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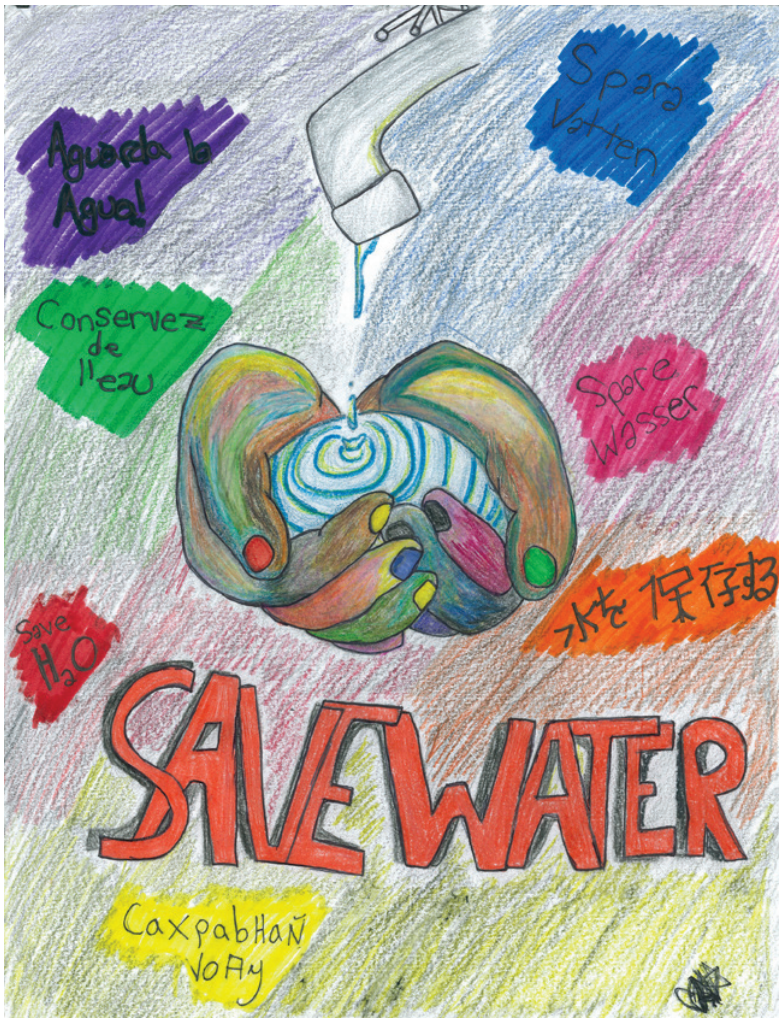
December 10, 2015 – January 12, 2016



Katherine Horton (Archie Clayton Middle School)
2010 Poster Art Contest – Honorable Mention, Grades 7-8

Mt. Rose snowpack numbers give officials optimism

Reported by: Jaime Hayden
Email: jhayden@mynews4.com

Print Story
Published: 1/04 6:19 pm
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MT. ROSE, Nev. (MyNews4.com & KRNV) -- Nevada's first snow survey of the year is in and the numbers are nothing but encouraging after four years of drought.

"I'm very happy with the results for this time of year, we're still a long ways from the end of winter and hopefully we continue to get more and more storms," said Jeff Anderson, Hydrologist with NRCS Nevada.

On Monday morning, Hydrologists with the Natural Resources Conservation Service measured 54 inches of snow depth, which equals 15.9 inches of water content at the Mount Rose Summit, making current snowpack 110 percent of normal for this time of year.

"Well as opposed to this time last year where it looked like we were just continuing the same pattern that we had seen the previous three years. I can say we are in a different trajectory, we are above average for this time of year," said Anderson.

A year ago, snowpack in the area was nearly half of what it is now, at just 60 percent of normal. And although we're above average for this time of year, hydrologists say we'll need a lot more snow to help our water supply this year.

"Our reservoirs are depleted and so an above average year would help, unless we have an extremely wet winter, it's not going to completely pull us out, but it's what we need to get on the right track," said Dave Wathen, Chief Hydrologist for the Federal Water Master's Office.

Hydrologists say most of our regions precipitation comes between October and March, making snowpack vital every winter, especially with the ongoing drought. So if there isn't a good snowpack by April 1st, experts say our water supply will be short again.

"Well like last year we ran out of water in the reservoirs early, and that was why the river was down to historic lows given the time of year early in the summer, so farmers were forced to shut off and even the municipals supply was taxed heavily," said Wathen. "So it needs to keep going, we need more storms and hopefully by April we'll be above normal."

Anderson says to get out of the drought in one winter we would need a historic year of about 230 percent of normal precipitation. He says the biggest number on record is around 178 percent of normal.

Lahontan Valley water users OK $17.4 million deal to sell Donner Lake assets

- Article
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The TCID bought its water interests in Donner Lake in 1943 for about $50,000.

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FALLON, Nev. — Lahontan Valley water users approved a ballot measure at Monday's special election to allow the Truckee-Carson Irrigation board of directors to sell Donner Lake assets.

More than 90 percent of the registered electors in Fernley and Fallon voted for the measure, 1,766 to 101. The district has 2,045 people eligible to vote.

"We didn't see as many in Fernley voting as we had hoped for, but there was a lot of activity here," said TCID District Manager Rusty Jardine at Tuesday's monthly board meting. "The margin surprised me. I thought there might have been some lack of understanding, but with the vote in our favor, it's surprising and pleasing.

"The board canvassed the votes and unanimously approved the outcome."

Jardine said voters overwhelmingly supported the district to sell its assets that will pay litigants whose homes or businesses were flooded on Jan. 5, 2008, when a 50-foot breach in the Truckee Canal's embankment emptied water to the housing subdivisions that straddled Farm District Road below the canal.

Jardine said he doesn't expect any glitches with the breach litigants.

"We will be providing the creation of documents to effect settlement," he added.

The question before the voters was whether the irrigation district acting through its board of directors should sell its interest in water storage rights and the dam facilities at Donner Lake in Truckee.

TCID bought its water interests in Donner Lake in 1943 for about $50,000.

Both the Truckee Meadows Water Authority and TCID boards previously approved the sale for $17.4 million.

TCID will be able to settle for $18.5 million, which includes money from the Donner sale and the remainder from insurance. Money derived from the sale, said Jardine, will pay the litigants.

If voters had defeated the measure on Monday, TCID could have faced a judgment of $30 million against the district based on earlier trials both in state and federal courts.

Jardine said TCID and TMWA should close escrow at the end of January and then proceed to another process — dismissal of claims.

Once escrow is completed, TMWA will be the sole owner of Donner Lake assets with complete control of the dam.

Jardine said TMWA will use the water — about 7,500-acre feet — as part of its inventory.

“It will be used as an extra supply of water for drought relief,” Jardine said.

With the litigation process and sale nearing an end, Jardine said he and the board of directors wished they could keep their Donner Lake assets.

“We recognize it as a gem, a beauty up there (in the Sierra),” he said.

For the past 25 years because of policies and court rulings, TCID has not been able to use any of the lake’s water.

“It hasn’t been a real resource to the district,” he said.

Snow Survey: Snowpack Looking Good but Drought Persists

JANUARY 4, 2016 BY BOB CONRAD LEAVE A COMMENT

Image courtesy of the NRCS.

This season's snow depth was measured by government officials today at Mt. Rose. The snow depth is slightly above average at 54 inches, or 110 percent of the median. Last year at this time it was at 60 percent of the median.

While that's a positive in relation to the past four years of snow accumulations, western Nevada is still considered to be in a severe or extreme drought, according to the national drought monitor.

A significant amount of snow would have to measured this season to put a noted dent in the region's water supplies, according to Heather Emmons with the USDA Natural Resources Conservation Service (NRCS).

Today's data were gathered by the NRCS at its Mt. Rose SNOTEL station. NRCS operates an extensive, automated network of SNOTEL weather stations to collect snowpack and related climatic data in the Western United States.

According to NRCS, "The system evolved from NRCS's Congressional mandate in the mid-1930's 'to measure snowpack in the mountains of the West and forecast the water supply.' The program began with manual measurements of snow courses. Data are reported by radio each hour and available on the internet. The high-elevation locations and the broad coverage of the network provide important data used by water managers, farmers, recreationists, researchers and emergency managers for natural disasters such as floods and droughts."

Ask the RGJ: Can new Reno bridge withstand ’05 flood?

 Mark Robison, mrobison@rgj.com 5:58 a.m. PST December 31, 2015

Crews remove debris from caught on the Virginia Street Bridge during the 2005 flood.(Photo: Provided by City of Reno)

393 CONNECTTWEETLINKEDIN 1 COMMENTEMAILMORE

Ten years ago this week, a Pineapple Express roared into Reno.

The subtropical storm with heavy rains and warming temperatures sent floodwaters down from the Sierra, closing businesses, forcing residents from their homes, and causing the governor to declare Washoe County a disaster area, with damage around $15 million.

Beyond the 400 sheep who drowned at a university farm off McCarran Boulevard, one of the biggest casualties was the Virginia Street Bridge in downtown Reno.

Water raced down the Truckee River at 16,000 cubic feet a second, or 46 times more water than was flowing last week. This eroded ground around the bridge’s support column to such a

dangerous extent that $650,000 was needed to repair a hole created by scour, or underwater erosion.

A new $18.3 million bridge is expected to open in its place May 1. A question worth asking is: Will the new bridge fare better if it's faced with a flood like on New Year's Eve 2005?

"Absolutely," said John Flansberg, the city of Reno's director of public works. "It's absolutely designed to handle much more water flow."

Not very safe

Before being torn down earlier this year, Virginia Street was ranked as Nevada's least safe bridge.

Normally, bridges in the state are inspected every two years.

"From 2010 until it was removed, we were inspecting (the Virginia Street Bridge) every six months to make sure it was still safe," said Jessen Mortensen, chief structures engineer for the Nevada Department of Transportation.

"Bridges used to become eligible for federal funds for rehabilitation and repair when their sufficiency rating dropped below 80. Below 50, it's eligible for replacement. Then it's a matter of when funding becomes available."

RENO GAZETTE JOURNAL
Ask the RGJ: Is Washoe health officer qualified?

RENO GAZETTE JOURNAL
Storm pours 4.3 billion gallons into Lake Tahoe

The Virginia Street Bridge's last sufficiency rating was 22.4 out of the 100-point rating.

Funds were not becoming available fast enough to replace it so money was scraped together from various sources: the city, NDOT, the Regional Transportation Commission, the Truckee River Flood Management Authority and other entities.

New features

The new bridge has multiple features that should easily handle a storm the size of the one 10 years ago, and they should also alleviate much of the problems in the 1996 New Year's Eve

storm. That flood was far more severe. It saw trees and other debris catching on the Virginia Street Bridge, pushing water out of the canal and into downtown Reno, where casinos were forced to close.

Floodwaters then were gauged at 23,200 cubic feet per second, or almost 50 percent stronger than the disastrous 2005 storm.

Both of those storms were taken into account during the bridge's design process, said John Flansberg, Reno's director of public works.

RENO GAZETTE JOURNAL

Ask the RGJ: Do short runways at RNO need special skills?

"When you look at the previous bridge, it had a center pier arch and arches on either side of that pier," he said. "Those arches would catch that debris. (During the floods) we'd pull out debris with a backhoe and put it on top of the bridge and haul it away."

Flansberg explained that the new bridge is about 2½ to 3 feet higher than the previous bridge so more water can flow under. It also has no columns or arches in the channel that can catch debris.

In addition, the bridge has bow arches above the bridge that help carry some of the bridge's weight, allowing it to be a few inches thinner. This creates even more room for water.

If that were not enough, the bridge has the protection of floodwalls on each side so erosion there is not an issue as with some other bridges.

"I can't think of a reasonable thing that would compromise the bridge," Flansberg said.

Reno engineering manager Kerri Lanza said, "With some components requiring maintenance and replacement, this new bridge is expected to last at least as long as 70 years."

The old bridge was rated at 50 years but lasted about 110.

The new one sports some bonus features, too.

"The new bridge has the same number of travel lanes as the old bridge," she said. "However, it has a wider pedestrian area and is structurally designed to accommodate future street car or light rail transit."

Bridge bump

Jay Aldean considers the new bridge his baby.

He has been a hydraulic engineer for 35 years and heads the Truckee River Flood Management Authority.

He made a stand in government meetings for a “clear span,” meaning no support posts in the water. This meant the bridge would be more expensive, and it went against many people’s wish to keep the same aesthetic look as the old bridge’s arches.

“I made ’em clear-span it,” Aldean said. “That way we don’t have to pay somebody to remove debris.”

He said the new bridge does not technically qualify for a 100-year rating from the Federal Emergency Management Agency, even though it can handle a 100-year event. (If something is a 100-year event, that means there is a 1 percent chance of it happening in any one year.)

To meet FEMA’s 100-year requirement, the bridge would have had to be about five feet higher than the surrounding street elevation, something that would not have worked in downtown Reno, Aldean said.

“We built the highest capacity bridge we could, given the geometric constraints of the surrounding area,” he said.

Flansberg said the new bridge is still noticeably higher than other bridges downtown, requiring stairs and ramps.

“There’s a little rise now as you come up over it now,” he said. “You start the transition from First Street going up and taper back down, and you tie back into the existing grade about Mill Street.”

