing or slowing efforts to mandate conservation, according to a ProPublica review of the districts' internal communications and every water-related bill filed in the Utah Legislature over the past decade.

In 2017, for example, the water districts opposed legislation intended to more accurately convey to consumers the true cost of water on their utility bills by capping how much of the cost could be covered by property taxes. A similar measure in 2019 passed only after being stripped of limits on water districts' ability to collect property taxes.

Then, beginning in 2018, the districts and their allies raised concerns about a series of bills to mandate meters for water used on lawns and gardens. Again, the proposals were significantly scaled back.

Mark Olalde

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And in 2020, when a lawmaker wanted to require utilities to find leaks in their systems as a means of conservation, a lobbyist for the districts rewrote the bill, removing the mandates.

Meanwhile, the districts have secured the Legislature's support for new water development projects that would cost billions of dollars, such as for a pipeline to carry Colorado River water to southwestern Utah and for dams along the Bear River in northern Utah. Without these projects, they say, the state could run short of water within a few decades.

This approach is having an impact beyond Utah's borders. Other states that have taken sometimes painful steps to cut back on what they draw from the over-allocated Colorado River have criticized Utah for failing to do the same. Utah's political leaders, though, remain hellbent on securing what they believe is their full share of the river that supports 40 million people, as Arizona, California and Nevada have already.

Agriculture consumes a majority of the water used in the West. But Utah farmers have been forced to take less than they have in the past, turning the spotlight to cities and towns where most water is used on landscaping. Yet in a state with suburbs full of lush lawns and tree-lined streets more reminiscent of the Midwest than the Southwest, conservation mandates are politically unpopular.

"Water politics waste more water than anything else in Utah," said a broker who buys and sells water in the state and who asked not to be named for fear of retaliation from the districts.

Critics call the districts' prediction that Utah will run out of water without new infrastructure a myth. The state would have the water it needs to continue growing, they say, if it aggressively pursued conservation.

ProPublica found some projections by the state and districts rely on faulty data and questionable cost estimates. A legislative audit uncovered a rash of errors in data on water demand and supply, the very numbers used to justify new infrastructure. And while a district representative told legislators that new projects such as pipelines would be a cheaper source of water for Utahns, their own numbers show conservation has provided water at a fraction of the cost of those projects.

"Everyone realizes that reducing water demand and increasing water conservation is the cheapest source of new water for Utah's future," said Rep. Suzanne Harrison, a Democrat who proposed a water conservation bill that was opposed by the districts, "but folks who are interested in developing water and building expensive pipelines don't really want that conversation."

Uniting as Prepare60

The influential group that controls Utah water policy is largely unknown to the public, but they're well known to policymakers. At its core are Utah's four largest water districts, which work alongside a loose coalition of politicians and interest groups representing cities and rural water users.

Utah's Four Largest Water Conservancy Districts

The water broker calls the group Utah's "water OPEC." A former state senator who clashed with the group over legislation considers them "smug kingdom builders." But to most people familiar with their power and ploys, they're the "water buffaloes."

The four largest water districts see themselves on the front lines of a battle to defend Utah's water rights from neighboring states and prevent shortages as the state grows. These districts — which serve about 90% of Utahns and bring in about a half-billion dollars of revenue annually — secure water at its source and transport it across the state to cities and towns, which in turn sell it to Utahns.

The state's population is projected to more than double between 2010 and 2060, so the four districts, three of which sell to the cities along the Wasatch Front, teamed up to develop and lobby for a plan to keep pace with that growth. This has given them an organized bloc to push for their

ideas. Nodding to the 2060 population projection, they dubbed themselves Prepare60.

The group, commonly referred to as Prep 60, has three stated goals: conservation, defending water rights and developing new water. But they don't give equal attention or funding to each.

When it comes to conservation, the Prep 60 districts implement measures long common elsewhere in the West. These include, among others, a "Flip Your Strip" program that pays homeowners to rip out curbside grass; rebates for efficient irrigation and low-flow toilets; lining canals to reduce water lost to seepage; demonstration gardens to showcase water-saving landscaping; and financial support for such outreach efforts as television ads in which Utah Gov. Spencer Cox pleads with residents to voluntarily "slow the flow."

The Washington County Water Conservancy District, a member of Prep 60, is also working with St. George and other southern Utah cities on their first-ever municipal ordinances limiting the size of lawns. California first instituted rules on water-efficient landscaping in 1993, and they've become stricter in the years since.

Other Colorado River Basin states say Utah's investments in conservation are insignificant compared to steps they have taken in the face of climate change. In blistering comments about the Lake Powell Pipeline — which would draw water from a shrinking reservoir along the Arizona-Utah border and send it to Washington County in Utah's southwest corner — Nevada water officials took aim at Utah water policy.

"What the Utah Board of Water Resources characterized as extreme conservation efforts and not practicable, such as converting or installing more efficient landscapes and creating incentive programs for water conservation, are actually commonly applied in an efficient and effective manner in many other communities," they wrote in 2020.

Take the Southern Nevada Water Authority, wholesaler to the Las Vegas metro area. Since 1999, that agency has paid residents and businesses to convert grass to water-efficient landscaping. The Central Utah Water Conservancy District, a Prep 60 member and Utah's largest water wholesaler, didn't launch a similar program until this year. The Nevada district pays Las Vegas property owners \$3 per square foot of grass they remove, compared to a maximum of \$1.25 paid by the Utah district. In total, the Nevada district has spent \$258 million to remove more than 200 million square feet of turf, while the Utah district has received 364 applications for the funding and paid \$15,400.

There's a similar gap in other conservation spending. Arizona, Nevada and California recently committed \$100 million to reduce water use in the next two years alone. Of that, \$20 million will come from the largest water district in Nevada, a state about the same size as Utah. The Central Utah district spends several hundred thousand dollars of its own money every year on "water conservation activity" and "water efficient landscaping." When it does fund conservation, it typically relies on federal dollars, spending \$141 million in federal funding between 1995 and 2019. Utah's Washington County Water Conservancy District spent 445% more on the

yet-to-be-started Lake Powell Pipeline than it spent on "conservation" and "public education" combined, according to its three most recent audited financial statements. The district said those years were outliers because the pipeline's environmental impact was being analyzed.

Meanwhile, the Prep 60 water districts have spent generously on lobbying at the Utah Capitol.

The districts' most influential surrogate is Fred Finlinson, a Republican who spent 20 years in the state Senate before leaving to lobby his former colleagues. After switching jobs, he married Christine Fox, a Republican who had spent 11 years in the Legislature before joining her new husband to work on water policy and lobbying. The Prep 60 districts have paid their firm, Finlinson & Finlinson, more than \$5.3 million since 2014. (The districts said some of that money went to "specialized consulting services" that didn't involve lobbying.)

Screenshots by Utah Rivers Council and ProPublica

In addition to helping found the firm that lobbies on behalf of the four Prep 60 districts, Christine Finlinson collects a paycheck as an assistant general manager of the Central Utah Water Conservancy District. Activists and a member of the district's board have alleged that this is a conflict of interest because her district sends lobbying business to Finlinson & Finlinson.

Over the summer, the Utah Rivers Council, an environmental group, asked the state attorney general and the U.S. Department of the Interior's Office of Inspector General to investigate the district's role in the arrangement and its history of using the firm to lobby against conservation bills. "We are concerned that the personal financial needs or professional whims of the senior staff of the CUWCD have been placed ahead of the needs of Utahns in providing an affordable water supply," the council's letter to the state attorney general said.

Christine Finlinson did not respond to requests for comment, but district General Manager Gene Shawcroft said that "the allegations are totally unfounded," adding that she plays no role in deciding the district's contracts with her husband.

After the call for investigations, the state's database of public lobbying disclosures was altered to remove Christine Finlinson's affiliation with Finlinson & Finlinson.

Challenging Road for Conservation

When lawmakers file conservation bills, they quickly learn who controls the process.

As she campaigned for office in 2018, Harrison, the Democratic lawmaker, repeatedly heard water mentioned as a top issue for voters. So, after she won, she filed a bill to compel water districts to study how to reduce per-capita use.

States don't all count water consumption the same way, making precise comparisons difficult. But no matter how it's counted, Utah has one of the nation's highest per-capita rates of water use.

Harrison's bill would have set a conservation target based on Denver's per-capita water use but without mandated cutbacks to reach her goal. She wanted the bill to start a discussion and believed her idea would fly through the Legislature. But there was immediate opposition.

In emails with the water districts' general managers, Fred Finlinson noted Harrison's bill had not been "vetted to my knowledge before any members of the water community." He claimed it would require studies costing millions of dollars, even though Harrison's bill would have merged its goals with already mandated conservation plans. The water districts' general managers said they wanted to wait for the completion of a state goal-setting process, which eventually published weaker conservation targets than Harrison had proposed.

The emails also revealed a cozy relationship between Prep 60 and state regulators. The deputy director of the Utah Division of Water Resources at the time, Todd Adams, worked directly with Finlinson to write amendments that weakened Harrison's conservation targets. He sent the lobbyist a marked-up copy of the bill with a note reading, "Give it a read and let me know what you think and where I screwed up."

Adams wrote in an email to ProPublica that the agency is open to working with anyone on legislation, including "Legislators, water conservancy districts, cities, water entities, NGO's and lobbyists."

Finlinson forwarded the annotated legislation to the Prep 60 leadership. The districts could "let everybody know who is going to destroy their communities," he wrote, referring to Harrison. "If she isn't willing to go with this proposals, her bill will likely remain in the House Natural Resource committee for the rest of the session," he added.

The bill was shelved.

Harrison said, "I learned really quickly as a freshman lawmaker that when you try to address water legislation, you're quick to get burned."

Screenshot by ProPublica

In a brief phone conversation, Finlinson told ProPublica, “I’ve tried my best to represent my clients.” He said he preferred to answer questions through email but did not respond to emails from ProPublica.

The outcome for Harrison’s bill was typical for Finlinson, the Prep 60 general managers and their “trusted friends,” as the lobbyist called their legislative allies. As the 2020 legislative session ended, Finlinson noted in an email to his clients that of the 53 bills he was interested in — a majority dealing with water — 52 had gone the way he wanted. The only bill that had Finlinson’s approval but failed to advance ended up signed by the governor a year later.

Among the legislation Finlinson helped shape were bills proposed by state Sen. Jacob Anderegg, a Republican. Tens of thousands of Utah property owners only pay a connection fee for unlimited use of untreated water outdoors, leading to excessive watering of landscaping. Known as secondary water, it typically comes from lakes and rivers and could otherwise be treated and used elsewhere. Anderegg saw potential savings by requiring meters for secondary water.

In 2018, Anderegg filed a bill in the Senate to require secondary water meters on most connections statewide and co-sponsored a House bill to include secondary metering in conservation plans. Both bills died.

The Prep 60 general managers acknowledge secondary meters encourage conservation. Data from the Weber Basin Water Conservancy District — a northern Utah Prep 60 member that spent more than \$16 million installing meters — shows residents reduced outdoor water consumption by 23% simply because they could see how much water they used. No rate increase was necessary.

However, when Anderegg tried again, Finlinson, in emails to the Prep 60 general managers, worried that if lawmakers put money toward secondary metering, there would be less funding for water infrastructure such as dams.

Asked if the group decides what water legislation lives or dies, Anderegg answered bluntly: “Yes. Absolutely.”

Even when Finlinson and the large water districts don’t stand in the way of conservation measures, other lobbying groups, politicians and rural districts often oppose them. In the case of Anderegg’s bills, small districts and cities also balked at the cost of the meters.

“They all work together on water,” Anderegg said of Utah’s water districts, large and small. “They all shoot an email out to everybody in their group, and then all those people go talk to their elected officials, and then their elected officials don’t want to get sideways from their water buffaloes and come up here and say, ‘I’ve got serious issues with your bill, Sen. Anderegg.’”

Anderegg eventually passed two bills. His intent was to mandate secondary water meters on all buildings statewide, but he was forced to remove that requirement. As enacted, one bill requires meters on new construction, while the other exempts certain jurisdictions from the rule. Finlinson bragged about the outcome, telling his clients that secondary metering passed “in its substituted splendor.”

Washington County Water Conservancy District General Manager Zach Renstrom said lobbying only gets the Prep 60 districts so far. “If I had the ability to go to the Legislature and tell them what to do, that’s giving me a lot more credit than I deserve,” he said.

Even with Prep 60’s influence, it’s difficult to persuade lawmakers to mandate large-scale conservation, so they must rely on voluntary measures, said Shawcroft, who is the Central Utah district’s general manager and has a non-voting seat on the Legislature’s water committee. “Because our Legislature thinks ‘mandate’ is a word of the dark side, we try to focus on things that make sense and are doable. To the degree we can, we will attempt to influence conservation bills that make sense, that are frankly doable and passable.”