Future floods

Aldean said the new bridge “absolutely positively will not stop downtown from flooding.”

The area, after all, is in a floodplain.

Replacing the Virginia Street Bridge was important, he said, but it was only the first step before downtown Reno can be flood-proofed. That will require bridges at Sierra, Lake and Center to be replaced, the bridge at Booth to be replaced as a pedestrian-bicycle bridge, and to heighten the levee along Riverside Drive, Aldean said.

Flooding like on New Year’s Eve 1996 and 2005 is unlikely this year because area reservoirs are not full this time around. For example, Lake Tahoe can still rise more than 6 feet before it becomes full.

Flansberg said the city works closely with the National Weather Service. “They are basically predicting we’ll get most of (this coming year’s El Nino) precipitation in middle to late winter — more like the end of January, February and into March.”

If a flood does come, though, the city has 700,000 sandbags ready to go, Flansberg said. And gauges along the Truckee River can give 7½ to 8 hours’ notice that floodwaters are headed this way.

For more stories by Mark Robison, visit on.rgj.com/mark.

Sierra snowpack beats average, at least for now

Benjamin Spillman, bspillman@rgj.com 4:57 p.m. PST January 4, 2016

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Jeff Anderson of the National Resources Conservation Service checks snow measurements at the automated Snotel data collection site on Mt. Rose near Reno on Monday morning.(Photo: Ben Spillman/RGJ)Buy Photo

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Snowpack at Mt. Rose near Reno is at about 110 percent of normal for this date, a welcome change after several seasons of extreme drought throughout the Sierra Nevada.

On Monday morning researcher Jeff Anderson of the Natural Resources Conservation Service confirmed measurements from the automated Snotel data collection site near the Mt. Rose summit.

Anderson measured 54 inches of snow depth and nearly 16 inches of snow water equivalent, which is how much water would result of the snow were to melt.

RENO GAZETTE JOURNAL

Strong start for Sierra snowpack

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Jeff Anderson of the Nevada Natural Resources Conservation Service measures snow at a Snotel site on Mt. Rose in Reno. (Photo: Benjamin Spillman/RGJ)

RENO GAZETTE JOURNAL

Here's how Sierra Nevada could still have dismal winter

That's about 110 percent of average for this time in January and well above the 60 percent reading at this point last year.

"Snow pack is above normal for this time of year which is great," Anderson said. "For most of the Snotel sites across the Tahoe Basin or the Truckee Basin we actually have more snow on the ground than we did at any point last season."

The exercise Monday was the first on-site measurement at the automated data collection spot on Mt. Rose. Although Snotel data is posted online every 24 hours, researchers such as Anderson still visit the sites on occasion to verify automated readings match what's happening on the ground.

The first on-site snow measurements for 2016 at the Mt. Rose Snotel site show more snow than usual for this date. That's a welcome change following several drought winters. Benjamin Spillman/RGJ

"This is one of about 800 stations that are across the west. They're really put in to measure our snowpack's water content," Anderson said. "They also measure precipitation, temperature and snow depth and soil moisture. But measuring that water content of the snowpack is really why they were installed."

All that data is telling Anderson and anyone else who's interested in Sierra Nevada snowpack that, at least so far, conditions are setting up nicely for robust winter snow cover.

Water supply managers are happy about the volume of snow and water content that put's the region well ahead of last season at this time. And skiers and snowboarders are happy that most of

the snow has formed in conditions cold enough for it to settle in powder form which makes it more fun for skiing and riding.

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Dave Wathen, chief hydrologist for the Reno-based federal water master, discusses the latest snowpack data during a visit to the Mt. Rose Snotel site on Jan. 4, 2016. (Photo: Benjamin Spillman/RGJ)

"If you are a skier powder is what you want," Anderson said. "All our snow has been really nice and cold."

Water managers, however, can be happy that the powdery, early season snow means there's still plenty of room in the pack for additional moisture. That means even if temperatures warm up the snow that's already in the mountains could absorb and store precipitation for later.

"All that water would just get absorbed," Anderson said. "Right now we would be fine to have a rain event, but for all of us skiers we would much rather have snow than an icy, crusty ski pack."

Still, the measurements taken Monday were just the first of 2016. The bulk of the winter months are still ahead. That means there's a chance things could change by April, which is when water managers measure the pack to anticipate what they'll have to work with come summer.

"It is critical that it keeps on going," said Dave Wathen, chief hydrologist for the Reno-based federal water master. "In 2013 we were even in a better state."

Then the snow stopped.

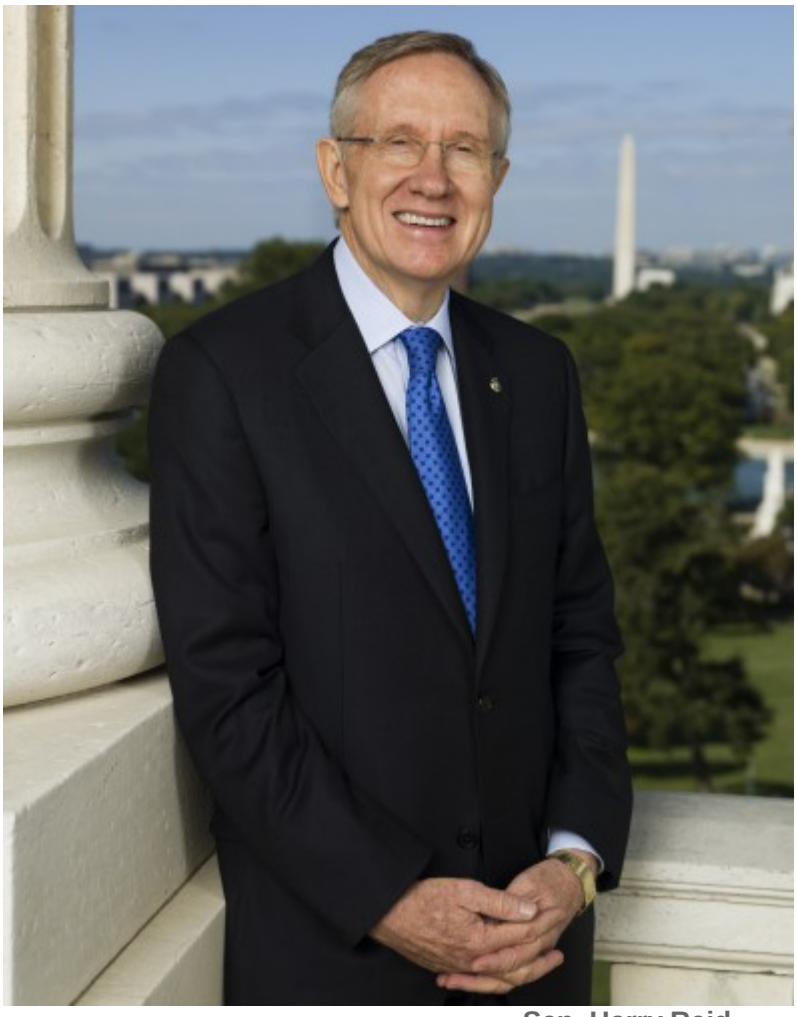
"After January in 2013 the storms quit coming," Wathen said. "We ended up on April 1 being just above 50 percent of normal, which was really the start of our really dry years."

This season people are optimistic that an El Nino pattern over the Pacific Ocean could keep the Sierra Nevada storm door open throughout the winter. With at least one storm on track to arrive this week and others forming behind it there's hope 2016 won't be a repeat of 2013.

"We need an above average year to dig us out of the hole that we're in," Wathen said. "Obviously this is a great start, but we need it to continue."

Sen. Reid to Kick Off Implementation of Truckee River Operating Agreement

JANUARY 4, 2016 BY BOB CONRAD LEAVE A COMMENT



Sen. Harry Reid

"With this agreement, five lawsuits will evaporate and go away." So said then U.S. Secretary of the Interior Dirk Kempthorne.

“Not everybody here today can remember a time when the efforts to improve our water supply were met with frustrating and expensive legal battles.” So said then Reno Mayor Bob Cashell.

They were referring to the Truckee River Operating Agreement (TROA), which was signed in September of 2008 in downtown Reno.

The agreement, though, has been held up in court since 2008, despite being called by Kempthorne, “a final agreement.”

The 2008 signing by government officials in front of hundreds at the Wingfield Park Amphitheater was met with, of course, more litigation filed by downstream users, including the Truckee Carson Irrigation District, which had opted out of the agreement.

That litigation has finally come to an end, and TROA is going into effect. According to a spokesperson for the Truckee Meadows Water Authority (TMWA), the last aspects of litigation were dismissed in district court, so the agreement is proceeding into implementation.

A press conference is being held tomorrow with U.S. Senator Harry Reid officially announcing the implementation of TROA.

“With TROA implemented … the community’s drought storage will more than double,” said Mark Foree, TMWA general manager. “Even if we have five more poor-water years just like we had last winter, TMWA will have more than enough drought reserves to meet of the community’s water needs. TROA is truly a game changer in terms of water supply.”

According to TMWA, the agreement provides the following:

- Permanent upstream storage for TMWA customers including supplies for emergency conditions and worse-than-worst-case droughts.
- Certainty associated with the Interstate Allocation of the Truckee and Carson Rivers as well as Lake Tahoe between California and Nevada.
- Improved flexibility of Truckee River operations to accommodate changing circumstances, policies and values while protecting historic water rights from injury.
- Improved timing of river flows for the threatened and endangered species in Pyramid Lake.

Reno-area water deal declared fully implemented

Reno-area water deal declared fully implemented

Truckee River (Nevada Department of Wildlife/YouTube)

image

By Sandra Chereb
Las Vegas Review-Journal Capital Bureau

RENO — Nearly 30 years after the first overture was initiated to settle decades of water wars over the Truckee River, clearing the last hurdles to implementing a pact was celebrated Tuesday.

U.S. Sen. Harry Reid- D-Nev., made negotiating a truce to the ongoing water conflicts along Northern Nevada's biggest river a priority when first elected to the Senate in 1986. In 1990, Congress passed a law directing

Nevada, California, the Pyramid Lake Paiute Tribe, Truckee Meadows Water Authority and the U.S. government to negotiate a resolution for divvying up the river that flows 120 miles from Lake Tahoe to Pyramid Lake north of Reno.

Decades later, the Truckee River Operating Agreement is now officially a done deal. Even though the agreement was signed in 2008 and various aspects implemented in stages, legal challenges by the Truckee-Carson Irrigation District that provides water to Fallon-area farmers held up ratification. Those lawsuits were recently dropped, allowing full implementation.

"It's really been extremely hard, quite frankly," Reid said in a telephone interview after his flight from Las Vegas was canceled and he missed a press conference hailing the agreement.

"I'm happy as a lark. I'm just sorry I couldn't be there," he said.

The pact guiding management of what has been described as the most litigated river in the country gives the Reno-Sparks area upstream storage for drought reserves, provides money and resources for tribal fisheries and preempts future litigation between Nevada and California over water allocation.

Under the agreement, Truckee River water is split 90 percent to 10 percent between Nevada and California, respectively. It also divvies up the Carson River with 80 percent to Nevada and 20 percent to California. Two-thirds of Lake Tahoe water belongs to California, one-third to Nevada.

It also mandated more aggressive water conservation in the Reno-Sparks area that resulted in regionwide water meters in exchange for upstream drought storage in Stampede Reservoir.

"We have waited literally decades for this day and it could not come at a more opportune time with the potential for a fifth year of drought in 2016," said Sparks Mayor Geno Martini.

The agreement also established a $25 million fishery fund for the Pyramid Lake tribe and $40 million for economic development. Tribal officials said the accord will enhance conditions in the Truckee River basin for the threatened Lahontan cutthroat trout and endangered Pyramid Lake cui-ui.

Leo Drozdoff, director of the Nevada Department of Conservation and Natural Resources, said it would take years to explain all the intricacies of the agreement. "Literally decades worth of work went into getting this operating agreement into place," he said.

"From a drought perspective, this agreement truly is a game changer," Drozdoff added. "It provides certainty in uncertain times."

Mark Foree, general manager of the Truckee Meadows Water Authority, the Reno-area's water purveyor, said the added available upstream storage will triple the region's drought reserve from around 22,000 acre-feet to 70,000 acre-feet, if Mother Nature cooperates.

Foree said the agency does not use water reserves on an annual basis or to service growth in the community

Water Agencies Celebrate Storage Of Truckee Water In Federal Reservoirs

- Bob Moffitt

Tuesday, January 5, 2016 | Sacramento, CA | Permalink

Bob Moffitt / Capital Public Radio

There will be more water available to supply the Truckee River this summer.

Mark Foree is the general manager of the Truckee Meadows Water Authority. He says the ability to store Truckee River water in Boca, Prosser, and Stampede reservoirs increases the agency's reserves by 50 percent.

"When water is not coming out of Lake Tahoe into the Truckee River, that is when we, typically in the summertime, we typically need to draw on our drought reserves, whether it be in Donner Lake, Independence Lake or reserves that we're building in these federal reservoirs," says Foree.

Foree says the agency's volume of accessible water will increase from 27,000 acre feet of water to 40,000 acre feet.

Some of the water will be released during the summer to help the Lahontan Cutthroat Trout and Cui-ui fish populations.

Farmers will also be able to store water and have it released throughout the summer.