The aversion to conservation mandates has led lawmakers to discuss solutions to the drought that included prayer and a national pipeline network to transport water from Eastern states to the West. Any less ambitious solution would be “nonsense,” said Republican state Sen. David Hinkins, the co-chair of the Legislature’s water committee.

Support for Pipelines and Other Projects

As the sun rose over southwest Utah one morning this fall, the banging of hammers and clattering of wood echoed through a new subdivision going up in St. George, the nation's third-fastest growing metro area. "For sale" signs stood in front of some recently constructed homes, while others were already occupied. Sprinklers showered verdant lawns and sidewalks, the runoff streaming down gutters along the streets of this subdivision that not long ago was open desert.

The scene came courtesy of the Washington County Water Conservancy District, which supplies the vast majority of municipal water to the roughly 180,000 people in the county. When the district changed leadership in early 2020, Finlinson sent the outgoing general manager a note of congratulations on a "job well done to the person who has done his best to cover the red sands of Washington County with water."

The new general manager, Renstrom, is tasked with keeping the water flowing. According to the district and the state, that requires pursuing perhaps the most controversial water project in the nation, the Lake Powell Pipeline.

Renstrom has heard the criticism of southern Utah's conservation efforts. According to the district, water use in Washington County has over the past two decades dropped from 439 gallons per person per day to 271 gallons. But conservation won't be enough to keep the area growing, he said, especially as a changing climate threatens the area's main source of water, the Virgin River: "If I have a biblical drought, the Virgin River's toast."

The Colorado River is also suffering. Flows in recent years are down 19% compared to the average during the 20th century, according to research from Brad Udall, a water and climate scientist at Colorado State University. If individual states move forward with new projects to draw from the river while their neighbors are cutting back, it could upend the agreement that allocates the river's water. "The last 20 years should be an enormous wake-up call that we need to rethink water planning in the West," he said.

Over immense opposition from inside and outside Utah, Renstrom and state leaders are pushing the 140-mile pipeline to take up to about 85,000 acre-feet of water annually from Lake Powell. In the Legislature, resolutions and legislation supporting the Lake Powell Pipeline and the Bear River Development Project, which would send water from the Utah-Wyoming-Idaho border to Utah's population center on the Wasatch Front, have had an easier path than bills calling for conservation.

"You can say that conservation alone will save us. It absolutely will not," Shawcroft, of the Central Utah district, said.

Since 2015, lawmakers have approved bills to pay for this infrastructure. One created a restricted account to fund the Bear River and Lake Powell Pipeline projects and replace some federal water infrastructure. The account was seeded with \$5 million from the state's general fund. Another bill allocated to it one-sixteenth of a percent of all state sales tax revenue. The account has since accumulated more than \$95 million.

Safeguarding that money is a priority for Finlinson and Prep 60.

Critics say the districts are blindly pursuing new water infrastructure. Initial projections showed water from the Bear River project would be needed by 2015, but the Weber Basin district now says it won't be needed until at least 2060. Environmentalists argue this shows the project wasn't necessary in the first place and the money would be better spent on aggressive conservation efforts.

Tagge Flint, the Weber Basin district's general manager, said he's proud of the project's delayed timeline because it shows "we've done much better in water conservation from our current sources and stretched them further."

Plans Based on Faulty Data

As Utah amasses a war chest to tap more water from the Colorado and Bear rivers, data used to justify the projects doesn't pencil out.

Responding to concerns about the accuracy of projections on how much water the state will need, Utah's Office of the Legislative Auditor General investigated, casting doubt on the claim that the state will run out of water without new sources. "It is widely recognized that there are fundamental problems with the way the state's water use data is gathered and submitted by local water providers," the auditor general's 2015 report stated.

The audit found some Utah cities reported different water use numbers to the state than they reported internally. One city's officially reported "water use for 2012 was the water use of another city with an identical name in the state of New York," the audit said. The audit also found cities and water districts had rapidly added to their supply from local sources, such as converted agricultural water, but the state's projections showed an inexplicable slowing in the growth of supply if projects like the Lake Powell Pipeline weren't built.

The state agencies charged with protecting and developing Utah's water —the Division of Water Rights, the Division of Water Resources and the Division of Drinking Water — acknowledged flaws in their data.

But the state's political establishment and Prep 60 water districts continue to cite that data to prove that Utah is on the verge of a shortage. They say their internal numbers are sound and that state water accounting has improved, pointing to a 2017 legislative audit that found the state had begun cleaning up its numbers.

The state justified the need for the Lake Powell Pipeline to federal officials using projections that show residents in Washington County will reduce per-capita water use from 302 gallons a day to 240 gallons by 2045, a level of consumption that's still higher than most of the country. Their projections continue for another 30 years, to 2075, but show no further decline in use. They also show leaks and other water losses consuming 15.4% of the district's water, higher than the estimated loss of a typical Utah municipality, while projecting the losses won't decline before 2075. The water district said they are making progress addressing water loss and that number would be updated.

Their cost estimates for water infrastructure also appear to be based on questionable figures, according to Zach Frankel, founder of the Utah Rivers Council and longtime critic of the Prep 60 districts, who hired a researcher to vet the numbers.

In 2013, the Division of Water Resources published a draft list of \$19.8 billion worth of water projects needed to keep pace with growth. The following year, Prep 60 released a similar analysis with a \$32.7 billion price tag. Last year, Prep 60 updated its estimates to \$47.7 billion for projects, maintenance and conservation, some of it paid by businesses and homeowners.

"They're fantastical propaganda," Frankel said of the estimates.

He noted that the state's estimate includes such odd items as \$3 billion for a water district's "master plan" that won't be needed until 2100 and nearly \$1 billion for projects that the group's research suggests already have funding.

Shawcroft defended Prep 60's higher estimates, saying the group's methodology, which was reviewed by an engineering trade group, was more detailed than the state's and accounted for inflation and the need to replace infrastructure every 50 years.

Despite uncertainty about the cost, Prep 60 contends spending billions of dollars for new water infrastructure is cheaper than conservation and the only way to have adequate water. Conservationists say Prep 60 is wrong on both points.

Studies have found it cheaper to invest in conservation and purchase water from local sources, when those options are available. Estimates for the Lake Powell and Bear River projects range from more than \$1 billion to more than \$2 billion each. The Central Utah Water Conservancy District analyzed the average cost for its

past conservation projects, and tapping new Bear River water could be up to eight times more expensive than conserving an equal amount of water and new Colorado River water could be 14 times more expensive, ProPublica found.

The water broker, who consistently monitors water prices, said pursuing costly construction projects over conservation and other alternatives is “bending over a dollar to pick up a dime.”

The broker pointed to state data that shows Utah lost 200,000 acres of farmland during the most recent five-year reporting period, much of it converted to residential development, which uses less water than farming. “More farm water comes out of production than the cities can absorb annually,” the broker said. “There is a glut of water.”

Bart Forsyth, the general manager of the Jordan Valley Water Conservancy District, a Prep 60 member, said it’s not always cost effective to buy and treat water from farms that have ceased production.

Growth and cost aren’t the only considerations. The Bear River Development Project, because it would divert more water from the Great Salt Lake, must also account for its impact on the lake, which is already at a record low. If the project causes the lake’s water level to fall even further, more of the lake bed will dry out, creating airborne dust laden with toxic

metals from industry and fertilizer runoff near a metro area already plagued by poor air quality.

Again, proponents of this pipeline support their argument with suspect data.

The state asserts the project will only lower the lake 8.5 inches. But environmentalists like Frankel believe it will drop several feet, pointing to historical studies of the relationship between the Bear River and the lake level.

The state supports its position with a white paper authored by a Utah State University professor who compiled research on the Great Salt Lake. To answer how much the Bear River project would lower the lake level, he turned to a Division of Water Resources employee who had done modeling on the lake. Instead of citing a peer-reviewed study to support the 8.5-inch figure, the white paper points to their “personal communication.” The professor acknowledged to ProPublica that the number should be treated with skepticism until the state’s model is published and reviewed. Still, the number has been accepted as gospel at the Utah Capitol, with lawmakers and state reports citing it.

Future Priorities

It has likewise become widely accepted at the Utah Capitol that conservation alone will never satisfy the state’s demand for water.

During a legislative meeting in September, Brian Steed, executive director of the Utah Department of Natural Resources, addressed the Legislature’s leadership, who were seated around an ornate, U-shaped wooden table in the Capitol. He was there to discuss \$100 million in federal COVID-19 relief money the state had set aside for water issues. Steed told lawmakers he wanted half of it spent on secondary water metering. Utah has 260,000 secondary connections, 85% of which are unmetered, and installing meters would bring massive water savings, he told them.

“This sets aside the need for additional buildout of water infrastructure,” Steed said, “and as we grow and have additional pressure, that additional conservation is really what’s going to have to take place in order for us to grow like we’d like to.”

Legislative leaders on both sides of the aisle responded favorably. (They have since approved Steed’s proposal, and the governor suggested spending an additional \$200 million of federal money on secondary meters.) It appeared the worsening drought and availability of federal funds had refocused the state on conservation.

But as Steed stepped into the corridor outside the hearing room, a lobbyist approached. Instead of spending all that money on secondary water meters, the man asked, couldn’t Steed carve out a few million dollars for a reservoir?

This article was supported by The Water Desk, an independent journalism initiative based at the University of Colorado Boulder’s Center for Environmental Journalism.

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Looming water cuts call for solutions



Linda Stout December 20th, 2021 at 2:00 AM

Opinion

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Congress approved a drought plan for the Colorado River this week. The photo shows the river downstream of Hoover Dam. (Daniel Rothberg/The Nevada Independent)

is the visible record of a slowly unfolding crisis. For the first time ever, federal officials have declared an emergency water shortage for the Colorado River. Nevada's water cuts will take effect on January 1, 2022. Extended droughts, extreme temperatures, and chronic overuse of the Colorado river basin require our attention. It's a wakeup call to change the country's reckless relationship with desert water. Policymakers, farmers, and 40 million residents who depend on the Colorado River must find ways to use less.

A common thread throughout history is the persistent belief that nature can be conquered. Such hubris has emboldened those in power to harness and exploit great Western rivers. Unsustainable water diversions along the Colorado River began in the late 1800s to irrigate crops hundreds of miles away. In an effort to "reclaim" the river, federal and state officials established the Colorado River Compact of 1922. It was an unusually wet year, and water was over-allocated from the onset. The compact divided the river between seven states, and Mexico was added later. The West has been overdrawing on the mighty river ever since.

The first tier of federal emergency cuts affect Nevada, Arizona and Mexico. Allocated just 2 percent of the river's water, Nevada will reduce its supply by 7 percent, a meager 0.14 percent savings for the Colorado River. Arizona, with 17 percent of river water rights, faces reductions of 18 percent. Mexico receives 9 percent, and its cuts will be 5 percent. Together, these reductions amount to less than 4 percent savings in our critical mitigation efforts.

Conservation policies often target cities where costs are widely distributed. Nevada's urban areas represent 90 percent of the state's population, but consume less than 20 percent of the water.

People blame casinos, suburban lakes, and their neighbors' pools and lawns for wasting water. However, Las Vegas recycles all water used indoors, and it is among the most water efficient cities in the West. Outdoors, where water can't be reused, the Southern Nevada Water Authority incentivizes homeowners to convert their lawns to low water desert landscapes with drip irrigation. Nevada policymakers, in response to anticipated water shortages, passed a new law prohibiting water-intensive decorative turf within medians, along roads, and in business parks.

Often missing in Nevada's discussions on water consumption is agriculture. The water saving potential is tremendous. According to USGS data from 2015, crop irrigation accounted for [70 percent](#) of freshwater withdrawals (in Nevada and worldwide). To be clear, much of Nevada's [agricultural water](#) comes from groundwater and surface water in Western Nevada, not the Colorado River. Still, consider the impact of a 20 percent reduction in Nevada's water for crops, a potential savings equal to [Las Vegas's entire water supply](#) from the Colorado River.

Nevada's number one cash crop is [alfalfa](#) (hay) grown for feeding livestock. It consumes more [water](#) than Reno and Las Vegas combined. In other words, the driest state in the country uses most of its scarce surface and groundwater to grow food for horses and cows. Nevada is not alone in its appetite for growing lucrative crops that humans never eat. More than half of U.S. crops are grown for our

agriculture an anomaly. [Irrigation](#) supports half of U.S. crop sales.