An agreement signed in 2008 by the U.S. Department of Interior, the states of Nevada and California, the Pyramid Lake Paiute Tribe and the Truckee Meadows Water Authority cleared its final legal challenge from northern Nevada farmers in November.

Truckee River Operating Agreement Implemented, After Decades of Negotiations

Posted: Jan 05, 2016 4:30 PM PST Tuesday, January 5, 2016 7:30 PM EST*Updated: Jan 05, 2016 6:22 PM PST* Tuesday, January 5, 2016 9:22 PM EST
By Paul Nelson
Email
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producers@ktvn.com

The Truckee River only stretches less than 120 miles from Lake Tahoe to Pyramid Lake, but that short water route has been the source of many conflicts for more than a century. In 1988, Sen. Harry Reid began the process of coming up with a new set of guidelines for the river, that all parties could agree with - 27 years later, the Truckee River Operating Agreement (TROA) is officially underway.

"We got a decision made and over with, and in the true spirit of government, it only took 27 years," Sparks Mayor Geno Martini said.

Martini is also the chairman of Truckee Meadows Water Authority, just one of the agencies that is happy with the agreement. They worked with California and Nevada, the U.S. Department of the Interior, and the Pyramid Lake Paiute Tribe to make the compromise.

"It was monumental and certainly there were times along the way where it didn't seem like it would get done but I think everybody was motivated by wanting to get something done," Leo Drozdoff, Director of the Nevada Department of Conservation & Natural Resources said.

Officials say the new agreement offers certainty and flexibility for the people that use the Truckee River's water. Urban growth, farm districts, and tribal uses were all reasons why they say the agreement had to be made. It also maintains recreation and protects species like the Lahontan Cutthroat Trout and the Pyramid Lake Cui-ui.

"The benefit to our habitat is huge for the tribe and then the signatory parties, the users, it's going to be huge for them also," Vinton Hawley, Pyramid Lake Paiute Tribe Chairman said.

Upstream storage was a major reason for modernizing the operation of the Truckee River. Because of TROA, officials say drought storage could eventually triple. Since the agreement took effect, December 1, more than 3,000 acre feet of water has been stored.

"We expect to increase our drought storage by about 50%, just over the winter, over what we could do either of the last two years," Mark Foree, TMWA General Manager said.

"Everybody always worries about we're not going to have enough water," Martini said. "Well, I think this will ensure, for now, that we can get through these droughts and be fine."

Chad Blanchard is the U.S. District Court Water Master and TROA Administrator. He says the plan will increase flexibility for the operation of upstream reservoirs, allowing different agencies to move water around and exchange water. He gave one example, saying if California wanted more water for recreation, they would have more flexibility to work with Nevada's stakeholders to make that happen.

"They can work with the other parties to be able to maybe work a deal and exchange some water back and forth to be able to manage objectives," Blanchard said.

90 percent of the river's water is being allocated to Nevada, ending the uncertainty with California over the distribution of the water. While there was some give-and-take for all parties involved, officials say this is the fairest and most useful method of utilizing one of northern Nevada's most precious resources.

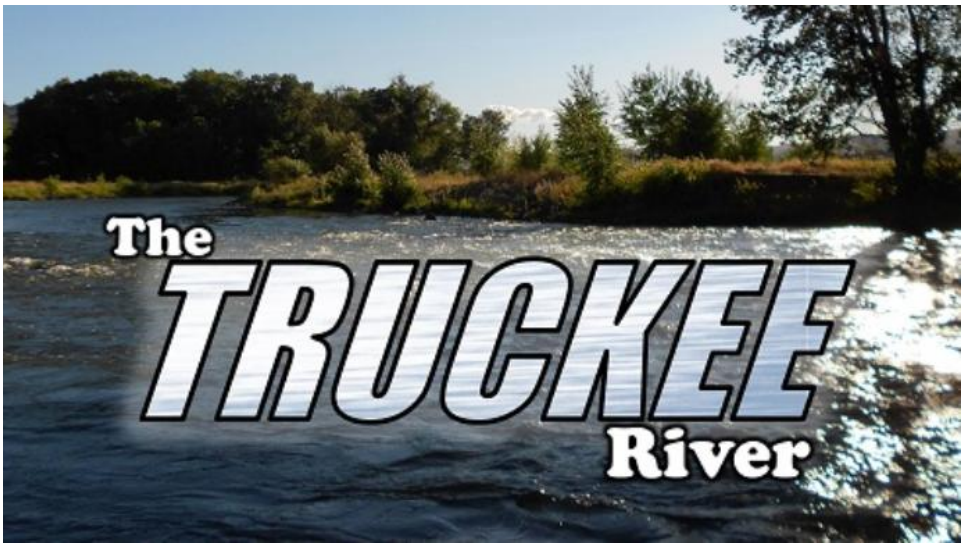
"With all the competing interests, you have those kinds of conflicts but it takes everybody giving up a little bit to get a little bit," Foree said.

TMWA also owns half of the water rights in Donner Lake, and they have an agreement with the Truckee-Carson Irrigation District to buy the other half. Foree says Donner is a small but important lake, adding drought storage for the Truckee Meadows.

Truckee River Operating Agreement Now in Effect

By colin.lygren@kolotv.com |
Posted: Tue 6:48 PM, Jan 05, 2016 |
Updated: Tue 11:04 PM, Jan 05, 2016

RENO, Nev. (KOLO) - After decades of fighting over the correct way to manage the water in the Truckee River, there is finally an agreement. Water officials are celebrating the implementation of the Truckee River operating agreement. It's said to provide more flexibility for water managers and further allow them to conserve.



Until now the river's flow has been governed by a series of very strict decrees that don't allow for much leeway, but with the implementation of TROA, the governance of the river will be based on what is best for all parties as well as seasonal weather conditions.

"From a drought perspective, this agreement is truly a game changer," said Leo Drozdoof, Director of the Nevada Department of Conservation and Natural Resources.

Water officials are applauding 27 years of negotiations that led to the formation of TROA.

"It is a great day for northern Nevada, it really is," said Sparks Mayor Geno Martini, Chairman of the TMWA board.

The agreement was hatched between California, Nevada, the Pyramid Lake Paiute Tribe, and the Truckee Meadows Water Authority.

"It provides a lot more flexibility to the parties to be able to exercise their water rights," said Chad Blanchard, Federal Water Master.

Blanchard says TROA allows water right holders like TMWA to more easily store water instead of letting it flow downstream.

"A water right that maybe was not being used before can now be exercised and credit stored up stream to be used later for a drought reserve," said Blanchard.

Prior to TROA, certain flows were required to be met every day no matter if it is during drought or high water year. Those requirements have been in place since the 40's when hydro-power plants and paper mills lined the river. With those water users gone, flows don't need to be as high.

"Hydro-electric power is not as important as it used to be; there are no paper mills... so that rigid release of water from reservoirs to meet a certain high flow at the state line is now not there anymore. Now we can hold water back in upstream reservoirs when we don't really need it, and release it when we do really need it," said Mark Foree, General Manager of TMWA.

Sierra Has Above-Average Snowpack

Posted: Jan 04, 2016 4:15 PM PST Monday, January 4, 2016 7:15 PM EST*Updated: Jan 04, 2016 5:22 PM PST* Monday, January 4, 2016 8:22 PM EST
By Paul Nelson
Email
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The Sierra is off to a strong start, in terms of snowfall, which is 110% of average for this time of the winter. The USDA Natural Resources Conservation Service conducted its first snow survey of the year, Monday, at the Mt. Rose SNOTEL site. Hydrologists measure the depth and weight of the snow, to show how much water content it has. This site had a depth of 54 inches, with a water equivalent of 15.9 inches.

"I'm delighted with this winter, so far," Jeff Anderson, NRCS Hydrologist said. "I think we're on the trajectory that we haven't been on in a few seasons. That's for sure, and that's towards above-average snowpack."

Anderson says the snowpack is about 10% above average, which is nearly twice what it was exactly one year ago. While the early snow is great news, he says it is still early in the season, and more precipitation is needed.

"The storms need to keep coming in," Anderson said. "We certainly don't have enough snow on the ground, now, to make an above-average snowpack in April, but we're on the right track."

January is traditionally the wettest month of the year, followed by December and February. Hydrologists say the next few months are critical for our water supply. Dave Wathen is the Chief Hydrologist for the Water Master's Office. He says he is encouraged by the early results, but knows it is too soon to be satisfied. In January of 2013, he says the snowpack was a little higher than it is today.

"However, that year, it just basically turned off," Wathen said. "We didn't get many storms after January, and we ended up the season at 50% of normal."

Wathen is hoping for a different outcome, this year.

"By far, the majority of our water comes from snow and snowmelt. This is our biggest reservoir, up here, is the snowpack," Wathen said. "We need it to keep on coming and accumulating, and hopefully by April 1, we'll be well above average, which is needed to fill our reservoirs."

Reservoirs like Lake Lahontan are nearly empty. Lake Tahoe is 1.44 feet below its natural rim. It would take a lot of snow to get back up to normal levels.

"Even if Tahoe gets back above its rim, it won't stay above its rim for very long," Anderson said.

Anderson says the concentration of water in the snow is fairly low density, but he expects that to increase as more snow falls on top, or more rainwater absorbs into it.

"As a skier, I'd like to see it come in as light powder, but as a hydrologist, I really just want the water content to be there by April," Anderson said.

Hydrologists say the next three months are critical for northern Nevada. As the snowpack builds up, so does our water supply.

"Whether you live in Reno and it's coming out of your tap, or you're a farmer in Fallon, we all need that water to survive," Anderson said.

"What we get off this snowpack is what goes to serve farming, municipal, industrial, commercial. So it's extremely critical," Wathen said.

Valley water users OK deal

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Water users in the Lahontan Valley approved on Monday to allow Truckee-Carson Irrigation District board of directors to sell the district's Donner Lake assets and dam.

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Lahontan Valley water users approved a ballot measure at Monday's special election to allow the Truckee-Carson Irrigation board of directors to sell Donner Lake assets.

More than 90 percent of the registered electors in Fernley and Fallon voted for the measure, 1,766 to 101. The district has 2,045 people eligible to vote.

"We didn't see as many in Fernley voting as we had hoped for, but there was a lot of activity here," said TCID District Manager Rusty Jardine at Tuesday's monthly board meting. "The margin surprised me. I thought there might have been some lack of understanding, but with the vote in our favor, it's surprising and pleasing.

The board canvassed the votes and unanimously approved the outcome."

Jardine said voters overwhelmingly supported the district to sell its assets that will pay litigants whose homes or businesses were flooded on Jan. 5, 2008 when a 50-foot breach in the Truckee Canal's embankment emptied water to the housing subdivisions that straddled Farm District Road below the canal.

Jardine said he doesn't expect any glitches with the breach litigants.

"We will be providing the creation of documents to effect settlement," he added.

The question before the voters was whether the irrigation district acting through its board of directors should sell its interest in water storage rights and the dam facilities at Donner Lake. TCID bought its water interests in Donner Lake in 1943 for about $50,000.

Both the Truckee Meadows Water Authority and TCID boards previously approved the sale for $17.4 million. TCID will be able to settle for $18.5 million, which includes money from the Donner sale and the remainder from insurance. Money derived from the sale, said Jardine, will pay the litigants.

If voters had defeated the measure on Monday, TCID could have faced a judgment of $30 million against the district based on earlier trials both in state and federal courts.

Jardine said TCID and TMWA should close escrow at the end of January and then proceed to another process — dismissal of claims.

Once escrow is completed, TMWA will be the sole owner of Donner Lake assets with complete control of the dam.

Jardine said TMWA will use the water — about 7,500-acre feet — as part of its inventory.

“It will be used as an extra supply of water for drought relief,” Jardine said.

With the litigation process and sale nearing an end, Jardine said he and the board of directors wished they could keep their Donner Lake assets.

“We recognize it as a gem, a beauty up there (in the Sierra),” he said.

For the past 25 years because of policies and court rulings, TCID has not been able to use any of the lake’s water.

“It hasn’t been a real resource to the district,” he said.

Truckee River water deal implemented after 27 years in the works

 Seth A. Richardson, srichardson@rgj.com 7:06 p.m. PST January 5, 2016

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Fall color is nears its peak along the Truckee River between Reno and Truckee. (Photo: Tim Dunn/RGJ Media, Tim Dunn)Buy Photo

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After more than a quarter decade of uncertainty, litigation and deal making, officials announced Tuesday the Truckee River Operating Agreement is finally in effect.

The deal marks an end to 27 years of conflict between the federal government, Pyramid Lake Paiute Indian Tribe, Nevada and California over water allocation along the Truckee River. Members of the Truckee Meadows Water Authority, the tribe, California Department of Water Resources and the Bureau of Reclamation made the announcement Tuesday. U.S. Sen Harry Reid, D-Nev., was scheduled to speak but his flight was cancelled because of inclement weather.

Reid has worked on the agreement for most of his senatorial career and said it was poetic the deal came to fruition right before his retirement.

“The only thing I can compare it to in difficulty was – and the difficulty with the water agreement took many more years – was Obamacare,” he said. “But they were both really hard and I’m confident this water thing is going to pay dividends for the western United States.”

Sparks Mayor and TMWA Chair Geno Martini echoed Reid’s sentiments.

“We didn’t all get what we wanted,” he said. “Some got a little less and the others more but we got a decision made and over with. In the true spirit of government it only took 27 years.”