It's a safe bet that every western state will see cuts in their Colorado River rations. Pumping limited groundwater as a replacement is tempting, but doesn't solve the water crisis. Converting to drip or low water irrigation systems will make the most impact. As of 2015, less than 10 percent of our irrigated crops were watered with drip irrigation, and wasteful watering methods such as flooding fields are still common practice.

The goal is "more crop per drop." Agricultural subsidies and tax credits must reward and incentivize water efficient irrigation and infrastructure. California, with rights to 27 percent of the Colorado River, grows most of America's nuts, fruits, and vegetables, but less than one-third of its crops use drip irrigation. Since 2014, California farmers have received more than \$80 million to convert fields from flood irrigation to drip irrigation. At UNR, researchers are developing "smart" deficit irrigation scheduling systems, computer-generated models that guide farmers to achieve the best yield with the least water.

The Colorado River compact, created a century ago, was faulty from the beginning. Harnessing the river with promises of prosperity is how 40 million people came to live in harsh dry states like Nevada. Policy makers struggle to see the full environmental and human cost of capitalizing on water, and are tasked with mitigating the effects of extreme weather disasters caused by climate change. Course corrections require "eyes wide open" solutions that do not create false optimism or deny the reality of severe drought and water shortages.

Mark Arax, author of "The Dreamt Land: Chasing Water and Dust Across California," has numerous policy recommendations for California (and the West) such as: bond measures for building ocean desalination and water recycling plants that encourage cities to conserve water; retiring vast acres of irrigated farmland; restricting groundwater pumping; and reserving surface water imports for the highest-value crops on the best soils. "Mega-dairies growing water-guzzling alfalfa should be given an incentive to relocate to states where cooler climes truly make for happy cows," he advises.

For urban areas, like Las Vegas, Arax cautions against suburban sprawl, calling it a "Ponzi scheme that costs cities more in services than it raises in revenues." So, it's concerning when Nevada's entire congressional body supports a flawed bill like the Southern Nevada Development and Conservation Act (SNDCA), which extends Las Vegas sprawl by 42,000 acres. Nevada is a gambling state, and pairing a shrinking water supply with expanded growth is a bad bet. This "too good to be true" package touts economic development, social justice, and sustainability, while downplaying the looming consequences of water shortages across the entire West.

Passing strong, sustainable, water policies are the lifeline for desert cities like Las Vegas. The infrastructure package recently signed into law by President Biden includes [Rep. Susie Lee's water recycling bill](#) and its [companion bill](#) by Sen. Catherine Cortez-Masto. These bills address water

infrastructure and climate bills are so important. Call your members of Congress. Thank them for supporting meaningful climate and infrastructure bills and ask them to reject the flawed and still pending SNDCA.

Linda Stout is the parent of four young adults and a longtime Las Vegas resident. She is a retired educator and climate activist. She grew up among happy cows on a small dairy farm in rural Wisconsin.

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Water managers grapple with a smaller Colorado River as the climate changes

December 19th, 2021



Study: Washoe County to run out of developable land by 2027

by Ben Margiott

Friday, December 17th 2021



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Downtown Reno as seen from News 4-Fox 11's Sky Vision drone on Dec. 17, 2021.

RENO, Nev. (News 4 & Fox 11) — Washoe County will run out of the most developable open land by 2027, according to a new study from the Economic Development Authority of Western Nevada.

The study, released to News 4-Fox 11, shows there are only 25,500 acres of developable land remaining — land that would be used up in about six years, according to the study.

Study: Washoe County to run out of developable land by 2027

EDAWN commissioned the study to support the Truckee Meadows Public Lands Management Act, a [proposed federal lands bill which would open up tens of thousands of acres of federal land](#) for developers, primarily in the area east of Sparks.

"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,

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The study is the first to quantify the natural land constraints that have contributed to limited housing supply and rising home prices in the Truckee Meadows.

"I really wasn't surprised by the study other than how fast we run out of residential land. I was a little surprised by that," EDAWN CEO Mike Kazmierski said.

“ *If you look at our region, and if you were to take all the (Bureau of Land Management) land and make it water, we're essentially an island.*

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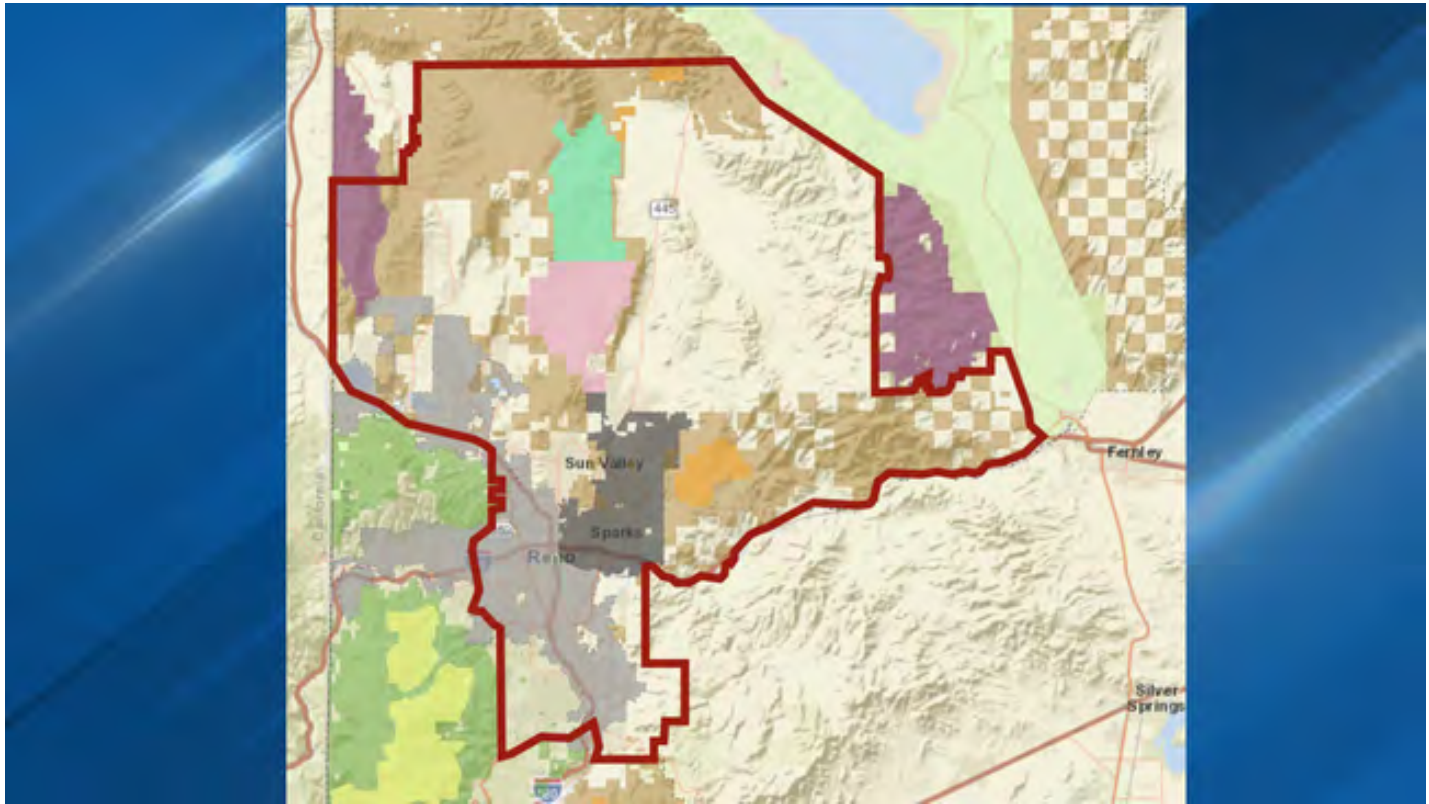
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sprawl. He said growing east into the hills above Sparks is better than the alternative of building up farther communities like Fernley or Silver Springs.



Map shows the land (tan-colored) that could be auctioned off under the Truckee Meadows Public Lands Management Act.

"It opens up land near the metro area which then helps us in many ways not have to deal with

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But some environmentalists say the bill would exacerbate urban sprawl and make northern Nevada less livable. Patrick Donnelly, Nevada director of the Center of Biological Diversity, said the Truckee Meadows can continue to grow within its existing natural boundaries.

“ It seems to be this old way of thinking that the only way we can grow is to sprawl outward to eat up more land.

"The Truckee Meadows needs to grow up not out. There is mostly single-family homes in Reno, mostly low-density housing and that is not a sustainable way to move into the future," Donnelly said.

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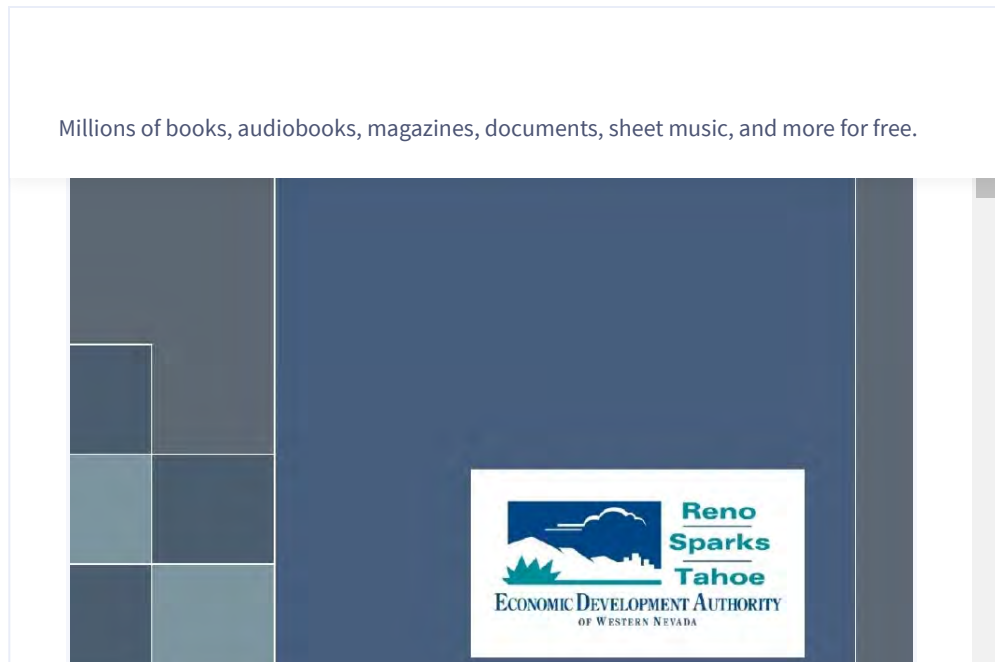
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2022 and voted on by late fall or early winter 2022.

RCG Economics, a consultant based in southern Nevada, did the study for a rough cost of \$85,000, Kazmierski said. Local governments and several developers also helped sponsor the research.

READ the study here:

[Northern Nevada Vacant Land Analysis](#) by [Ben Margiott](#) on Scribd



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Email reporter Ben Margiott at bjmargiott@sbgvtv.com. Follow [@BenMargiott](#) on Twitter and [Ben Margiott KRNv](#) on Facebook.

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Tahoe Fund Partners with Raley's to Launch A New Way to Donate with Photos

Partnership with PixlBank's new I Love Tahoe campaign will support efforts to lessen the impacts of plastics in Tahoe

The Tahoe Fund and Raley's have partnered with the social good platform PixlBank to launch a unique social campaign designed to promote responsible tourism and inspire residents and visitors to reduce plastics in Lake Tahoe.

The campaign focuses on the "Drink Tahoe Tap" message and is part of a larger initiative called [I Love Tahoe](#).

In stores or online, people will be directed to the Drink Tahoe Tap [campaign page](#) on the I Love Tahoe website where they can upload a photo of themselves drinking Tahoe Tap water – some of the purest water in the nation. They can then share their photo directly to their social media pages to unlock a \$10 donation from Raley's that will go towards installing water refill stations to help reduce plastic water bottle waste in Tahoe and to work with partners at UC Davis Tahoe Environmental Research Center and the Tahoe Water Suppliers.



“We are always looking for creative ways to encourage people to take care of Tahoe,” said Tahoe Fund CEO Amy Berry. “We think this is a fun way to drive more people to drink Tahoe Tap instead of using plastic water bottles. We are thankful to our partners at Raley’s for continuing their efforts to get this message out.”

The campaign is an extension of the partnership with Raley’s to promote Drink Tahoe Tap water bottles in their stores. Drink Tahoe Tap water bottles are available for purchase at all nearby [Raley's locations](#).

To help motivate people to share their photos and incentivize others to Boost those photos with donations, PixlBank has developed a built-in sweepstakes model that converts peoples’ actions (and donations) into entries to win [awesome prizes](#), like GoPro® cameras and video drones.

I Love Tahoe and Drink Tahoe Tap will give Tahoe visitors and residents a fun and rewarding way to empower and invest their social currency in the preservation and restoration of Lake Tahoe.

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PRESS RELEASE

New Study Details Significant Land Shortage in Northern Nevada

Based on current job growth trends, RCG Economics projects that the Region will absorb the most desirable residential land parcels in six years and Industrial in 20 years

RENO, Nevada (Dec. 21, 2021) – RCG Economics (RCG) released the [Northern Nevada Vacant Land Analysis: Inventory & Implications for Economic Growth & Development Report](#). The Study was designed to determine the short and long-term developable land constraints that could negatively affect the Region's economic resilience going forward. The Economic Development Authority of Western Nevada (EDAWN) commissioned the study which was primarily supported by The Truckee Meadows Business Coalition, NAIOP, EDAWN and local governments. (See page 5 of the report for sponsor recognition.)

Based on current job growth trends, RCG projects that the Region will absorb the most desirable Residential land by 2027 and Industrial land by 2041. The number of parcels to accommodate large-scale development in the near- and medium-terms is limited and will likely face supply constraints sooner than smaller parcels, especially since most of the larger parcels are 30 or more miles from Metro Reno-Sparks. 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 land.

According to the report, there are roughly 25,500 gross acres remaining of developable residential and nonresidential land in the Study Area, which represent less than 5% of the total acreage in the Region that is not vacant, not usable, too steep, etc. (see Figures IV-1 and IV-2). The study **confirmed that failing to ensure an adequate supply of developable land in the region will lead to a significant reduction in the region's growth and the area's gross regional product.**

Southern Nevada also conducted a lands study to assist in the passage of their lands bill. "It only made sense to conduct a similar effort to validate what the low-cost housing advocates, workforce housing proponents and the development community already knew," said Scott Bensing, a member of the Truckee Meadows Business Coalition. "This comprehensive study shows us that we are running out of developable land in the Truckee Meadows. Once the most desirable land is gone, the price for remaining land will skyrocket, making it nearly impossible for our children to stay in Northern Nevada and raise their families here," Bensing said.

Mike Kazmierski, President & CEO of EDAWN said, "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. Once approved, the Act will allow for the auction of federal land just east of the City of Sparks to increase our land supply, with the proceeds of the sales used to provide resources for parks, river protection, Lake Tahoe, wetlands and other enhancements to our quality of life. Access to this land closer to the metro area will allow for our continued growth, while avoiding the negative consequences of urban sprawl."

Elizabeth Fielder, Chair of NAIOP Northern Nevada (Commercial Real Estate Development Association) said, "It is imperative that we maintain our region's economic vitality and continue to diversify our region. As such, we are proud to present this study as clear, striking evidence that we are running out of land in our region. The only solution to our affordable housing crisis is to build more houses. And the only way to do that is to have more land to do so. A federal lands bill will pave the way for more affordable housing and more jobs for our current and future residents."

About [EDAWN](#):

The Economic Development Authority of Western Nevada is a private/public partnership established in 1983. EDAWN is committed to adding quality jobs to the region by recruiting new companies, supporting the success of existing companies, and assisting new forming companies to diversify the economy and have a positive impact on the quality of life in Greater Reno-Sparks.

Contact:

Norma Yamaji
Manager, Business Development
Economic Development Authority of Western Nevada
775-829-3768, yamaji@edawn.org

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Screen grab of the platform — accessible at public.ledger8760.com/reno. Courtesy: Ledger8760

NNBW staff report

Tuesday, December 21, 2021 (/news/2021/dec/21/reno-ledger8760-launch-public-carbon-emissions-tra/)

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(<http://twitter.com/intent/tweet?text=http://nnbw.com/news/2021/dec/21/reno-ledger8760-launch-public-carbon-emissions-tra/>)

The City of Reno and carbon tracking company Ledger8760 this month announced the launch of a public portal “that comprehensively and accurately captures and monitors the City of Reno's carbon footprint,” according to a Dec. 14 press release.

The platform — accessible at public.ledger8760.com/reno (<https://public.ledger8760.com/reno/>) — is capable of capturing all three emissions scopes for carbon output from city buildings, public utilities, meters, vehicle fleets and more, “allowing the city to identify blind spots in emissions management and identify opportunities to make more sustainable choices,” according to the release.

“Today marks a major milestone in our sustainability journey. By making our emissions data public, we are setting a new standard for transparency, as we work to reach our sustainability goals,” Reno Mayor Hillary Schieve said in a statement. “We look forward to the invaluable insights we will gain through this partnership to inform action plans that will make a real impact in 2022.”

Ledger8760 is a SaaS (software-as-a-service) startup that measures real-time energy, emissions and utility information from hundreds of sources, helping companies and government agencies measure their carbon footprints and reduce their costs.

Launched in 2017, Ledger8760 had been in stealth mode before going live at the start of this year.

The company hired Adam Kramer as CEO in April, and on July 1, it launched a collaboration with the State of Nevada, Washoe County and City of Reno to collect energy and emissions data from

NEWS

Invasive plants are invading Tahoe. A debate rages over using herbicides to battle them

Amy Alonzo Reno Gazette Journal

Published 11:52 a.m. PT Dec. 22, 2021 | Updated 11:39 a.m. PT Dec. 23, 2021

Desperate to control aquatic invasive species in a heavily traveled Lake Tahoe waterway, two regulatory agencies are considering allowing the use of aquatic herbicides in the Tahoe Basin, a treatment method that up until now has been prohibited.

The Tahoe Regional Planning Agency Governing Board and the Lahontan Regional Water Quality Control Board will decide in January if herbicides should be used on 17 acres in the Tahoe Keys to control rapidly spreading underwater invasive plants. Aquatic invasive plants have the potential to devastate Tahoe by impacting lake clarity, impeding boating, negatively affecting aquatic life and contributing to algae blooms.

More: Nevada tribal women reflect on Lake Tahoe resort name change

Advocates argue Tahoe's invasive aquatic species problem is reaching crisis proportions and that federally approved herbicides could help. Opponents argue they don't work and that invasive species-plagued areas such as the Tahoe Keys should be walled off from the rest of the lake.

Both sides agree something must be done.

"This fact is beyond debate: If we do nothing, or fail to act quickly, the worst fate for Lake Tahoe is unavoidable," said Darcie Goodman Collins, chief executive officer of the League to Save Lake Tahoe.

A threat to Lake Tahoe's clarity and health

Located in South Lake Tahoe, the Tahoe Keys Lagoons were built in the 1960's on the Upper River Marsh. The marsh was excavated, and the soil was capped with sand to form stable building sites. The Keys now include more than 1,500 housing units; 900 docks; and several businesses surrounded by 172 acres of waterways.

Invasive aquatic weeds thrive in the Lagoons because of the water's relative warmth and its stagnant, shallow water that allows light in for weed growth. It is estimated by the Lahontan Regional Water Quality Control Board that about 90% of the lagoons are infested with aquatic weeds. The weeds also spread easily by boat propellers that fragment the plants, spreading pieces around the lake.

The Keys is a boating community with more boat trips in and out of the waterways than many other areas around the lake — an estimated 25% of the lake's commercial, government and private boats use the Keys.

Aquatic invasive species have plagued the Keys since the 1970's. Since the mid-1980's, seasonal mowing has been the main weed control practice to keep the waterways clear for boats, but the mowing is a temporary fix — it does not actually reduce the amount of aquatic weeds growing in the Keys.

More than 10,000 cubic yards of plant matter — more than 900 dump trucks — are removed annually, costing the Tahoe Keys Property Owners Association up to \$400,000 per year.

The association has tried lining portions of the Keys with bottom barriers — mats that prevent sunlight from reaching the weeds — but the association is only permitted to use five acres of bottom barriers at a time by the Lahontan Regional Water Quality Board, a challenge when managing 172 acres of waterways. The association has spent roughly \$5.7 million on weed control over the years.

Now, the association is asking for an exemption to a previous ban on herbicides in the area that would allow a three-year trial period in the Tahoe Keys.

Lake Tahoe, and the adjoining Tahoe Keys, is recognized as federally protected from the use of herbicides because of its exceptional quality and recreational significance. Aquatic herbicides have never been used in Lake Tahoe or the Keys.

The trial project would combine herbicides, UV light exposure, manual extraction and other methods with an end goal of removing 75% of the invasive plants on the 17 acres over the three-year period, according to Lars Anderson, a retired United States Department of Agriculture aquatic plant and invasive species biologist.

Supporters of the project including scientists at the Tahoe Environmental Research Center; University of California, Davis; University of Nevada, Reno; the League to Save Lake Tahoe; and the Tahoe Resource Conservation District.

They argue that the Environmental Protection Agency-approved herbicides have been used for decades throughout the United States and that they only impact the targeted invasive plants. The herbicides proposed for the Tahoe Keys area target three species of weeds prevalent in the Keys: Curlyleaf pondweed, Eurasian watermilfoil and coontail.

In small trials, the selective herbicides have shown they kill the invasive plants without harming native plants, Anderson said. In addition, underwater curtains will be put in to keep water from treated areas from spreading into other parts of the Keys and the Lake.

“I don't believe the test poses any risk to Tahoe, even though it involves herbicides,” said Jesse Patterson, a former marine biologist who now works as the chief strategy officer for the League to Save Lake Tahoe. The League has previously opposed herbicide use at the lake, but Patterson said the limited and controlled nature of the trial has assuaged many of the League's concerns. “I know herbicides are part of it and are getting the most attention, but it's a broader suite of tools.”

Another solution proposed by opponents to herbicide

Opponents such as the Tahoe Area Sierra Club, Friends of West Shore and the California Sportfishing Protection Alliance argue herbicides aren't a viable long-term solution and will foul the lake and drinking water.

The Tahoe Area Group of the Sierra Club is instead pushing for an alternate solution: Walling off the Tahoe Keys from the main lake. The houses could remain but returning the lagoon to native marshland would filter out pollutants, according to the group.

“Herbicides do nothing about the problem: the nutrients and the sediment in the water,” said Tobi Tyler, Vice Chair of the Tahoe Area Group of the Sierra Club and a former water resource engineer with the Lahontan Regional Water Quality Control Board. “Making sure the Keys homeowners can take their boats out of their backyards is more important than saving the lake?”

“Do people want this? No. They understand fundamentally that this is a natural treasure and world-renowned lake. They get that this is a special lake and you don’t just pour herbicides in here ... This is not treating this lake in a manner it should be treated.”

The Tahoe Keys debate takes place as other agencies are partnering to perform the largest invasive plant removal project to date in the Lake itself.

The U.S. Forest Service Lake Tahoe Basin Management Unit and the Tahoe Regional Planning Agency are removing 17 acres of invasive plants in the Taylor and Tallac creeks and marshes by staking down bottom barriers (large tarps) on the floor of the Tallac Marsh.

The Lahontan Regional Water Quality Control Board is scheduled to vote on the matter Jan. 12. The Tahoe Regional Planning Agency Board is set to vote on the matter Jan. 26.

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

PERSISTENT POLLUTANTS

US drinking water to be tested for 29 PFAS

EPA will use data to determine public health risks

by **Cheryl Hogue**

December 22, 2021

US utilities will have to monitor the drinking water they supply for the presence of 29 **per- and polyfluoroalkyl substances (PFAS)** from 2023 through 2025, under a regulation the US Environmental Protection Agency issued Dec. 20.

The EPA will use the monitoring data to determine whether these environmentally persistent synthetic compounds need regulation in drinking water to protect public health.

"We are advancing the science and the monitoring that are necessary to protect all communities from PFAS,"

EPA Administrator Michael S. Regan says in a statement.

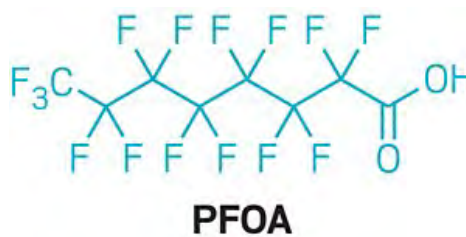
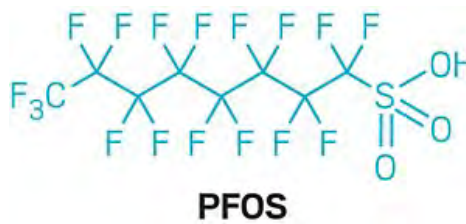
All 29 PFAS selected for monitoring contain reactive sites. The chemicals include sulfonic acids and carboxylic acids of perfluoroalkyls and fluoroethers.