TROA provides more flexibility for water allocation along the Truckee River between both Nevada and California. It allows for more upstream storage of water to help alleviate water shortages in drought years and for improving timing of river flows to protect endangered species in Pyramid Lake.

The deal has been in place for one month now and TMWA General Manager Mark Foree said the impact is already visible with 2,700 acre-feet of water stored.

“The last two years going into the summer we’ve had about 27,000 acre-feet of drought storage. Just in the first month of TROA storage, we’ve added about 10 percent. We expect by the springtime we’ll have increased our drought supply by 50 percent, so it’s a big deal.

The deal was originally signed in 2008 but litigation at several levels held up any implementation until the August 2015 sale of 2,750 acre-feet of water rights to the Pyramid Lake Paiute Indian Tribe.

Tribal Chairman Vinton Hawley said the TROA deal fixes an antiquated system that would allow the tribe to thrive.

“Sometimes there’s no benefit to anyone when all we’re operating on is a trickle that comes down,” he said. “If you have water rights, you’re in a position to get your water because you have priority.”

Foree also announced the Truckee Carson Irrigation District electors voted to approve a sale of their half of Donner Lake to the water authority.

“That’s a big deal,” he said. “It will further extend our water portfolio and further expand our abilities to store water upstream for use in drought.”

Ernie Schank, president of the irrigation district board of directors, said the vote to sell their half of Donner Lake was overwhelming with 95.4 percent in favor.

“In recent years our portion of Donner Lake has not been usable because of government regulations and lawsuits, et cetera,” Schank said. “It was an opportunity for us to get out of about eight major litigation cases.”

The irrigation district will be dropping all of its objections to TROA, Schank said.

Reid reserved special criticism for the irrigation district, who he said had been a serious obstacle from the start.

“The irrigation district, they worked against us from the very, very beginning. Against us. They didn’t try to help,” he said. “As a result of that, we got what we needed and they got nothing. And that’s what they deserve: nothing. They were an obstacle to everything we tried to do.

“They’d been stealing water from various parties for decades,” Reid added. “Now they owe a lot of water, they have to return that water. Rather than trying to work with us, they worked against us and as a result it took a while to get this done.”

Schank declined to comment on Reid's remarks.

Seth A. Richardson covers politics for the Reno Gazette Journal. Contact him at 775-788-6301, srichardson@rgj.com or on Twitter at @SethARichardson.

Truckee River Agreement Implementation Celebrated Today

JANUARY 5, 2016 BY BOB CONRAD LEAVE A COMMENT

The Honorable Vinton Hawley, Pyramid Lake Paiute Tribe, speaking today about the Truckee River Operating Agreement.

The Truckee River Operating Agreement (TROA) is finally complete.

Dignitaries met today at the Siena Hotel in Reno to celebrate the implementation of the agreement, which was signed in 2008 but has been held up in court since, a pattern that has stalled finalizing the agreement for decades.

U.S. Senator Harry Reid, who was scheduled to speak but could not attend because of a flight cancelation in Las Vegas, praised the agreement, calling it “landmark legislation.”

But he had harsh words for the Truckee-Carson Irrigation District, which he blamed for holding up the agreement with what he called vexatious litigation.

"The Irrigation District did everything they could to stop it from moving forward," he said. "They did everything they could to destroy Pyramid Lake. (TROA is) really a wonderful deal. It would have happened a long time ago but for the Irrigation District and their vexatious and mostly worthless lawsuits."

More than 20 years and thousands of hours of negotiations have occurred to get the agreement finalized.

Director of the Nevada Department of Conservation and Natural Resources Leo Drozdoff said: "This interstate allocation provides stability and assurances for water systems and the public in both states. The ability to store and transfer Truckee River water, especially in times of drought, is particularly beneficial to the Reno/Sparks metropolitan area."

Learn more in the video below.

*The Truckee River Operating Agreement is finally finished after more than 25 years.*CLICK TO TWEET

RELATED:

Newly Inked Truckee River Agreement Already Paying Off

By JULIA RITCHEY · 44 MINUTES AGO
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The Truckee River on Tuesday in downtown Reno.
Credit Julia Ritchey

The Truckee River has been called one of the most litigated waterways in the West. But a landmark agreement reached by federal, state, tribal and local officials last year has cleared the way to better management of the region's most valuable resource. Reno Public Radio's Julia Ritchey reports.

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2:47
Listen to the story.

The Truckee River Operating Agreement has been more than 27 years in the making and finally puts an end to decades of court proceedings and high-level negotiations over the waterway's future.

The plan, called TROA for short, was officially implemented by the federal water master on December 1, and already northern Nevada is reaping dividends.

"In our first month, we've already been able to store about 2,700 acre feet in upstream reservoirs that we could never have stored at this time of the year before without TROA."

That's Mark Foree, general manager of the Truckee Meadows Water Authority, who's been working on the agreement for eight years.

He says with TROA now in place, their agency will be able to triple its upstream reserves, critical during a drought cycle.

"Without TROA, we already have, really, a great drought supply, but with TROA, we'd have to say it's truly exceptional. I think the community can take comfort in that. I know that I'm sleeping better now."

Water storage is the most immediate impact, but far from the only one.

TROA settles allocations between California and Nevada, with Nevada getting 90 percent of the Truckee's water.

The Pyramid Lake Paiute Tribe also stands to gain from the arrangement by getting rights to store water in the Stampede Reservoir and increasing protections for the lake's threatened Lohontan cuthroat trout.

During a celebratory press conference yesterday in downtown Reno, Tribal Chairman Vinton Hawley acknowledged that it’s been a hard fought battle.

"And it was a really surreal moment when it was reported to us that 'This is done.' And to acknowledge it was like, I don't know, let's let it sink it because somebody may oppose it."

Senator Harry Reid was one of the driving forces behind the TROA, but was unable to attend Tuesday's conference because of the weather. He called the process difficult but says the benefits to northern Nevada were well worth the fight.

Leo Drozdoff is the director of Nevada's Department of Conservation and Natural Resources. He says the one of the best parts of the agreement is its flexibility.

"What this agreement does is it's undergirded with requirements, but it says look in different times of the years and different weather conditions, different weather patterns, we can be far more flexible with how this water goes, so it can better serve a great number of people later."

Arthur Hinojosa with California's Department of Water Resources agrees.

"That kind of certainty given changing climate, given drought, is huge for the communities that are dependent on the river's flow itself, either for their livelihood or recreation or the tourism that it brings up — not to mention the use of the water itself."

Hinojosa says disagreements will likely still occur from time to time, but that TROA gives a clear avenue to resolve disputes outside of the courtroom. The agreement, he says, could even serve as a model for communities across the West that struggle with limited water resources.

Tags:
TROA
Truckee River

TMWA Buys Water Rights For Donner Lake | KUNR

JANUARY 7, 2016 BY THISISRENO LEAVE A COMMENT

Since the 1940s, TMWA and its predecessor, Sierra Pacific Power, has owned one half of Donner Lake's water rights in California. The other half belonged to the Truckee Carson Irrigation District, made up mostly of Fernley and Fallon-area farmers.But last month the irrigation district agreed to sell its stake in Donner to TMWA to the tune of $17 million.Mark Foree is general manager of TMWA and says the lake further bolsters the agency's drought supply.

Read more from our media partner, Reno Public Radio: *TMWA Buys Water Rights For Donner Lake | KUNR*

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El Niño makes snow now, but warmer winters still ahead

Benjamin Spillman, **bspillman@rgj.com***6:35 a.m. PST January 11, 2016*

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(Photo: Benjamin Spillman/RGJ)

El Nino is making for a snowy start for 2016 but the long term prognosis for the Sierra Nevada, and the planet, includes greater likelihood for warmer winters. Benjamin Spillman/RGJ

STATELINE, Nev. -- The El Niño weather pattern that's fueling a snowy start to 2016 for the Lake Tahoe region is among the strongest on record and likely to continue bringing storms to the region.

But the long-term climate prognosis for the Sierra Nevada and the planet as a whole is more troubling with rising global temperatures threatening to make cold, snowy winters less likely in the future.

That was the message two climate scientists delivered Friday to an audience of meteorologists gathered for a conference at Lake Tahoe.

Alexander Gershunov, a climate and meteorology researcher at Scripps Institute of Oceanography, presented two models that showed the 2015-16 version of El Niño shaping up to be similar to conditions in 1982-83 and 1997-98, and maybe a little stronger.

"According to this, this particular El Niño is unprecedented on that record," he said of the stronger of the two models. "These three are in the same ballpark."

RENO GAZETTE JOURNAL

Hot in here? Warming climate bad news for Sierra snow

Under the five strongest El Niño patterns through history California and the Sierra Nevada tended to get more winter precipitation than normal. As much as 80 percent more along the Southern California coast and about 20 percent more in the Reno-Tahoe region.

Weaker El Niño events on record have produced drier winters for Reno-Tahoe.

Still, it doesn't necessarily mean the snowpack that's been a welcome break from the Sierra Nevada drought will continue piling high, Gershunov said.

> “I think the average person can get behind not using the sky as a waste dump.”
>
> **Ken Caldeira, Department of Global Ecology, Carnegie Institution for Science**

That's because if the pattern brings warm, wet weather, it could generate rain instead of snow.

"I really hope it doesn't rain a lot on this snowpack," he said.

The presentation was part of Operation Sierra Storm, a national conference for television meteorologists sponsored by the Lake Tahoe Visitors Authority.

But when it comes to the sustainability of the Sierra snowpack there's more to it than a seasonal El Nino pattern.

The region is also affected by changes to the global climate, which is generally getting warmer and cooking up conditions that make extremely snowy winters less likely in the future.

The global perspective was the focus of another presentation by Ken Caldeira, a climate scientist in the Department of Global Energy at the Carnegie Institute for Science in Stanford, Calif.

Caldeira said that while neither a single storm nor even a single season of weather can be directly attributed to human-caused climate change, the rapid warming of the planet can create conditions that make warmer winters with less snow a greater likelihood.

He contrasted the winter of 2014-15, which was considered the worst snowpack in hundreds of years, with the strong start to the winter of 2015-16 and said climate change essentially loads the dice in favor of warmer scenarios.

"As it gets warmer and warmer the likelihood of last year's snowpack gets more and more likely," Caldeira said. "This year's snowpack gets less likely."

Caldeira has said that if current carbon emissions continue unabated until fosil fuel recourses are depleted the overall temperature of the planet could increase as much as 15 degrees Fahrenheit, a worst-case-scenario that would threaten to make parts of the Earth uninhabitable.

The recent climate talks in Paris generated commitments from nations around the world to reduce carbon emissions in decades to come. For example, the United States agreed it could, by 2025, reduce emissions to 26 to 28 percent below 2005 levels.

But those commitments, Caldeira said, would only do enough to accomplish about half of what climate scientists say needs to be done to avoid some of the most drastic consequences.

"We more or less have to stop building things with smokestacks and tailpipes," Caldeira said.

He said to do more will require a political consensus that doesn't yet exist. Although he added that making the subject of rapid climate change and its consequences more understandable to a broader audience could help motivate the general public to push politicians to make tougher decisions when it comes to limiting future emissions.

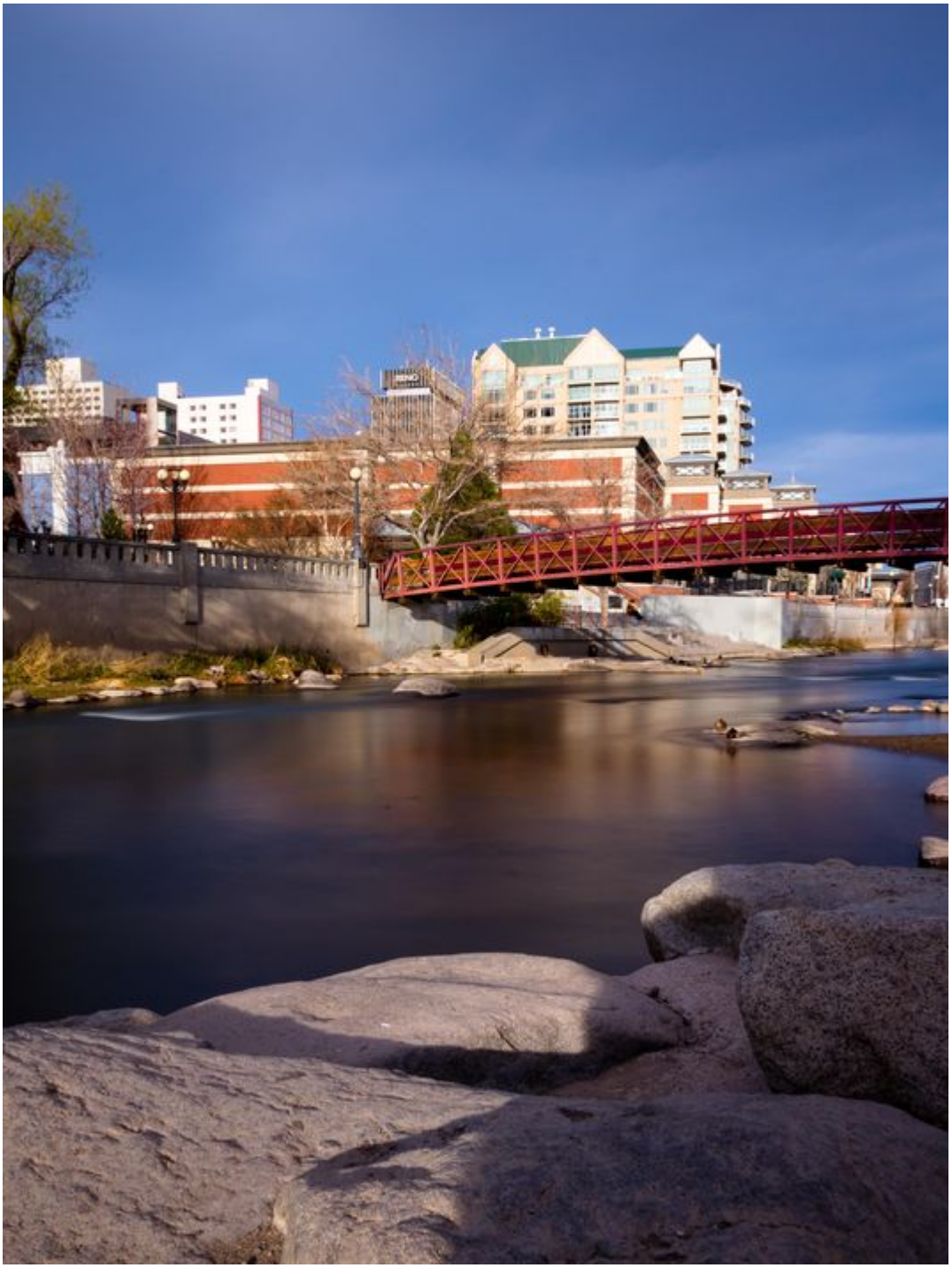
"I think the average person can get behind not using the sky as a waste dump," he said.