Two of the chemicals, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), are widespread water contaminants even though they are no longer manufactured in the US. Exposure to PFOA or to PFOS is associated with cancer, immune system dysfunction, and endocrine disruption. **The EPA plans to propose legally enforceable limits on these chemicals in drinking water in 2022.**

Two other chemicals on the monitoring list are related to substances developed by chemical companies to replace PFOA as manufacturing aids to produce fluoropolymers. One is **4,8-dioxa-3H-perfluorononanoic acid, the parent acid of 3M's ADONA ammonium salt**. The other is **hexafluoropropylene oxide dimer acid (HFPO-DA), the chemical that forms when Chemours's GenX hydrolyzes into in the presence of water.**

Two chemicals that are environmental transformation products of certain commercial PFAS, including **the pesticide sulfluramid**, are also on the list. The compounds, which include N-ethyl perfluorooctane sulfonamido acetic acid (N-EtFOSAA), eventually break down into PFOS.

In addition, the EPA selected two chlorinated polyfluorinated ether sulfonic acids for monitoring in drinking water. **The two are components of a mixture known by the trade name F-53B that was developed in China and is used as a replacement for PFOS in**



ADONA is the ammonium salt of 4,8-dioxa-3H-perfluorononanoic acid.

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the electroplating industry.

Along with the 29 PFAS, **the EPA is requiring utilities to monitor for the presence of lithium in drinking water.** The element, which occurs naturally in some groundwater, is found at **levels that could pose a risk to human health in 45% of US public-supply water wells**, according to a study released in February.

Chemical & Engineering News

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CORRECTION:

This article was updated on Dec. 29, 2021, to correct the name 4,8-dioxo-3H-perfluorononanoic acid. The original omitted the 4. The *N*-EtFOSAA structure label was also amended on Dec. 23, 2021, to add the second A.

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Checking drinking water for PFAS and lithium



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Top 5 smart meter breakthroughs witnessed in 2021

By Nicholas Nhede Dec 23, 2021



Factors including a lack of funding, consumer resistance and unwillingness by utilities to deploy smart meter technologies in the past years have restrained the growth of the market. Since 2020, the impact of the

Image credit: 123rf.com

pandemic on supply chains and 2021 installation procedures have further negatively affected the market.

However, a lot of developments have been achieved despite the negative restraints. We look at the top five achievements realised in 2021.

Europe's smart meter installation milestone

In 2021, the penetration of smart electricity meters in Europe passed the 50% mark with more than 150 million units installed in consumer households and premises, according to a study released by Berg Insight.

The milestone is owing to increased digitalisation and modernisation of the grid and the enactment of supporting policies as the bloc eyes to achieve energy sustainability goals set under the Fit for 55 and Green Deal packages.

The UK under its effort to install 50 million smart meters, connected 16.6 million units on the **Data Communications Company** (DCC)'s network as of 11 December 2021. In late November, the DCC had announced that **10 million households have been connected to its network.**

By 2026, the number of smart meters installed in Europe is expected to reach 227 million units with the units with the **central, eastern and southern Euro** have been slow in deploying over the past years, expected to have the ten fastest-growing markets in terms of first-generation deployments. The proximity of central and eastern Europe to advanced utility firms including EDF and E.ON and to vendors including Landis+Gyr, Kamstrup and Sagemcom will increase penetration throughout the decade, according to Guidehouse Insights.

India announces smart meter rollout timeline

Consumer acceptance and a lack of funding delayed smart meter penetration in India over the past years, according to Anil Rawal, Managing Director and Chief Executive Officer of IntelliSmart Infrastructure. Efforts by EESL and utilities have to date resulted in just over 2 million units being deployed across India.

However, the pledge made by the Indian government in 2021 to install advanced units for all residential customers by 2025 is expected to be a game-changer. It will see more than 250 million smart meters installed through 2025 and more funding mechanisms introduced to support deployment.

Guidehouse Insights predicts the installation of smart meters in India to exceed 5 million meters annually post COVID-19, as utilities invest more in digital tools to address non-revenue electricity.

Hydrogen meter

With the global economy striving to expand the hydrogen market to speed up the decarbonisation of industry, energy generation, transportation and building heating and cooling systems, various efforts are underway to come up with 100% hydrogen meters.

The UK government, under the Hy4Heat project, has partnered with various smart meter manufacturers to develop 100% hydrogen meters.

As part of the initiative, **SIT and its subsidiary MeterSit**, have managed to develop a 100% smart hydrogen meter that has received certification from the Netherlands Measurement Institute.

Federico de' Stefani, Chairman and CEO of SIT group, said: "After the satisfaction of seeing our products installed in the hydrogen houses in the UK and exhibited at COP26, we are proud to obtain this certification for our 100% hydrogen meter which allows us to move from a test phase to a production phase.

In early December, Sensirion also launched its **pure hydrogen, hydrogen blends and natural gas smart meter**. The company claims its module is the world's first module that measures any gas mixtures.

New smart meter use cases

Smart meters have traditionally been used to ensure accurate billing but digital transformation trends within the utility sector in 2021 have resulted in the introduction and piloting of new use cases.

A report released by 2020health and commissioned by Smart Energy GB highlights the application of **smart meters for health and care monitoring systems**.

The report explores the benefits of using smart meters for home monitoring for vulnerable individuals and as part of post-operative or restorative care, for population-level screening and monitoring, and for self-monitoring for well-being and safety.

The new use cases are being piloted in the UK and in Japan. However, factors including a lack of proposition and collaboration, technological and connectivity limitations, and supporting policy and regulations will need to be addressed for them to become mainstream, according to the study.

Apart from using advanced metering infrastructure (AMI) to enhance billing, **US utility Con Edison announced some new use cases** including using smart gas detectors for outside monitoring of natural gas leakages.

AMI valve box intrusion detection devices are helping Con Edison to protect its distribution network and valves from intrusion and tampering in dense areas.

The utility will also be installing cathodic protection test stations for remote monitoring of gas distribution pipes and evaluation of the impact on the grid or leaks on the soil.

New smart meters, interoperability and communication standards

Interoperability of smart meters and grid devices and resilient connectivity are areas the industry continues to address to enhance the operations and efficiency of smart grid environments.

In 2020, **Kamstrup** unveiled a new smart electricity meter, OMNIA, which the firm claims enables utilities to leverage both RF mesh and IoT cellular communications specifications and technologies for connectivity.

Mikkel Winther Johansen, Product Manager, said: "It's important to us to be able to cater to different needs, and with the new addition to our meter portfolio, it's up to our customers to decide whether they want to jump the IoT train straight away or stick to the tried-and-

tested RF solution, only gradually making the transition. Both have their benefits, so it's really a matter of what suits the utilities' individual needs."

Itron launched a new electricity meter for the German market, with enhanced operations and interoperability with multi-vendor environments. The new capability is vital for utilities with energy companies partnering with various technology providers in smart grid and energy modernisation programmes.

Nicholas Nhede

Nicholas Nhede is an experienced energy sector writer based in Clarion Event's Cape Town office. He has been writing for Smart Energy International's print and online media platforms since 2015, on topics including metering, smart grids, renewable energy, the Internet of Things, distributed energy resources and smart cities. Originally from Zimbabwe, Nicholas holds a diploma in Journalism and Communication Studies.

Nicholas has a passion for how technology can be used to accelerate the energy transition and combat climate change.



Home > News > Environment > **City considering more restroom**

ENVIRONMENT

City considering more restrooms on the river

By ThisIsReno | **Published:** December 30, 2021 | **Last Updated on** D

The local nonprofit One Truckee River is pushing for more public restrooms on the Truckee River. T group is attending City of Reno meetings to discuss its Truckee River Restroom Project and propose new restrooms on the river.

A “Portland Loo” was the first public restroom installed on the river at Brodhead Memorial Park. “Public restrooms are basic building blocks of complete, functioning public parks,” said Iris Jehle-Peppard, executive director of One Truckee River.

Community is invited to attend the following meetings:

- Ward 3: Tuesday, January 4, 5:30 – 7:30 pm at the Reno City Hall Council Chambers, One E. Street, Reno.
- Ward 1: Monday, January 10, 5:30 – 7:30 pm at the McKinley Arts and Culture Center, 925 Riverside Drive.
- Ward 5: Tuesday, January 11, 5:30 – 7:30 pm at the Reno City Hall Council Chambers, One E. Street, Reno.
- Parks commission: Tuesday, January 18, 5:30 to 7 pm at the McKinley Arts and Culture Center 925 Riverside Drive.
- City Council: Wednesday, February 9, 10 am at the Reno City Hall Council Chambers, One E. 1 Street, Reno.

More information, and a survey, is at onetruckeeriver.org.

SOURCE: One Truckee River

ThisIsReno

This Is Reno is your source for award-winning independent, online Reno news and events since 2009. We are locally owned and operated.

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Strong Sierra snow measurement prompts cautious optimism from California water officials

By **Ed Fletcher/CapRadio**

Published December 31, 2021 at 6:04 AM PST



Department Of Water Resources

File photo: Frank Gehrke of California's Department of Water Resources checks the snowpack depth with Courtney Obergfell and Michelle Mead of the National Weather Service.

Don't schedule the 'drought's over party' just yet. That's the message from California water officials on Thursday, despite the promising results of a key Sierra snow survey.

At 78.5 inches, the snow depth at Phillips Station is double the average measurement at that location. But officials warned of wet starts that have fizzled.

"Let's just keep it coming," said Sean de Guzman, who manages snow surveys for the California Department of Water Resources.

"Even though rain and snow are currently above average", de Guzman added, "this drought is still far from over. Most of our reservoirs are still below average and our groundwater is still recovering. We still have a long way to go for our wet season, and we need more and more of these storms to keep coming through."

De Guzman told the handful of reporters present for the measurement — which has been conducted since 1940 — that 2013 started out wet, but after the new year, the precipitation stopped, resulting in one of the driest years on record.

Unlike last year, de Guzman said, the heavy October rains helped saturate the soil, boosting future snow runoff. Melted snowpack provides about a third of California's water needs.

The statewide sensor network puts the current snowpack at 160% of average. Earlier this week, water resources officials began releasing water from Folsom Lake, but they say the state's largest reservoirs remain around just at one-third full.

The recent storms that were responsible for dumping feet of snow in California also had a big impact on the eastern side of the Sierra. Chris Smallcomb, a meteorologist with the National Weather Service in Reno, told Reno NPR member station KUNR that precipitation is ahead of this time last year.

"If you look at just the eastern Sierra as a whole, basically from Tioga Pass all the way up to Truckee and you look at the snowpack information there, we're actually already ahead of where the peak was for snowpack last winter," Smallcomb said,

He said that the eastern Sierra is also two-thirds of the way to what's typical for peak precipitation, especially in a La Nina winter.

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Ed Fletcher/CapRadio

[See stories by Ed Fletcher/CapRadio](#)

Ltc Harry J. Culbert Usa (Ret)



Listen to this obituary

Obituary

LTC Harry J. Culbert USA (RET)

January 11, 1941—December 5, 2021

Harry passed away peacefully Sunday, December 5th, at home with his family and caregiver as he requested.

Harry was born in Ely, Nevada and moved with his family to Reno in 1945. He attended Mt. Rose Elementary School, Billingshurst Middle School, and Reno High School graduating in 1959. He then attended the University of Nevada and was a member of the Lambda Chi Alpha fraternity and studied history and ROTC courses.

Leaving the university in 1964, he was commissioned a Second Lieutenant and sent to the Infantry School at Fort Benning, Georgia. His first assignment was in Korea on the DMZ for 15 months. This tour was followed by an assignment as Company Commander at Fort Carson, Colorado for two years and then back to special training at Fort Bragg, North Carolina in 1967. This training led to an assignment as a Battalion Senior Advisor with the Vietnamese Army. During this assignment he was awarded a number of decorations including a Purple Heart during combat operations. In 1969 Harry returned to Fort Benning for the Infantry Advanced Course. It was during the next two years that he met and married Mary K of St. Louis, Missouri, returned to the university to complete his degree, and became a proud father.

Between 1971 and 1972 Harry was called to service again, in Vietnam, with the 173rd Airborne Brigade and then transferred to an aviation group. From 1972 to 1976 he served with a Department of the Army Test Activity at Fort Hood, Texas. Married and father of two sons, he returned to Reno and civilian life.

He spent the next 16 years as an Army reservist with assignments primarily in California. As the boys grew Harry coached soccer teams for 7 years and then enthusiastically sat on the bench for skiing, basketball, competitive swimming, and football games. He was also financial advisor for their fraternity, Delta Chi, during their college years.

Harry returned the University of Nevada for a degree in accounting and went to work for Sierra Pacific Power Company. He retired from the military in 1993 with 28 years of service and retired from Sierra Pacific in 2000. He went on to do seasonal tax work at H&R Block, and had a 19 year volunteer commitment to the Truckee Meadows Water Authority Advisory Committee. He also joined and supported the Veterans of Foreign Wars Post 10053 Verdi and The Vietnam Veterans of America Chapter 989 Reno.

Harry and Mary K traveled Nevada, the United States and parts of Europe. Harry enjoyed gardening and rooting for UNR at basketball and football games. He was always looking for fishing or hunting opportunities wherever he went, hoping for directions to the perfect fishing hole or active hunting location.

Harry was preceded in death by his father J. Emmet, his mother Elsie, and his brother Jon. Harry is survived by his wife of 52 years, Mary K, his sons Paul and Jayson and their wives Karlene and Lindsay, and his much-loved grandchildren Emma, Paul and Nick who he frequently bragged about regarding their many achievements.

A Memorial Mass of the Resurrection will be celebrated on Friday, January 14, 2022 at 2:00 PM at Our Lady of Snows Catholic Church, 1138 Wright Street, Reno with reception following at the Parish Center located at 1200 S. Arlington Avenue, Reno.

Harry's family would like to thank all of our family, friends and caregivers who tirelessly offered prayers, support, compassion, and care during his final year on earth.

In lieu of flowers please consider donations to Crisis Support Services of Nevada (<http://cssnv.org/donate/>) or The Diocese of Reno, 290 South Arlington Ave. Suite 200 Reno, NV 89501. Attention: Sunday TV Mass Donation.

Posted online on December 22, 2021
Published in Reno Gazette-Journal

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Reminder: 2022 REQUEST FOR PROJECTS

Tahoe Fund is seeking proposals for 2022 projects that will improve the Lake Tahoe environment for all to enjoy

As a reminder, the Tahoe Fund has opened up our annual Request for Projects. We are an organization focused on getting impactful projects done in the Lake Tahoe Basin, and we are now seeking new projects to add to our portfolio in 2022.

We have identified forest health as our number one priority, specifically seeking projects that will increase the pace and scale of forest restoration. Other focus areas include improving Lake clarity, expanding sustainable recreation, innovative solutions to transportation challenges, and creating more stewards of Lake Tahoe. This annual Call for Projects is an opportunity for innovative thinkers and organizations to secure the funding necessary to make their project to improve the Tahoe Basin a reality. Public agencies and nonprofits are invited to submit proposals for projects that require \$5,000 to \$1,000,000 in funding, and projects with the ability to leverage additional funding from Tahoe Fund support will be prioritized.

Previous and current projects vary widely and benefit diverse users and goals in the Basin. They include the building of the [new Tunnel Creek singletrack](#), supporting [East Shore field trips](#) for campers with physical disabilities from Camp Wamp, and removing trash from around all 72 miles of Lake Tahoe with a [team of SCUBA divers](#). The new [Caldor Trails Restoration Fund](#) will support the rebuilding of beloved South Lake trails that were damaged or destroyed during the Caldor Fire.

The Tahoe Fund strives to ensure the Lake is available for all to enjoy.

Project guidelines and the request for projects submission form can be found [here](#).

Projects submissions are due by January 31, 2022.

Our mailing address is:
PO Box 7124 Tahoe City, CA 96145

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

Opinion: Praise for Harry Reid must acknowledge settlement of water wars | Bruce Bledsoe

Bruce Bledsoe

Published 5:00 p.m. PT Jan. 5, 2022 | Updated 7:35 a.m. PT Jan. 6, 2022

This opinion column was submitted by Bruce Bledsoe, former opinion editor for the RGJ.

In all the well-deserved praise for Harry Reid, one major accomplishment has been missing — his successful effort to end Northern Nevada’s long-standing water wars over who gets how much of Truckee River water and when. This came through the Negotiated Settlement and Truckee River Operating Agreement, which in importance stand on a par with the creation of the Tahoe Regional Planning Agency, the California-Nevada Interstate Compact, and, in southern Nevada, the seven-state Colorado River Compact.

The issue had frustrated all attempts to resolve it, especially the outcries of the Pyramid Lake tribe over the Newlands Project, which in 1906 began diverting water from their reservation to agricultural interests (primarily the Fallon area), as the first project of the 1902 Reclamation Act intended to “make the desert bloom.” But others were making claims on the water as well, including the cities of Reno and Sparks. Few things raised passions so high, but early in his Senate career Reid made it a point to take it up.

He gathered together Sierra Pacific Power Company, the Truckee-Carson Irrigation District, the Pyramid Lake tribe and the state of Nevada, while his legislative director Wayne Mehl investigated the issues and coordinated discussions. After preliminary meetings proved hopeful, the talks were joined by the Fallon Paiute Shoshone Tribe, the cities of Reno and Sparks, the state of California and the United States bureaus of Reclamation and Indian Affairs. Joining later were the Lahontan Valley Wetlands Coalition and the Coalition for a Negotiated Settlement. TCID (primarily the Fallon area) soon withdrew because farmers believed they were being asked to give up their water for nothing in return. It remains a subject of debate whether the farmers could have gained more favorable terms than they eventually did if they had remained in the talks.

In any event, the discussions continued, during which time (1989) the tribe and Sierra Pacific announced their own Preliminary Settlement Agreement to improve Truckee River water usage for both. The utility gained up to 39,500 acre-feet of drought storage in upstream reservoirs (notably Stampede) while the tribe gained the right to store and release Stampede water in the spring to improve its fishery's spawning, primarily for the endangered cui-ui. Also benefiting the tribe was the requirement that Reno and Sparks reduce consumption by 10 percent during droughts, primarily through twice-a-week watering and meters.

Further arduous talks eventually led to a 1990 federal law mandating the Truckee River Operating Agreement which, when it finally went into full effect in 2015, settled the Pyramid tribe's lawsuit preventing the Reno-Sparks sewage plant from using its expanded capacity. It tripled drought storage for Reno and Sparks while providing more water for Pyramid, in part through the water-meter mandate. It reaffirmed the 1970-71 Interstate Compact with California, assuring that Nevada would receive 90 percent of the Truckee's flow. It gave funding to the Fallon and Pyramid tribes for economic development while settling numerous long-standing lawsuits. And it did this far more cheaply than importing large amounts of water or building new reservoirs upstream. It was praised for creating a more reasoned and effective use of river water to accommodate the various needs including fisheries, storage, quality, drought reserves, riparian habitat, river canopy and recreation.

On another front Reid spearheaded the 2002 Desert Terminal Lakes Program to preserve several endangered Nevada lakes, primarily Walker but also providing funds for Pyramid, Summit, Carson and Independence.

Bruce Bledsoe was opinion editor for the RGJ for 20 years; this column is a much-condensed version from "Ravage and Renewal," his Truckee River history.

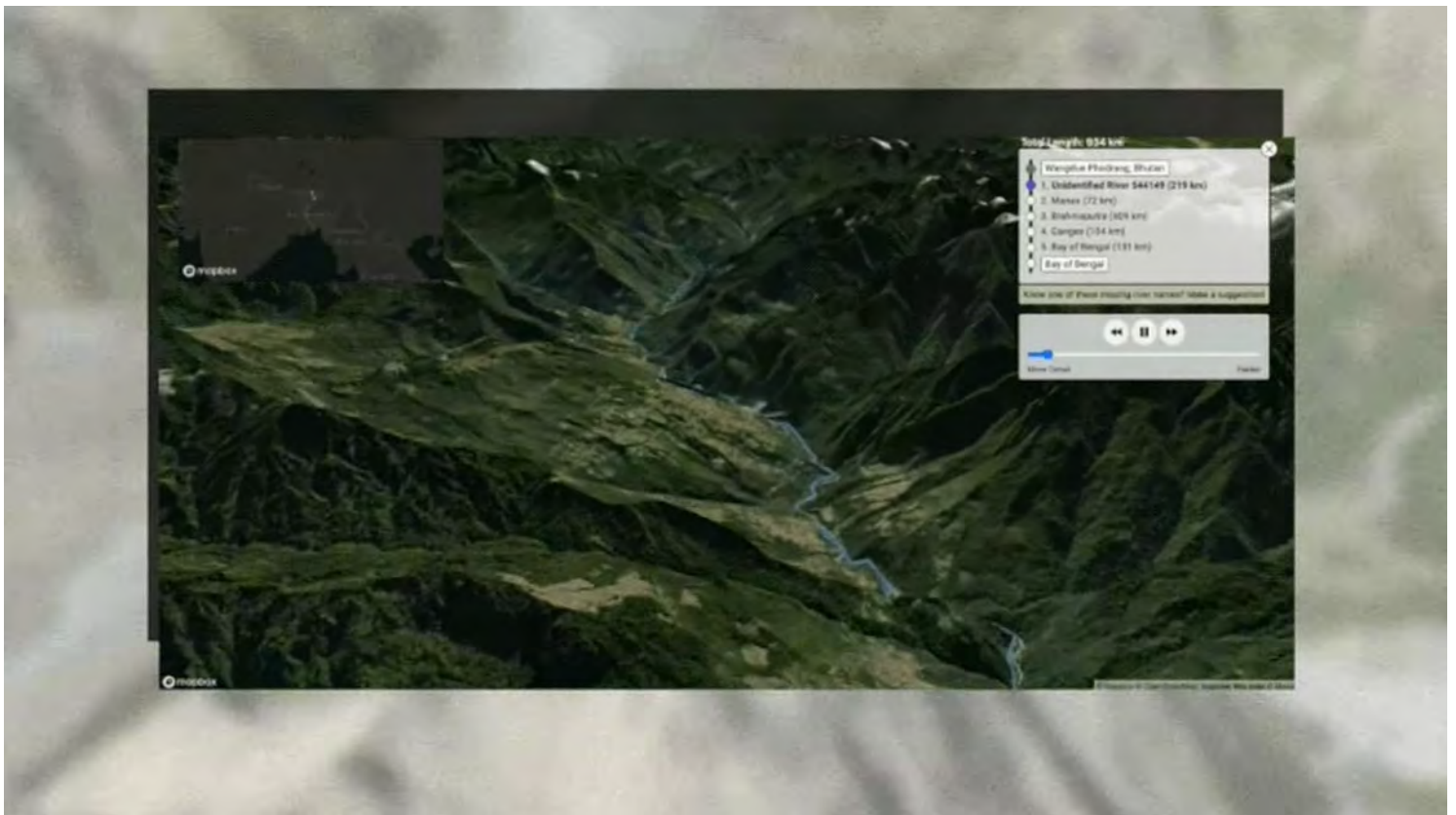
Have your say: How to submit an opinion column or letter to the editor



01-06-22

This mesmerizing map lets you follow the path of a drop of water anywhere in the world

Click to drop a raindrop anywhere in the world, and River Runner shows you where it ends up. It's an illustration of how connected our waterways are—and how far pollution that enters our rivers or streams can travel.



[Image: River Runner]



BY ADELE PETERS

1 MINUTE READ

If a drop of rain falls in Chengdu, China, it will flow nearly 2,000 miles away to the East China Sea. In Cochabamba, Bolivia, rain flows through multiple rivers to the Amazon in Brazil, eventually reaching the Atlantic Ocean more than 3,000 miles away. Rain falling in Custer, South Dakota, travels 2,600-plus



The Euphrates River in Turkey [Image: River Runner]

A mesmerizing new map called **River Runner** lets you choose a spot anywhere in the world and take a bird's-eye-view path through the local watershed, down streams and rivers that wind through mountains and fields. It's a global version of a **tool released last year** that initially focused on American watersheds.

River Runner - Himalayas

Data analyst Sam Learner built the project using data from the U.S. Geological Survey with help from the USGS's water team and the [Internet of Water](#), an organization that works on water data. (The back-end data needed to route the path of water globally didn't exist in the right format, so the team had to build it.) Learner spent weeks tweaking the design to make navigation smoother; the tool is still in a beta version, with some names missing from streams and rivers.

The Canadian Rockies in British Columbia [Image: River Runner]

It's fascinating to explore. "There's something really interesting about ending up in little pockets of the country or world that you don't know about at all, in interesting terrain," Learner says. It's also a clear illustration of how interconnected we are. He adds: "What we put in a river or stream ends up in someone else's water."

Tap to drop a raindrop anywhere in
the world and watch where it ends up

Project by [Sam Learner](#) | Data: [USGS/loW](#) | [Report Issues](#)

Pollution from New Delhi **ends up in the Bay of Bengal**. Fertilizer from farms in Minnesota and Montana **ends up in the Gulf of Mexico**, where it contributes to dead zones, areas where algae grows and chokes out oxygen, **killing fish and other marine life**. Plastic “nurdles” (pellets used in manufacturing) **flow from factories to rivers and lakes**. Trash dropped on a hike in the Austrian Alps might wash into a stream and **end up in the Black Sea**.