Carol Chaplin, executive director of the authority, said meteorologist conference is an opportunity for people in the Lake Tahoe region to gain a greater perspective on weather and climate, given how important those conditions are to the outdoors economy and lifestyle in the area.

"As we focus season by season, we also know there is a bigger world out there," she said.

Our view: Truckee River deal makes Reno safer

The Opinion of the RGJ Editorial Board*7 a.m. PST January 10, 2016*



(Photo: Getty Images)

Some news events merit the label “boring but important.” Final approval of the Truckee River Operating Agreement deserves the label “boring but worth celebrating.”

After 27 long years of effort, the deal finally went into full effect last week. It is a win for Reno-Sparks water customers because it further protects them from drought, and it is a win for U.S. Sen. Harry Reid, D-Nevada, who has been championing it since his early days on Capitol Hill.

The most easily understandable reason for celebration is that it doubles the Reno area’s upstream drought reserves and eventually will nearly triple it.

Before now, the Truckee Meadows Water Authority had never been able to store drought reserves in winter. Drought or not, TMWA had to keep gates open, even if that meant reservoir water levels could get down to zero. Now it can close those gates in winter.

In a meeting Thursday with the RGJ’s Editorial Board, TMWA general manager Mark Foree reported that already since December, the water utility has been able to save more than 1.1 billion gallons because of this new agreement.

“The old system was ‘use it or lose it’ and sometimes you just couldn’t use it all,” he said.

Now TMWA can store additional water in Stampede, Boca and Prosser Creek reservoirs. A bonus is that more stored water means more opportunities for recreation at reservoirs.

2015 was the region’s worst drought year on record. A TMWA analysis shows that even if Northern Nevada had five more years in a row just like it, the amount of water in drought storage would actually increase each year under the Truckee River deal. Without the agreement, drought reserves would begin falling short in late 2017 and become exhausted in 2018 if the drought continues like it has.

Other aspects of the deal protect river habitat, improve the timing of river flows to help fish in Pyramid Lake and are expected to improve water quality.

It also settles disputes by many different players with claims on the water. For instance, California and Nevada have been arguing for 100 years over allocation of the Truckee River’s water. The agreement makes clear that Nevada gets 90 percent while California gets 10 percent.

The Pyramid Lake Paiute Tribe will receive $90 million for economic development thanks to the deal.

As should be clear, this was a complex agreement involving many players, including the states of Nevada and California plus Reno, Sparks, Fernley, Washoe County, water utilities, ranchers and Indian tribes.

Others had tried to reach a solution without success when Reid made it one of his initial priorities as a junior senator from Nevada. He first got all of the parties together in the late ’80s.

When negotiations periodically would start to fall apart, he would step in and get them moving forward again. He secured much of the money required to get agreement from everyone. Seeing the Truckee River Operating Agreement to completion is a highlight to a career with many highlights.

This is one of those behind-the-scenes agreements that soon will be taken for granted. Year after year, the Truckee River will serve the needs of the community quietly and consistently. Now is the time to mark what a difficult and important achievement this was.

Truckee River Agreement Benefits Nevada

800px-truckee_river_reno_nv.jpg

Mark Kobayashi-Hilary/Flickr

Truckee River running through downtown Reno, Nev.

Jan 11, 2016
by:
Chris Sieroty

The Truckee River, which runs for some 120-miles from Lake Tahoe to Pyramid Lake, has been one of the most fought over waterways in the country.

But for the last 30 years, negotiations and some litigation has been ongoing about how the water would be used.

Now a landmark agreement reached by federal, state, tribal and local officials is promising better management of the region's precious resource.

The Truckee River Operating Agreement, called TROA for short, was officially implemented on Dec. 1. The agreement also settles allocations between California and Nevada, with Nevada getting 90 percent of the Truckee's water.

"The Truckee Meadows Water Authority, which is the main supplier to the Reno-Sparks metropolitan area has already been able to store almost 3,000-acre feet of water in upstream reservoirs," said Jason King is Nevada State Engineer with the Department of Conservation and Natural Resources.

King said the immediate benefits are having the water during a drought cycle. As for it taking almost 30 years to reach a deal, King was not surprised.

Water Storage a Critical Question for Climate Adaptation

SUNDAY, 06 DECEMBER 2015 20:51

21st century conditions require big changes in approach ensuring adequate water supplies

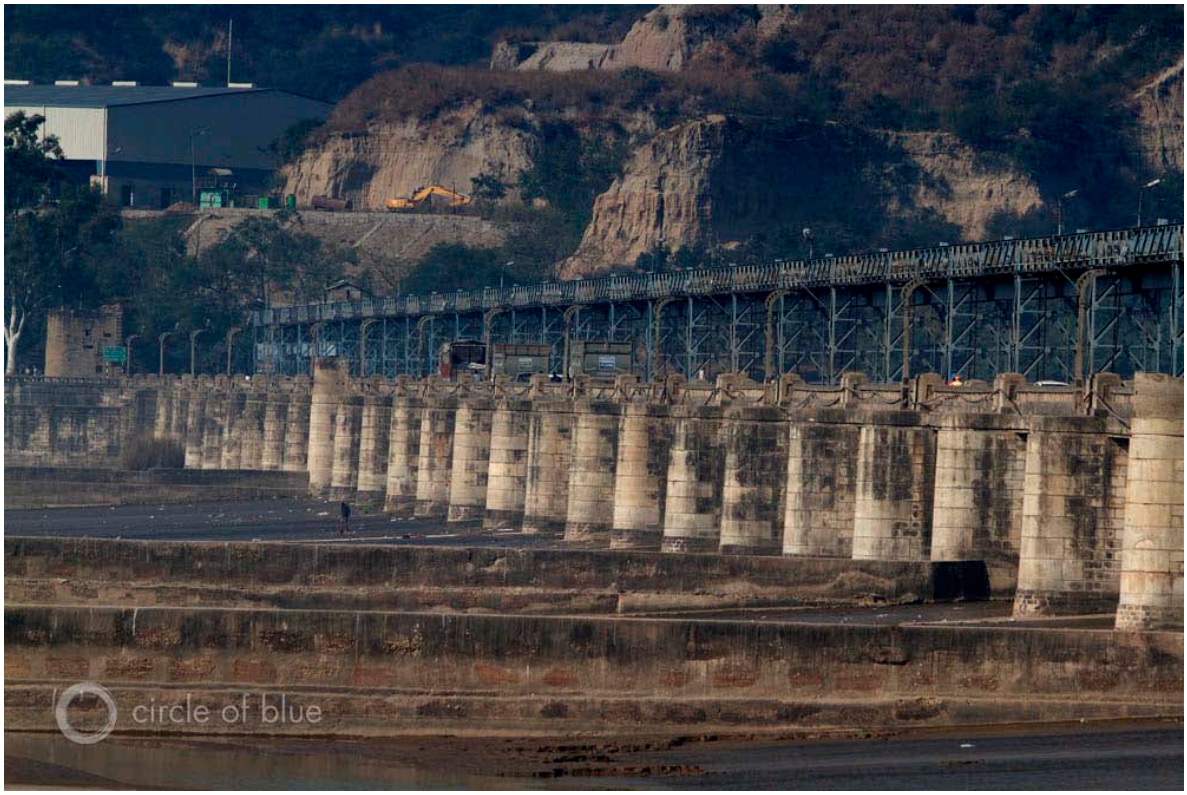


Photo © J. Carl Ganter / Circle of Blue

In northern India between the cities of Chandigarh and Ludiana, the waters of the Sirhind Canal are held back by a dam that manages flow and floodwaters. *Click image to enlarge.*

By Brett Walton
Circle of Blue

Negotiators meeting at the United Nations climate summit in Paris have two main objectives. The first is to secure an agreement to limit heat-trapping carbon pollution. The other is to establish various programs to help communities prepare for a hotter planet.

In diplomatic parlance these objectives are known as mitigation and adaptation.

The first goal has been on the international agenda since the original UN climate treaty, in 1992. Adaptation, however, is a newer addition to the annual summit — and for good reason. It is now clear that even if carbon emissions were to cease immediately — an impossible scenario — the world must still learn to cope with changes in weather patterns and sea levels that are already underway and will continue.

It is also clear that the adaptive measures, by and large, will be in response to changes in water availability: to nastier droughts, more powerful floods, and shifts in the timing and quantity of snow, rain, and glacial melt. The deluge in Chennai is one example of the new climate math. India's fourth largest city, home to 9.6 million people, was turned into a lake, inundated by 17 consecutive days of rain.

Water advocates have repeatedly clamored for recognition that climate adaptation is about shifting hydrological cycles. In Paris, they are beginning to see results. But Paris is not where adaptation will take place. Fortifying modern society against the destructive potential of a new climate falls on the shoulders of public officials in countless cities, counties, and districts in countries rich and poor. In Denver and Dallas just as in Delhi and Dhaka.

Water managers have much to think about, and the considerations vary by region. Indian cities are still trying to provide 24-hours-a-day water service to their citizens, while American counterparts are encouraging residents to use less. Still, one issue more than any other is likely to dominate the water adaption discussion in the coming decades: storage. That is, how to smooth out climate irregularities into a reliable, steady water supply.

Storage is a "huge topic," says Peter Gleick, president of the Pacific Institute, a research group. Huge, because the stakes are so high. There are billions of dollars in public and private investment and engineering contracts in play. California voters, for instance, approved $US 2.7 billion last year to spend on storage projects. There is potential conflict between old practices and new ideas. Dams and reservoirs are the tried-and-true storage method. A suite of alternatives is available but they have been tested in only a few parts of the world.

The questions are many: build new dams, increase the capacity of existing facilities, or change how they are managed? Emphasize small dams or large ones or none at all? Is underground storage an option? Where are the best locations? Must laws and policies be altered? How does conservation fit in? The questions are not only a matter of engineering. They also reflect deep and serious debates about social, environmental, economic, and political values.

Dams Set the Stage

In the beginning all storage was natural. Groundwater reserves were built up over millennia. Lakes formed and reformed. Domestic and economic life was molded on the seasonal cycles of rain, snow, and heat.

Soon enough, the demands of the modern era overwhelmed the natural order, in the United States in particular but also in other large economies. For settlements to grow into cities and pioneer farm

plots into vast commercial enterprises, the need for regular and predictable water supplies was an urgent matter.

Photo © Heather Rousseau / Circle of Blue

Lake Powell is the second largest reservoir on the Colorado River. *Click image to enlarge.*

Manmade reservoirs were the answer. An era of dam building began in earnest in the United States in the 1930s. Fifty years later reservoir storage capacity had increased by a factor of 10. China, India, South Africa, and other countries followed. Worldwide, dams radically altered watershed ecology, drove millions from their homes, and became flashpoints for environmental and social justice movements.

Despite the drawbacks, reservoir storage helps in several ways. It provides a long-term buffer against extended drought. Dams in the Colorado River Basin, for example, hold four times the river's average annual flow. Storage also protects communities against floods. The Portland, Oregon, waterfront would be washed away every few decades if not for the dozens of dams upstream on the Columbia River in British Columbia, Idaho, Montana, and Washington.

Storage is a critical issue today because natural systems are faltering. Groundwater reserves are being drained. Mountain snowpack is shrinking and melting sooner, leading to drier conditions later in the summer. A U.S. Geological Survey study published last month found that the peak spring river flows in the northern U.S. plains moved one to two weeks earlier over the last century.

“Climate change is going to destroy snowpack storage,” Gleick told Circle of Blue. A large body of scientific research supports the claim. Watersheds in the American West, southern Europe, the Middle East, and Central Asia that supply 2 billion people face declines in snow storage, according to a study published last month in the journal Environmental Research Letters. The snow season for several basins in the American West could shrink by two months by 2050, according to a 2014 University of Idaho study.