Aoraki/Mount Cook in New Zealand [Image: River Runner]

The same back-end data used to make the map, Learner says, could also be used to make another tool that would show everyone who’s upstream from a particular point, so people can better understand where water pollution is coming from.

ABOUT THE AUTHOR

Adele Peters is a staff writer at Fast Company who focuses on solutions to some of the world's largest problems, from climate change to homelessness. Previously, she worked with GOOD, BioLite, and the Sustainable Products and Solutions program at UC Berkeley, and contributed to the second edition of the bestselling book "Worldchanging: A User's Guide for the 21st Century." [More](#)

NEWS

Did you know the science of measuring water in snow originated in Reno more than 100 years ago?

Amy Alonzo Reno Gazette Journal

Published 8:00 a.m. PT Jan. 6, 2022

On Monday, federal hydrologist Jeff Anderson will head up Mt. Rose Highway to manually measure the water content of December's record snowfall.

His instrument? A hollow metal pole with a serrated edge — a tool invented by a University of Nevada, Reno professor more than 100 years ago.

In the early 1900s, James Church, a professor of classics and German at the University of Nevada, Reno, pioneered the science of measuring water in snow to predict stream flows, developing and patenting gadgets for his work.

More than a century later, his device and methodology live on.

'The father of snow surveying'

Snow survey data is the backbone of water management and water use in Nevada, according to Anderson. But why does such data matter? It allows water managers and farmers to plan in the winter for the coming summer.

Church is remembered today as the "father of snow surveying," according to Anderson.

It started in 1906, when Church and members of the Nevada Agricultural Experiment Station built a weather observatory on the summit of Mt. Rose to record snowfall, wind and spring runoff data.

Over the next few years, he established a system of courses around Mt. Rose and Tahoe to take snow samples. He compared snow and water content against stream flows to forecast runoff for the coming year. Some of Church's courses are still in use today, with over 100 years of historical snow data.

Church also developed and patented a snow sampler — a simple device made from a long, hollow metal tube with a serrated edge that is still used today by hydrologists around the world.

The tube is inserted into the snow to remove a core of snowpack. The tube is weighed with and without snow to calculate the water content.

By calculating the average of measurements from multiple locations, scientists can determine the snow water content for an entire area. Church's forecasting became known as the Nevada system and remains the standard throughout the West.

A legacy that lives on

A simple tool and formula, the snow sampler was groundbreaking.

Before the invention landed in the hands of scientists, measurements focused on the snow's depth rather than the amount of water it contained.

With Church's tool and formula, the study of snow water had begun.

Within years of Church's pioneering work, multiple independent snow surveys were being conducted throughout the West. In 1934, a severe drought struck, and Congress responded the next year by creating a federal snow survey and water supply forecasting program, managed by the U.S. Department of Agriculture.

They based the entire enterprise off Church's methodology.

Several decades ago, backcountry weather stations were installed that measure snow and transmit the data wirelessly. These stations -- known as SNOTEL sites -- for the most part replaced measurements with the tubes.

"But if I have a site where something looks weird with the data, I go up with the tubes and see how much snow is on the ground," Anderson said. "They are very similar to what Church developed -- pretty much exactly the same."

Church's legacy lives on in other ways as well.

Hikers in the Galena area can visit Church's Pond. Those not interested in hiking a few miles can visit the Nevada Museum of Art, which Church founded as the Nevada Art Gallery in 1931. Or they can visit the UNR campus to catch a performance in the Church Fine Arts building.

Not bad for a Classics and German professor who dabbled in the snow.

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



The Worldwide Water Meter Industry is Expected to Reach \$25+ Billion by 2027

Fri, January 7, 2022, 7:00 AM · 8 min read

DUBLIN, Jan. 7, 2022 /PRNewswire/ -- The "[Global Water Meter Market By Product \(Standard Water Meter and Smart Water Meter\), By Distribution Channel \(Offline and Online\), By End User \(Residential, Commercial, and Industrial\), By Regional Outlook, Industry Analysis Report and Forecast, 2021 - 2027](#)" report has been added to **ResearchAndMarkets.com's** offering.



Research and Markets Logo

The Global Water Meter Market size is expected to reach \$25,368.6 million by 2027, rising at a market growth of 4.2% CAGR during the forecast period.

A device that helps to monitor the volume and amount of water utilized in numerous commercial, residential, and industrial environments is called water meter. In addition, smart metering solutions refer to the new and expanded version of conventional meters, which utilize meters or modules with communication capabilities integrated into or connected to the meter.

The water meter works when water flows into a building, it enters via water lateral and afterward flows through the meter.

This flow of water that enters the building is then calculated by the water meter. The flowing water passes through the meter rotates a built-in device. Every complete spin of this device calculates a certain amount of water; wherein the amount is immediately shown on the display panel of the water meter in cubic meters. Thus, when water flows via the water meter, manually rotating the device is the only way to calculate the amount of water.

COVID-19 Impact Analysis

The outbreak of the COVID-19 pandemic has impacted different aspects of the business world. Owing to the imposed lockdown across different nations, the COVID-19 pandemic has impeded the production of several items of the water meter market. Companies operating in the water meter market can suffer a complete lockdown only to a limited extent, and afterward, they are expected to modify their investment plans.

Along with that, companies are now majorly investing in creating a better and safer work environment to avoid the situation of the low workforce and hence, low production. Many governments are also putting more effort to stabilizing the economic condition and supporting companies in uplifting their businesses, which is expected to support the market players and further fuel the growth of the market.



advocate | engage | create



Aquatic weeds and a hazardous algae bloom turn water in the Tahoe Keys a murky green.

A Critical Decision on Invasive Species at Tahoe

2022 begins at an important crossroads for Lake Tahoe. On January 12 and 13, the Lahontan Water Quality Control Board will make a decision on one of the most important issues facing Lake Tahoe's ecological future – controlling aquatic invasive weeds. You're invited to [attend this important virtual hearing](#) for the *Tahoe Keys Lagoons Aquatic Weed Control Methods Test*, or CMT for short.

Join the League by speaking out in favor of the CMT. Please consider adding your name to this letter of support today.

SIGN THE LETTER

As a believer in our mission to Keep Tahoe Blue, you know that aquatic invasive species are the greatest ecological threat to the Lake's health, as well as our enjoyment of its sparkling blue waters. The Tahoe Keys are ground zero for the infestation of aquatic invasive weeds at Tahoe, which is spreading further into the Lake.



Aquatic weeds creep out of the Tahoe Keys (bottom right) and into the Lake itself.
PC: Marine Taxonomic Services

To put this threat in check, a proposal to test a suite of control methods is moving toward a final decision, following a thorough environmental review process.

[LEARN MORE ABOUT THE TEST & SOME OF THE TREATMENT METHODS](#)

The League Strongly Supports the CMT

It all comes back to our mission – protecting Lake Tahoe's water quality and clarity today and for future generations. Here's why we support the test:

- Science clearly shows that aquatic weeds pose a dire threat to the Lake.
- Not taking immediate action, and continuing with the status quo, will not solve the problem – it will harm Lake Tahoe's water quality.
- The fate of all of Lake Tahoe, not just the south shore, is at stake.

[MORE REASONS WHY WE SUPPORT THE TEST](#)

Watch the January 12 Hearing

Here's how to join the virtual hearing that begins on Wednesday, January 12 at 10:00 am PST.

[LEARN HOW TO JOIN THE HEARING](#)

In case you missed it, recent news stories by the [Associated Press](#) and [Reno Gazette Journal](#) provide an overview of the issue.



Photo: tahoeclarity.com

Support a Healthy, Beautiful Lake Tahoe

Please remember to add your name to the letter supporting the CMT. This is your chance to help tackle Tahoe's dire aquatic invasive species threat.

[SIGN THE LETTER](#)

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League to Save Lake Tahoe | 530.541.5388 | keeptahoeblue.org



Home > News > Business > **\$8 million in grants available for cle**

BUSINESS

\$8 million in grants available for clean fuel fleets

By ThisIsReno | **Published:** January 9, 2022 | **Last Updated on J**

Photo by Giulia Lorenzon on Unsplash

A portion of the Volkswagen settlement funds distributed to Nevada are being made available to private businesses to replace their diesel-powered vehicles with cleaner alternatives. Nevada Division of Environmental Protection (NDEP) is offering up to \$8 million for the initiative, and grant applicati will be accepted through Jan. 31.

“Reducing pollution from diesel engines is a critical part of protecting the health of all Nevadans, and especially children and the elderly, who are the most sensitive to pollution from diesel emissions,” said NDEP Administrator Greg Lovato. “NDEP is looking forward to investing VW grant funding into projects that will help the Silver State drive towards a healthy, climate-resilient future.”

Nevada received \$24.8 million in the Volkswagen settlement which was reached in 2017. The U.S. government and California filed a civil suit against the carmaker for violating the Clean Air Act by designing diesel-powered cars that “cheated” smog tests and emitted up to 40 times the legal limit of nitrogen oxide into the air.

Businesses that have diesel-powered vehicles and equipment can apply for the funds to replace their freight trucks, delivery trucks, buses and other vehicles with low or zero-emission alternatives.

Apply online at <https://bit.ly/2ZPJWK3> or send your application to NevadaDEMF@ndep.nv.gov.

Source: NDEP

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Corporations Are Consolidating Water and Land Rights in the West

With farms, ranches and rural communities facing unprecedented threats, a worrying trend leads to a critical question: Who owns the water?

Jan. 9, 2022 • Eli Francovich



Center-pivot irrigation on a corporate farm near Pasco that draws water from the Snake River, on Tuesday, June 15, 2021.

Steve Ringman/TNS

Editor's Note: This piece originated in the [Columbia Insight](#). It is part of a collaboration that includes the Institute for Nonprofit News (INN), California Health Report, Center for Collaborative Investigative Journalism, Circle of Blue, Colorado Public Radio, Columbia Insight, The Counter, High Country News, New Mexico In Depth and SJV Water. The project was made possible by a grant from the Water Foundation with additional support from INN and the Fund for Investigative Journalism (FIJ).

Ghost cattle — 200,000 made-up heifers. A massive fraud rocking eastern Washington's arid ranching communities, leading to criminal charges and bankruptcy. [The Church of Jesus Christ of Latter-day Saints](#) and a Bill Gates-owned company duking it out at the auction block, [each willing to spend more than \\$200 million to buy 22,500 acres of ranchland and its associated water rights](#).

These were just some of the headlines from this past summer when Cody Easterday of Mesa, Washington, pleaded guilty to [defrauding Tyson Foods](#) and another unnamed company of more than \$244 million. He did so, according to court documents, by billing for the care of those imaginary animals.

After he pleaded guilty, the bidding war started. In June, the Church's agricultural holding company beat out Gates' 100C LLC, cementing the Latter-day Saints as one of the largest commercial agricultural landowners in the Western United States.

That's raised troubling questions about land consolidation, a decades-long trend fueled by the demise of the family farm. But there's a more complicated, and potentially troubling consequence to that purchase.

The water.

As Western lands are consolidated, so too are the rights to use the water that flows under and over those lands. As the Pacific Northwest gets warmer and drier, water is becoming a hot commodity that's attracting investors — whether it's the Latter-day Saints,

[large agricultural interests or New York investors](#).

And while state laws across the region regulate how, when and why water rights are sold, some worry it won't be enough to hold back the tide.

"I think we are ripe for the picking in terms of speculation and people coming in and trying to get their hands on these water rights," says Rachael Osborn, a longtime water lawyer in Washington State and cofounder of the Washington Water Trust. "A lot of people are now thinking they are sitting on pots of gold, and they have every intention of trying to sell their water rights when they no longer need them. It's really unfortunate that we've gotten to this point, where people think they can make a lot of money off water."

Fewer Owners

While dramatic, the Easterday land consolidation — and its possible impact on water rights ownership in the rural West — is hardly an isolated example.

Just this year a Wall Street-affiliated company attempted to acquire private water rights throughout the Columbia River watershed in Washington. The broad proposal would have allowed the company to bank and then sell or lease that water. Crown Columbia Water Resources LLC, which is connected to a Wall Street-backed investment firm, filed the application with the Washington State Department of Ecology. After [substantial public blowback that effort was suspended](#) earlier this year.

"A lot of people are now thinking they are sitting on pots of gold, and they have every intention of trying to sell their water rights when they no longer need them."

In 2019, that same company was in the news for purchasing water rights throughout the state and attempting to sell and lease them, prompting an ongoing legislative review of water marketing.