No single action will replace the storage that will be lost, according to Paul Fleming, manager of the climate and sustainability group at Seattle Public Utilities. That means communities must discuss the menu of options and agree on the order that works for them.

“It’s fair to say that any decision on storage needs to be rooted in the values of the location and of the people who reside there,” Fleming told Circle of Blue. Fleming was also a lead author for the adaptation chapter of the 2014 National Climate Assessment. “It’s important to think of storage not in isolation but as part of an overall strategy.”

Some regions need more storage than others — places that rely primarily on natural storage and are more exposed to the whims of weather.

“There are places where we’ve under-invested in surface storage,” Gleick said, mentioning sub-Saharan Africa as one such area. “These are places where there is a higher risk of drought and flood because they don’t have the protection that reservoirs provide.”

Dams need not be the behemoth structures that flourished in the last century and continue to be built today. Small dams can slow down rivers that are swollen from a heavy rain, hold back the water, and allow it to soak into the soil. The 2015 Stockholm Water Prize, considered the Nobel for water, went to Rajendra Singh for using such methods to restore groundwater tables in India. Singh’s organization has helped build or inspire the construction of more than 8,600 johads, or small earthen dams, in his home state of Rajasthan in the last two decades.

“Due to the harvesting of rain and recharging groundwater, there is no scope for drought or floods in our area,” according to Singh. “This work of ours is a way to solve both floods and droughts globally. Therefore we believe the impact of this work is on the local level, national level, the international level and above all at the village level.”

Using Old Dams In New Ways

Communities are also adapting by renovating old dams. Denver officials want to raise the height of Gross Reservoir, to boost storage capacity. Officials in Washington state plan to link two reservoirs in the Yakima River Basin by pipeline, to maximize storage.

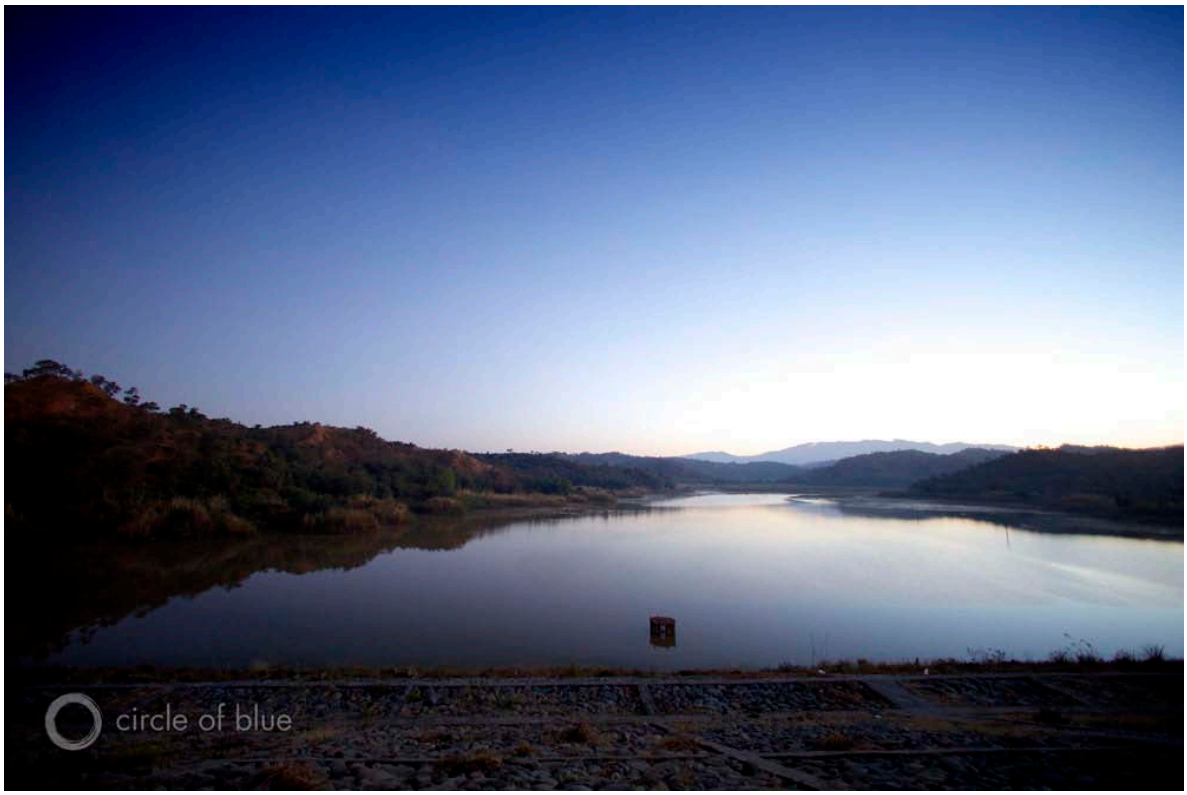


Photo © J. Carl Ganter / Circle of Blue

This reservoir near the small village of Parchh, in northern India, captures rain, which is used for irrigation during the post-monsoon season. *Click image to enlarge.*

Gleick points to Folsom Dam as another example of how an existing reservoir can be retrofitted to match a new climate reality. The dam, on the American River, east of Sacramento, was completed in 1956 and is operated by the federal Bureau of Reclamation. Like all dams that trap snowmelt to limit flood damage, Folsom is operated according to a set of formulas called rule curves. The curves tell managers when to transition from flood control mode, when reservoirs are emptied, to water storage mode. The shift happens in the spring, but decisions are often made with old data, Gleick said.

“We have to change those curves to reflect that the nature of storms is changing,” Gleick said.

Louis Moore, Bureau of Reclamation spokesman, told Circle of Blue that Folsom’s rule curves have been updated and that there are ongoing discussions about additional changes, to match new conditions. Paul Fleming said that Seattle is also changing how it manages its reservoirs.

Rule curves are an operational change. Reclamation is also altering Folsom’s physical structure. The agency is collaborating with the U.S. Army Corps of Engineers on a $US 900 million upgrade to the dam’s spillway. This will allow managers to dump water more quickly during a flood and thus store more water behind the dam.

Other Storage Options Are Available

Dams are not the only option. More and more agencies are looking to store water underground.

The Los Angeles Department of Water and Power submitted a plan this year to shop locally for its water. Instead of channeling stormwater quickly out to sea, the city will soak up rainfall and store it in the soil for use in dry times. If fully implemented, local rainfall could provide up to one-third of Los Angeles' water supply and reduce its reliance on the diminishing Sierra Nevada snowpack.

Similar measures are being attempted elsewhere. A project announced in October in Uttar Pradesh, a state in northern India, will use flood water from the Ganges to refill groundwater basins. Almond and grape farmers in California's Central Valley will flood their fields this winter in an attempt to refill depleted aquifers. The city of Wichita, Kansas, stores surplus flows from the Little Arkansas River in its main drinking water aquifer. Farmers, too, can change their management practices to build organic matter and increase the water-holding capacity of the soil. Not tilling the land before planting is one such method.

These sorts of alternatives are getting attention in Paris. A UN science agency released a call to action last week for negotiators to consider groundwater management and storage as part of a climate agreement. More debate is sure to follow

Sensor science

Collecting climate info on the Great Basin

By Kelsey Fitzgerald

This article was published on 12.10.15.

As world leaders gathered in Paris for the two-week long United Nations Climate Conference, University of Nevada, Reno professor Franco Biondi quietly continued a project that he has been working on for years, and will likely continue for many more—tracking climate change in the Great Basin using a network of sensors and webcams.

Geography professor Franco Biondi studies modern and historic climates of the Great Basin.
PHOTO/KELSEY FITZGERALD

The website of the 10,000 year clock referenced here is at www.10000yearclock.net/learnmore.html
Webcams, data and other information on the NevCAN program are available through the project website: http://sensor.nevada.edu/nccp/Climate%20Monitoring/Network.aspx
For information on the Long Now Foundation's plans for their Nevada property, visit: http://longnow.org/clock/nevada/

In 2008, Biondi and a group of other scientists from the Universities of Nevada (Reno and Las Vegas) and the Desert Research Institute teamed up to create the Nevada Climate-ecohydrological Assessment Network (NevCAN), a system designed for collecting long-term climate data in remote Nevada mountain ranges. With funding from the National Science Foundation, the team installed 12 climate stations in the Snake and Sheep Ranges of eastern and southern Nevada.

“We wanted places that were going to remain as pristine as possible, and also be representative of the rest of the Great Basin,” Biondi said.

Each station is powered by solar panels, and consists of a webcam and sensors to measure snow, wind, rain, temperature, relative humidity, soil moisture, tree growth and more. By placing a series of monitoring stations up the mountain slopes, the NevCAN system allows researchers to observe changes that happen at different elevations and life zones, from the valley floor up to the ancient Bristlecone Pine forests that exist high in the Snake and Sheep ranges. This data is important because as global climate warms, scientists believe that species may begin to migrate to higher elevations where temperatures are cooler.

“We’re concerned about multiple changes that are happening in these ecosystems, from climate changes to changes in species distributions,” Biondi said. “Mostly we wanted to make sure we had data on these ecosystems to see how things change. There are very few long-term datasets in the Great Basin.”

Climate change happens slowly. So does climate research. It took about five years to develop the NevCAN system and install all of the sensors. Biondi said that all stations have been up-and-running since 2013, and they have now collected approximately three years of data. Though three years isn't long enough to draw any meaningful climate trend conclusions, Biondi hopes that the growing data record will become more useful—and used—as time goes on.

"There are definitely patterns that need to be discovered," Biondi said. "There is so much data. I wish we had more people actually using the data. We are using some of it, but there is so much that could be done."

The network was built to last far into the future, said Biondi, aligning with the mission of one of their supporters, the Long Now Foundation that owns property in the Snake Range and allowed the NevCAN team to install monitoring stations there.

Long Now is best known for its ongoing effort to construct a clock that will last for 10,000 years inside a mountain in Texas. They'd like to do the same in the Snake Range, and are also discussing the possibility of building a field station on the site to house visiting NevCAN researchers.

In the future, Biondi hopes to link some of the NevCAN stations with other existing national-scale climate monitoring projects. Data and live video feed from the 12 webcams are publicly available on the project website.

White House launches 'moonshot for water'

Gregory Korte and Ian James, USA TODAY 4:26 p.m. EST December 15, 2015

Interior Secretary Sally Jewell speaks at a signing ceremony for a memorandum of agreement to establish the Manhattan Project National Historic Park Nov. 10.(Photo: AP)

WASHINGTON — The White House launched an ambitious effort to enlist the private sector in its efforts to reclaim and conserve water Tuesday, saying it’s critical for the country to better manage water supplies that are under increasing pressures from climate change.

"Water is a huge challenge in this country, and I think we all know that," Interior Secretary Sally Jewell said at a meeting at the White House. "It’s important we have all hands on deck."

The strategy, known informally as a "moonshot for water," focuses on encouraging technological advances and private-sector investment to rebuild water projects like reservoirs, boost data collection, support water-sharing agreements and find new technologies to recycle and conserve water.

Jewell announced the creation of a new Natural Resource Investment Center to help coordinate research and investment on water conservation and water rights management. She also

announced a Water Summit to be held at the White House on March 22, which is World Water Day.

Groundwater levels have been declining in many areas across the country. In an analysis of U.S. Geological Survey data published this month, USA TODAY and The Desert Sun found that water levels have declined in 64% of the wells included in the government database during the past two decades. The average decline among decreasing wells has been more than 10 feet, and in some areas the water table has dropped more than 100 feet since 1995.

In a report laying out its water technology innovation strategy, the White House noted that some of the largest increases in water demand due to climate change are projected to occur in regions of the U.S. that rely on groundwater, such as the Great Plains and parts of the Southwest. It said global warming “will challenge the sustainability of the aquifers in these regions.”

The White House recommended that groundwater levels and the amounts pumped should be better monitored.

USA TODAY

Pumped Dry

The initiative is modeled after a similar push for solar power, which the White House credits for driving down the cost of solar energy and speeding its adoption. "We are literally taking that playbook and running that again," said Ali Zaidi, the Associate Director for Natural Resources, Energy and Science at the Office of Management and Budget.

"We need to up our game on water. That's the message we have today," he said. "We crushed it on solar, and we're going to do the same on water."

The solar playbook combined federal research, grants and open data with commitments from private sector companies to increase their use of clean energy.

Here's the kind of innovation the Obama administration would like to see: Better materials for water pipes, where leaks rob 16% of the nation's water supply, and better sensors to detect those leaks; more water-efficient household appliances; and more cost-effective desalination

technologies to transform seawater and brackish water into usable freshwater using less energy and emitting less greenhouse gases.

"It's important to understand that the technology to do all that already exists," said John Holdren, President Obama's chief science adviser. "But we need innovation and entrepreneurship to expand on the technologies we already have."

Echoing Obama's language on clean energy, Holdren said the country needs an “all-of-the-above approach” to water policies.

The White House said its March 22 water summit will focus on potential solutions and “innovative, long-term strategies for making sure we have enough water when and where we need it.”

In its report, the White House emphasized some federal efforts that are already underway, such as an initiative to make water data publicly accessible. It said that as climate change leads to shifts in water supplies and demand for water, “communities will need to expand, reduce, or reconfigure their water infrastructure systems, including through innovative public-private partnerships.”

Administration officials also said there are big opportunities for using water more efficiently in agriculture. They pointed out, for example, that many of the nation’s irrigated farms have yet to adopt advanced technologies such as devices for sensing soil moisture, which can help dramatically reduce water usage

The Latest: Water rights emerge as obstacle in Faraday deal

December 17, 2015 14:10 PST

By MICHELLE RINDELS Associated Press

CARSON CITY, Nev. (AP) -- The latest on the Nevada Legislature's special session to review incentives for electric carmaker Faraday Future (all times local):

2:01 p.m.

Water rights have emerged as the biggest potential hang-up in a deal to bring electric carmaker Faraday Future to Nevada.

Some lawmakers have raised concerns over a section of a bill that would speed up the process of allocating water rights when a major economic development project is on the line.

Republican Assemblyman Jim Wheeler says the language gives the state water engineer too much power, and says it isn't appropriate to make a potentially far-reaching change to water law during a brief special session.

Water rights are a touchy and complicated subject in the driest state in the nation.

Lawmakers and other interested groups are working behind the scenes to hammer out disagreements on the bill.

12:44 p.m.

The state's top economic development officer says bringing Faraday Future to Nevada could have a ripple effect similar to the one Tesla has created in the Reno area.

Steve Hill of the Governor's Office of Economic Development says Tesla's massive battery factory has "lifted the market in northern Nevada," raised property values and will raise average wages.

Hill also says more opportunities will come to Nevada as it gains a reputation as a global center of advanced transportation.

The electric carmaker's plan to put a $1 billion plant in North Las Vegas was announced about a year after lawmakers approved incentives for fellow electric carmaker Tesla.

Hyperloop Technologies also recently announced plans to test its super-fast tube-based transportation system on a track at North Las Vegas' Apex Industrial Park.

11:45 a.m.

A bill to revamp Nevada's workforce development programs will require companies using state job training funds to have a state-approved "diversity action plan."

Democrats are applauding the provision, which they say will help level the playing field for minority communities, veterans and people with disabilities. Those groups have higher unemployment rates than the general Nevada population, which has a jobless rate of 6.5 percent.

Senate Democratic leader Aaron Ford says the substance of the plans can differ, but might include targeted commercials or setting up a recruiting office in West Las Vegas, which has a sizeable African-American population.

Faraday Future is hoping to build its $1 billion manufacturing plant in ethnically diverse North Las Vegas. Twenty percent of city residents are black and 39 percent are Hispanic.

11:10 a.m.

State officials say Nevada is falling short in getting residents ready for skilled jobs like ones at automaker Faraday Future, so they're proposing a new workforce development program.

Assembly members are considering a bill to create the Workforce Innovations for a New Nevada (WINN) program and apply $2.5 million to the account with transfers from Nevada's general fund and Office of Science, Innovation and Technology.

Dale Erquiaga of Gov. Brian Sandoval's office says state officials would meet with major new businesses moving to Nevada and work with them to develop a customized training program. The WINN account would provide start-up money so colleges or other agencies can develop the training.

The programs are modeled after initiatives in Georgia and Louisiana, but Erquiaga says he wants Nevada's to be even better.

10 a.m.

Lawmakers are kicking off the second day of a special session aimed at reviewing an incentive package for carmaker Faraday Future.

But not all the seats will be full on Thursday.

Republican Assemblyman Stephen Silberkraus was taken to the hospital for a few hours overnight with complications linked to kidney stones. He was discharged Thursday morning, but it wasn't clear if or when he'd be returning to the Assembly chambers.

Fellow Republican Assemblyman David Gardner says he's texting Silberkraus to keep him up on legislative developments.

There's also a vacant seat after Democratic Assemblywoman Marilyn Kirkpatrick resigned and became a Clark County commissioner earlier this fall. Democratic leader Irene Bustamante Adams says there's no indication she'll be replaced for the special session.

LETTERS: Clark County mislabeled as a 'water hog'

From our readers

Water hogging

The Dec. 10 article stating that Clark County ranks as the nation's sixth-largest "water hog" is wildly misleading, because it doesn't disclose the qualifying restrictions in the study by the Center for Biological Diversity ("Clark County ranks high on 'water hogs' list").

Using the U.S. Geological Survey water usage data, a correct statement would be: "Of the 40 counties in the nation with populations of more than 1 million, Clark County ranks sixth in per-capita domestic water consumption." The "study" considered only the most populous counties (arbitrarily defined as populations greater than 1 million) and only domestic water consumption, which excludes usage for agriculture, industrial, mining and power generation. Neither of these qualifications was mentioned in the article.

Addressing the first omission, based on population, the 40 largest counties in the country represent only about a quarter of the nation's population. For instance, looking at counties with populations greater than 400,000 (covering half of the country's population) reveals that Clark County uses less water per person for domestic consumption than nearby Washoe County, home to Reno (143 versus 129 gallons per person per day).

Also, some real water hogs with greater per-capita domestic consumption than Clark County in wet areas include Montgomery County, Md. (204 gallons per person per day), East Baton Rouge Parish, La. (144 gallons per person per day) and Honolulu County, Hawaii (144 gallons per person per day). The average domestic water consumption for the nation is 88 gallons per person per day. With no restriction on population, Clark County ranks 291 out of 3,224 counties in domestic per-capita water usage.

The situation is very different looking at total water consumption, including agriculture, industrial, mining and power generation. The focus on domestic consumption is myopic because nationally, domestic consumption accounts for only 8 percent of total freshwater consumption. Clark County ranks 1,965 out of 3,224 counties in total per-capita water usage. Indeed, Clark County ranks only eighth among counties named "Clark" in the United States.

Using a modest amount of water, Clark County provides a beautiful home to 2 million people and a vacation playland for the world. Misleading, biased "studies" don't deserve to be published in our fine city's newspaper.

Robert Ungar

Groundwater is sinking in Galena

Jeff DeLong, jdelong@rgj.com*12:20 p.m. PST December 21, 2015*

Buy Photo

(Photo: Peggy Santoro/RGJ)

At a place in south Reno where groundwater levels have dropped for decades and protracted drought has significantly worsened the situation, big changes are coming.

Washoe County's primary water provider, which this year took over the water system serving the Mount Rose-Galena fan area on the Mount Rose Highway, is proceeding with a near $30 million plan that when completed should give a rest to overused groundwater supplies and help end a problem that has had water levels dropping and wells going dry for years.

USA TODAY
Pumped Dry

“We need to proceed and move on this problem,” said Mark Foree, general manager of the Truckee Meadows Water Authority. “It’s time to start helping with that situation up there.”

It was back in the early 1990s that residents began voicing increasing concern that the area’s aquifer was being overpumped to serve quickening development, with groundwater levels showing evidence of continued decline and little recovery year to year. Shallow private wells went dry at an increasing pace, with affected homeowners pointing fingers at deeper municipal wells operated by Washoe County and an associated general improvement district.

Between 1990 and 2011, when Washoe County Department of Water Resources Director Rosemary Menard admitted the county’s large production wells were having a “pretty big impact” on private wells in the area, more than 150 homeowners were forced to deepen wells, with a big spike occurring in 2000 when several new production wells went on line. Another 60-plus homeowners whose wells failed were forced to connect to municipal water between 2004 and 2011, when the county adopted a program to assist homeowners in connecting to public water systems or deepen existing wells.

The problem didn’t go away and was squarely on the radar screen during lengthy negotiations that led to the January 2015 merger of the county’s water system and the larger Truckee Meadows Water Authority. According to authority estimates, water levels in two key wells monitored there dropped 80 feet over the last 10 years.

Officials came to the conclusion that in the Galena-Mount Rose fan area, more water existed on paper than actually existed underground.

A drought now four years in duration is worsening the problem, as is a resurgence in the post-recession housing market that is resulting in more homes going up in the affected area.

Plans call to address the situation through “conjunctive” water use made possible by the water system merger. Essentially, the idea is to use more of TMWA’s surface water drawn from the Truckee River – as well as additional supplies drawn from area creeks – to end the long-standing practice of 100 percent reliance on groundwater to meet demand.

“The current level of pumping is not sustainable,” Scott Estes, TMWA’s engineering chief, said last April as he briefed the utility’s board of directors of the need to accelerate plans to address the situation.

“We’ve known for some time conjunctive water use was headed for this area,” Estes said. “We just didn’t anticipate having to implement this plan this quickly.”

Planned is a $27.6 million effort to expand use of surface water to the area and in doing so, ease up on that overburdened groundwater resource. TMWA immediately initiated the process last winter, sending some 3,000 acre-feet of surface water to the Galena area – supplies that allowed it to shut down 15 wells that otherwise would have been pumping from the ground to meet demand.

A $2.8 million project to pipe treated Truckee River surface water up to the area above Zolezzi Lane is now under construction as the utility moves to expand the process.

Other plans are longer term and more expensive. One is the construction of an $8.2 million plant to treat surface water drawn from Thomas and Whites creeks in the upper Galena area. Another $11.6 million will be spent to purchase water rights from those creeks. Money for those projects will be raised through connection fees charged to new development, with no impact on rates paid by existing water customers, Foree said.

The utility is meanwhile exploring increased injection of treated surface water directly into groundwater wells – an effort that will further improve the health and reliability of a currently overstressed aquifer, Foree said.

Kathy Bowling, a long-time Callahan Ranch area resident active in the region’s groundwater issues for years, said she has mixed feelings about the utility’s conjunctive water use plans. Bowling’s home is still served by a domestic well but she was forced to pay $15,000 to deepen it from 178 feet to 380 feet in 2005 due to declining water levels.

“We do need the water,” Bowling said. “It will make the existing private wells healthier and it makes the production wells healthier, which is a good thing.”

She also sees a minus. New water supplies will likely mean new development. Existing plans, based on county-approved active tentative maps, call for as many as 1,171 new

homes in the area, according to a report prepared by the water authority. TMWA is requiring these additional surface water supplies to protect the area's groundwater resources.

"This is going to replenish the groundwater out here but it also will bring more water out here for more development," Bowling said. "It could create more urban sprawl out in this direction."

Utility officials, however, insist the idea is to fix a long-standing problem caused by overuse of a limited resource. Once improvements are completed, they say, that overstressed aquifer should start to recover.

"This issue is about protecting the long-term viability of the groundwater," Estes said.

SPECIAL REPORT: PUMPED DRY

USA Today: Pumped Dry promo to content in USA Today today Xxxxx xxxxx x xxxxxxxx. **1B**

More at USAToday.com: In places around the world, supplies of groundwater are rapidly vanishing. As aquifers decline and wells begin to go dry, people are being forced to confront a growing crisis.

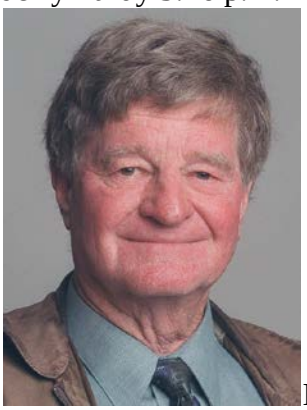
Jeff Carr ·

Manager, Corporate Accounting at TriNet

It seems that Galena area homeowners should pay a special assessment to pay for these projects and not all TMWA customers. If you choose to live in an area with no sustainable water supplies, then you should have to pay for the upgrades to the water system

One View: Milfoil infestation an environmental disaster

Jerry Purdy 3:26 p.m. PST December 21, 2015

 Buy Photo

Jerry Purdy(Photo: Tim Dunn/RGJ)Buy Photo

3 CONNECTTWEETLINKEDINCOMMENTEMAILMORE

Feathery underwater Eurasian water milfoil is native to Europe and Asia and first appeared in the U.S. in the 1800s.

In the 1980s, milfoil-contaminated boats from Lake Mead began appearing at the Tahoe Keys Marina. The marina has since become so clogged with milfoil that milfoil cutting equipment must be used to cut a path so boats can reach Lake Tahoe. Milfoil spread quickly throughout Lake Tahoe and elsewhere. A mandatory boat inspection program was not yet required which allowed milfoil-contaminated boats to go anywhere in Lake Tahoe, including neighboring lakes and reservoirs. Today, large beds of milfoil exist all around Lake Tahoe and elsewhere.

Milfoil eventually flowed over the Lake Tahoe Dam at Tahoe City into the Truckee River, contaminating a 116-mile stretch of river all the way to Pyramid Lake. Milfoil now floats out of the Truckee River into a multitude of diversion ditches that provide water to local and downstream users, including the Reno-Sparks water and sewer treatment plant.

Eurasian watermilfoil grows thickly in a slow-moving portion of the Truckee River between Lake Tahoe and Truckee. Crews are now working to remove the weed in the area by pulling it from the riverbed. (Photo: RGJ file)

It’s critical to quickly eradicate milfoil all along the river before it grows to the point of plugging up our diversion ditches and other essential facilities. Eradication is very time-consuming and costly, a maintenance problem that must be paid for by someone. Truckee River water users including citizens from Reno-Sparks and elsewhere downstream shouldn’t have to pay this cost because they didn’t cause the problem.

Scientists discovered when a black plastic blanket is placed over milfoil for about a month it will dry up and disappear. It would be cost-prohibitive to place plastic blankets over all Lake Tahoe locations and elsewhere where milfoil now grows unless state and federal funding were provided.

California and Nevada agencies are responsible for approving all Lake Tahoe development. These agencies must act quickly to secure necessary state and federal funding to prevent the spread of milfoil through the lake and downstream.