A 2018 deal showed the tremendous speculative value of land/water deals in the Columbia River Basin. That's when Gates' 100C paid \$171 million for 14,500 acres of land (10,500 acres of it irrigated farmland) from the Boston-based John Hancock Life Insurance Company, which [had paid \\$75 million for the parcel in 2010](#).

It's not only land acquisitions. Northwest Natural Holding Company —formed in 2018 as the parent company of longtime Portland-based NW Natural Gas Company — has quickly expanded into public water utility ownership. In 2021, the gas company's NW Natural Water concern added to its portfolio by acquiring five water companies in Washington, Idaho and Texas, [cumulatively investing more than \\$110 million in the water sector](#).

Elsewhere in the West, [Harvard University has snapped up California vineyards](#) and a Canadian teachers pension plan bought [more than 6,000 acres of Washington orchards and its attendant water](#).

'A World of Scarcity'

The summer 2021 drought that strangled parts of the Pacific Northwest has inserted the issue of water rights into nearly every environmental discussion in the region and has raised concerns about speculation and price gouging.

If climate change forecasts prove accurate, the summer of 2021 was a dress rehearsal for the future.

This summer in Oregon the federal government shut off access to water in the Klamath River due to a historic drought, [prompting some farmers and activists to threaten to take the water by force](#).

In Washington, [wheat production hit all-time lows](#) reflecting drought-depressed yields.

"You look back to this drought, that was the worst drought we had in 100 years, and it put a fine point on who got water first," says Jamie Short, a water resources program manager for the Washington State Department of Ecology.

"You look back to this drought, that was the worst drought we had in 100 years, and it put a fine point on who got water first."

Concerns about water speculation and scarcity aren't new. And while climate change and drought reinvigorate those worries, experts such as Short caution against oversimplification.

Because if water law is anything, it's complex.

"Consolidation and water rights, (it) isn't one plus two equals three. It's really case dependent," she says. "I don't think climate change is going to make anything any easier for us. But in a way, it's a world we already know. A world of scarcity."

Following the Opportunity

According to water laws in most western states, water can't be owned, although the right to use that water can be sold, bought and transferred.

Washington's first water banks were created to offset the impact of new residential developments on in-stream flows in the Yakima River.

Photo courtesy of the Bureau of Land Management.

In Washington — and elsewhere — there are rules governing the sale of water. For example, water rights must be used, or they are relinquished. Water must be used for a “beneficial” purpose and a water transaction can’t harm senior water right holders.

The regulation requiring that water be used would seem to discourage speculative behavior.

However, Washington and other states have programs that allow users to bank their rights with the state and not relinquish ownership. This has allowed water right holders the ability to effectively sell, trade and buy water.

This is known as water banking.

Banking serves several purposes. Farmers use water banks to sell water rights they no longer need to other farmers. Conservation groups use them to increase in-stream flows to help native fish. Developers use them to secure water for housing and commercial projects.

But this system also gives speculators a place to park their assets and wait until the price has risen, says Osborne.

Osborne, who is semi-retired, teaches water law at the University of Washington. The water-banking program has been particularly helpful for stream and river conservation projects, she says. But as developers and investors shell out more money for water, conservation groups are struggling to compete “[because everybody wants to get their hands on water.](#)”

Shrinking Farms

The desire to acquire water has helped fuel the ongoing consolidation of western lands.

Consider, in 1987, more than half of all U.S. cropland was operated by midsize farms that had between 100 and 999 acres of cropland, while 15 percent was operated by large farms with at least 2,000 acres, [according to a U.S. Department of Agriculture 2018 report.](#)

“To a pretty large extent land consolidation means water consolidation. But it’s not at all clear if that is good or bad, or the ways in which that is good or bad.”

Over the next 25 years, those numbers shifted dramatically. By 2012, farms with 100-999 acres held 36 percent of cropland, [the same share as that held by large farms.](#)

It’s a similar story in the Columbia River Basin.

The number of farms in Washington decreased by 7 percent between 2010 and 2019, [according to a 2020 USDA report.](#) At the same time the average size of farms increased from 382 to 410 acres.

Many of those properties come with valuable water rights, rights that are increasingly controlled by fewer and fewer people.

Some experts affiliated both with the state and private water-consulting firms, caution that the ways land consolidation will impact water or rights isn’t yet clear.

“To a pretty large extent land consolidation means water consolidation,” says Jonathan Yoder, director of the [State of Washington Water Research Center](#) and a professor of economics at Washington State University. “But it’s not at all clear if that is good or bad, or the ways in which that is good or bad.”

Is Paranoia Justified?

One indication that it may be a bad thing, or at least an issue of concern, came on Nov. 17 when Washington's Ecology department announced a pilot grant program aimed at funding local water banks, helping upstream communities compete with wealthier downstream agricultural interests.

"The pilot grants are intended to furnish rural communities in headwater basins throughout the state with funds to compete with deep-pocketed water investors," states a news release announcing the grant.

The grant program is the latest in a series of efforts Ecology has taken to try and understand how, and if, speculation is impacting Washington water.

In 2019, following concern about out-of-state investors, the state Legislature asked the department to examine whether water banking is leading to speculative or monopolistic behavior, says Dave Christensen, the policy and program manager for the Department of Ecology Water Resources Program.

"The Legislature has been concerned and Ecology has been concerned because we've been hearing it from our stakeholders," he says.

On Nov. 19, Christensen [updated the Legislature with the department's findings](#).

In short? So far there's little evidence of water speculation in Washington, he says. Between 1997 and 2019, there were 54 out-of-basin transfers in Washington State, representing less than 0.3 percent of the total volume of water used, according to a University of [Washington study commissioned by the Department of Ecology and published in 2021](#).

"Remember these people got these water rights for nothing. Maybe a \$10 application fee."

"The 54 transfers represent 1.5 percent of the total records that indicate a change of place of use in the Ecology database, implying that the majority of water right transfers in Washington State occur within-basin," states the study.

The Department of Ecology will continue to examine the issue and [present the Legislature with a final report, and policy recommendations, in 2022](#).

Other experts interviewed for this story also downplayed the risk of consolidation and speculation, noting that water is a difficult substance to transport and pointing to regulations in the West and Washington State in particular.

Daniel Haller, a water resource engineer with Aspect Consulting, which has offices around the Pacific Northwest, says that roughly 90 percent of all water rights in Washington are held by public entities — whether that's municipalities, the state or the federal government.

"I think the window for concern is small," Haller says. "Just because the number of rights is small. There is a subset of water rights that someone could try to speculate on. I just haven't seen it yet. I think the risk in the future is pretty small."

Political Drivers

However, that optimism isn't universally held and Osborn, the longtime water lawyer, is skeptical of Ecology's review process.

"Ecology convened this group to assess water banking and make recommendations to the Legislature and their recommendations to the Legislature has nothing to do with controlling price or making sure the benefit comes back to the public," she says. "Remember these people got these water rights for nothing. Maybe a \$10 application fee."

Osborn believes the state should take 10 percent or more of the water bought or sold as a sort of "transaction fee."

"Those with the money get to determine how the rules are drawn up and whether they are enforced or not."

While private speculation and out-of-basin transfers are a concern, there are also worries about cities and towns holding onto water rights, says John DeVoe the executive director of the Oregon-based WaterWatch.

In Oregon, some cities and towns hold onto water rights, not because they need the water but because they hope to sell it to other municipalities.

"A lot of these cities are not using this water for municipal purposes. they are selling it," he says. "That's kind of the hallmark of speculation."

As for state oversight, DeVoe isn't confident in Western state's regulatory muscle.

"I think state oversight is politically driven," he says. "And those with the money get to determine how the rules are drawn up and whether they are enforced or not."



[Home](#) > [News](#) > [Environment](#) > **‘Ideal’: Snow survey brings positive new**

[ENVIRONMENT](#)

‘Ideal’: Snow survey brings positive news f

By Ty O'Neil | January 10, 2022

NCRS Hydrologist Jeff Anderson takes a sample during his January snowpack survey at Mt. Rose on Jan. 10, 2022.
Image: Ty O'Neil / This Is Reno




 Listen to this story.



Snow survey brings positive news for region



The region's snowpack is "way above normal" according to Jeff Anderson, hydrologist with the U.S. Forest Service's Inyo National Forest Natural Resources Conservation Service in Nevada. His January snow survey on Monday night found that the snowpack in the region is well above normal. 

Rose Summit measured 7.5 feet of snow with more than 27 inches of water content—185% of the average snowpack.

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Non-profit plans to install more public restrooms along Truckee River

by Audrey Mayer

Monday, January 10th 2022



Truckee River flowing through the Reno area. (KRNVT)

RENO, Nev. (News 4 & Fox 11) — You may see more public restrooms installed along the Truckee River soon. It's part of a project spearheaded by a non-profit called [One Truckee River](#). "I think overwhelmingly, the community is interested in having more public restrooms along the river," said Executive Director Iris Jehle-Peppard. She said it will provide an essential service to people walking along our trails as well as prevent contamination.

City plans to install more public restrooms along Truckee River

"I think what people don't realize is the Truckee River actually provides 85% of the area's drinking water so whenever contaminants are put into the river then Truckee Meadows Water Authority needs to put more effort into taking it out," said Jehle-Peppard.

There's already one restroom at Brodhead Memorial Park. It gets about 30 flushes per day.

Over the last 18 months, it only had 7 minor incidents and 15 calls for service.

One Truckee River hopes to install two more restrooms soon, eventually reaching 10, at various parks along the river.

"This region is growing really fast and so even if you're somebody that's not unsheltered, you know, I have little ones and I've been in situations where I've been too far from a public restroom and it just happens," said Jehle-Peppard.

There's a series of public meetings with the City of Reno scheduled this month and next. There is also a survey you can take on their [website](#).



KUNR

Donate

We are experiencing signal outages on 91.7 in Reno/Verdi and 91.9 in Susanville. We are looking into the cause and hope to have the signal restored soon.

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

LISTEN • 1:47

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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](#)

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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](#).

48°

57°

59°

LIVE

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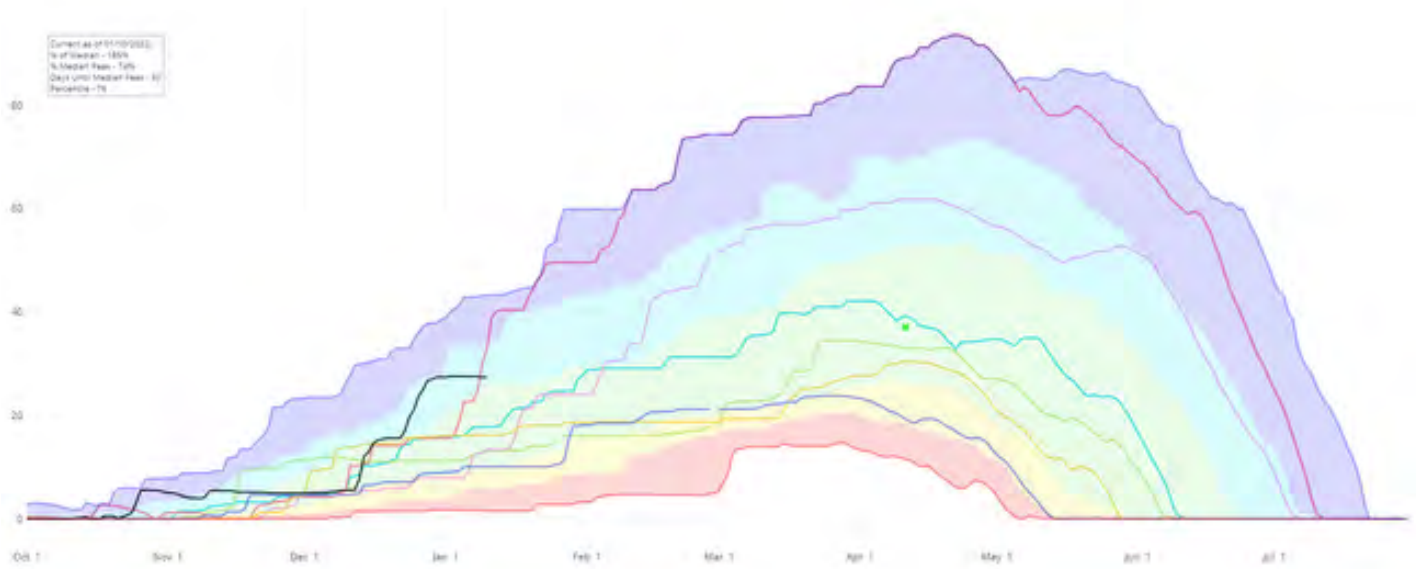
Snowpack measured at 185% of normal for this time of year on Mt. Rose

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.* ”



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