Lake Tahoe is a national treasure, visited by local citizens and others from all over the world, proving it's worthy of environmental protection. Many environmental groups and other respected organizations have been involved with Lake Tahoe issues for years and are well-informed on these issues. Their organizations have played a major role helping protect and preserve the Lake Tahoe environment. Considering the urgency and seriousness of the milfoil issue, I urge environmental leaders to make a special effort to contact our elected officials, including our governors and those in the Senate and House of Representative to explain the milfoil situation in detail, answer questions, and provide any information these officials may request. It's especially important that Washoe County, Reno and Sparks be contacted and provided with this data.

Elected officials seemed to avoid taking a position on the Tahoe Keys Marina or approving corrective solutions, which only made matters worse.

Our elected officials must take aggressive action now to fix the milfoil problem before it becomes worse and cannot be repaired.

Jerry Purdy is a retired civil engineer and a Reno resident.

Recent Storm Great News for Summer Water Supply

Posted: Dec 22, 2015 3:03 PM PST Tuesday, December 22, 2015 6:03 PM EST*Updated: Dec 22, 2015 4:04 PM PST* Tuesday, December 22, 2015 7:04 PM EST
By Erin Breen
Email
Connect
ebreen@ktvn.com

Link: http://www.ktvn.com/story/30814101/recent-storm-great-news-for-summer-water-supply

The ski resorts at Lake Tahoe couldn't be more thankful for the early Christmas surprise of this latest winter storm. Some report at much as three feet of new snow. And that snow is also welcome news for our summer water supply.

"It's not all we need," says federal water master Chad Blanchard. "But it's sure a great boost for what we need in the mountains."

Lake Tahoe is still a few inches below its natural rim which means that we aren't out of the woods in terms of storage yet, but this past storm sure did help.

"We actually went from 114% of normal to 150% overnight!" Blanchard said. "That's in terms of water content. The early wet snow we've gotten is just what we need,"

Bringing the level of Lake Tahoe up is important for everyone in the basin. The ski resorts will see it pay off this winter and if we continue to see snow this winter we'll be in even better shape next summer.

"It really isn't all we need yet but it is another big step in the right direction," Blanchard said.

And we're expecting even more later this week.

Residents near Thomas Creek and Foothill roads won the earthquake lottery Tuesday night.

That's the exact location of a magnitude 4.4 quake at 10:45 p.m. - the biggest in a swarm of six quakes that hit Reno - according to the Nevada Seismological Laboratory at the University of Nevada, Reno.

Above is a map of where the earthquakes started on Tuesday, according to data provided by the USGS:

RENO GAZETTE JOURNAL
#RenoRetro: Swarm evokes memories of earthquakes past

Now, the probability of a larger event (larger than the 4.4 quake) is slightly increased, said the laboratory in a press announcement.

Quakes were reported near several Washoe County schools, including Galena High School and Hunsberger Elementary.

However, Washoe County School District spokeswoman Victoria Campbell said they have not found any damage.

"We do have people there and at this point there’s no indication of any damage to school property," she said Wednesday morning.

There were reports of people feeling earthquakes throughout the city, from South Reno to Northwest Reno.

RENO GAZETTE JOURNAL
From 2011: Tahoe tsunami would spur 30-foot surge, destruction

The Reno-Tahoe Airport reported no repercussions from the earthquakes because they struck too late, spokesman Brian Kulpin said Wednesday.

“Earthquakes are something that we practice for,” Kulpin said. “We practice for several disaster scenarios and that’s something we train for because we know this happens here.”

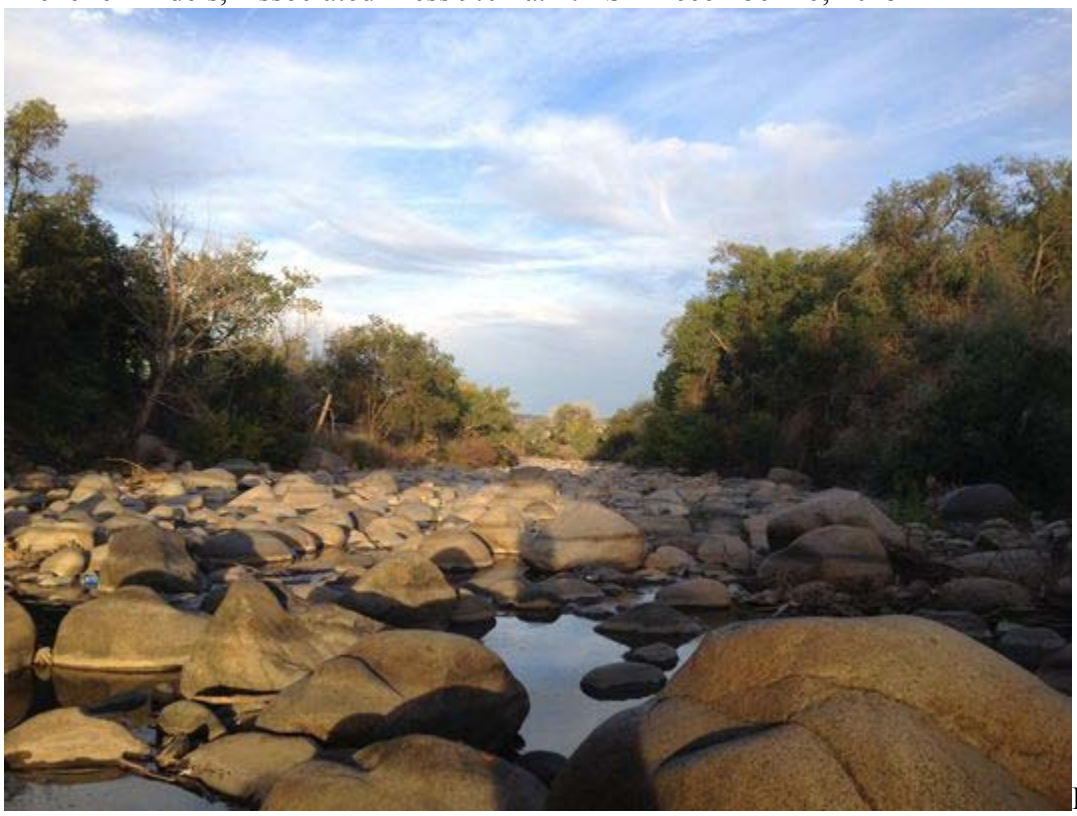
Andy Gebhardt, customer services manager for the Truckee Meadows Water Authority, said they could not find any damage to water pipes in the area.

“We were wondering that ourselves but nothing happened last night that we can attribute to an earthquake,” he said.

Click here for more information from the Nevada Seismological Laboratory. Check back with RGJ.com as more information becomes available.

Drought report could map Nevada water policy

Michelle Rindels, Associated Press 9:02 a.m. PST December 26, 2015

 Buy Photo

Boulders protrude from a drought-ravaged Truckee River, as seen from under the Sutro Street overpass facing east, in June.(Photo: Mark Robison/RGJ)Buy Photo

85 CONNECTTWEETLINKEDINCOMMENTEMAILMORE

CARSON CITY – A panel of water experts that spent almost a year analyzing Nevada's persistent drought has issued recommendations that could shape Gov. Brian Sandoval's policy agenda in the coming year.

The eight-member Nevada Drought Forum, which Sandoval commissioned in April, included water, agriculture, climate and emergency management officials who gathered information in a series of public meetings over the past year.

"I think there's stuff in there that can be done fairly quickly, and a variety of stuff that is going to take a fair amount of planning and prioritization," said forum chairman Leo Drozdoff, director of Nevada's Department of Conservation and Natural Resources, about the 20-page report wrapped up in mid-December.

Here are some of the panel's recommendations:

•**RAMP UP CONSERVATION**: While agencies such as the Southern Nevada Water Authority testified about their aggressive water-saving measures, the forum wants conservation efforts elevated statewide and even in smaller municipalities. Forum members want water meters on all connections, water efficiency standards for new development, tiered rate structures to promoted water conservation and time-of-day and time-of-week watering restrictions.

They also recommend giving the state water engineer power to enforce water conservation plans if agencies aren't sticking to them.

•**TWEAK WATER LAW**: The forum wants incremental changes in Nevada law that strengthen the state water engineer's ability to manage the state's driest areas. Members want clarification in law that would preserve indoor water use even amid cutbacks in domestic well users' outdoor watering.

They also want to change the law to allow the small-scale capture of rainwater, as long as it doesn't interfere with others' water rights.

•**CLOSE GAPS IN RESEARCH**: The state bases many of its water policy decisions on the U.S. Drought Monitor, a map that's updated weekly to reflect conditions on the ground throughout the U.S. and Puerto Rico. But Drought Forum members say there are gaps in the data.

They recommend improving the map by developing a statewide monitoring network that uses a variety of information sources and makes real-time data centrally available. They also want to coordinate with other western governors to ensure western states have more of a say in the national map, and that it's measuring both hydrological conditions underground and the vegetation conditions above ground — which can sometimes give different signals about the state of the drought.

•**FIND NEEDED MONEY**: Forum members noted that incentive and rebate programs can be effective at encouraging consumers to conserve, but they can be prohibitively expensive. The group wants state agencies to come up with budget proposals that could help pay for high-priority incentive programs.

They also noted that some of their recommendations, such as better drought monitoring, could require extra staff. The forum wants to identify and prioritize the resources needed to implement its plan.

•**PLAN LONG-TERM**: The forum wants to support the work of Nevada's Water Reuse Steering Committee to explore regulatory changes that could allow water recycling and stretch supplies.

They also want to keep an eye on technology advances in water desalination — a process that's expensive now but could be a viable option for boosting Nevada's supply when it gets cheaper.

•**EDUCATE THE PUBLIC**: The forum wants to keep the conservation message going to everyday Nevada residents, even during wetter years when drought isn't top-of-mind. They also want state staff dedicated to public outreach, including people focused on educating elected and appointed officials about Nevada's water issues.

•**REWORK WARNING SYSTEMS**: Forum members recommend the state's Drought Response Committee refine its warning system. Nevada issues Drought Alerts, Drought Warnings, a Governor Drought Declaration and a water emergency declaration, but the forum wants more clarity on the difference between them.

For more information, visit Nevada Drought Forum

Reservoir evaporation a big challenge for water managers in West - See more at:

http://www.colorado.edu/news/releases/2015/12/28/reservoir-evaporation-big-challenge-water-managers-west#sthash.9KQFqwlh.dpuf

Reservoir evaporation a big challenge for water managers in West December 28, 2015 Water managers in Colorado and the West scrambling to meet the growing demand for increasingly scarce water supplies caused by large populations far from water resources, climate change and drought need to focus more effort on conserving water, including addressing reservoir evaporation, say University of Colorado Boulder researchers. While reducing water consumption has been successful in places like Denver and much of California, the loss of water from reservoir evaporation is an issue already affecting the growing population of the West, said CU-Boulder Associate Professor Katja Friedrich. The reservoir water loss is becoming even more important as broad uncertainties in precipitation projected by climate change and early snowmelt require more reservoir storage, she said. “Evaporation of water from open reservoirs in the arid western U.S. cannot be neglected any more, especially with the possibility of precipitation decreases occurring as a result of a changing climate,” said Friedrich, a faculty member in the Department of Atmospheric and Oceanic Sciences (ATOC). “We need to try to plan for both short-term needs and to make sure we have enough water over the coming decades.” A recent workshop on campus convened by researchers at CU-Boulder and the Desert Research Institute (DRI) in Reno, Nevada, brought together experts in atmospheric science, hydrology, land use and water resource management from the western U.S. and Canada, said Friedrich. Water managers have little information on evaporative loss, relying on outdated methods like “pan evaporation,” developed in the 1920s and still in use today. In pan evaporation, a 4-foot-in-diameter, 10-inch deep pan is set next to selected reservoirs where water managers fill the pan and measure water evaporation in 24-hour increments and extrapolate the results to corresponding reservoirs. The method is used today in many Colorado reservoirs as well as major Colorado river impoundments. The problem in part is not all reservoirs are equal in terms of location, elevation, shape or evaporation. Attendees of the CU-Boulder-hosted reservoir evaporation workshop in October proposed the use of high-resolution weather models coupled with sophisticated reservoir models, which could be used not only to estimate evaporation but also to forecast it, a method not previously considered by water managers. Little research has been done on quantifying evaporation with instrumentation and numerical models, Friedrich said. “We need to better understand evaporation, which will require continuous measurements of wind direction and speed, air and reservoir temperatures, humidity, solar radiation and vegetation at individual reservoirs.” Evaporation is a large and continuing problem in the Colorado River basin, including Lake Mead and Lake Powell where about 500 billion gallons of water evaporate annually, according to CU-Boulder Assistant Professor Ben Livneh of the Department of Civil, Environmental and Architectural Engineering. This represents roughly 10 percent of the total natural flow of the Colorado River Basin said Liveneh, who also is also a fellow at the Cooperative Institute for Research in Environmental Sciences -- about five to 10 times the amount of Denver’s annual water use. “We can no longer afford to lose this amount of water. Once it is lost it is gone,” said retired ATOC scientist Bob Grossman, who helped organize the conference on reservoir evaporation. “The neglect of evaporative loss as the cost of doing business in a water-abundant world will likely cut into the bottom line as scarcity looms.” Proposed “geo-engineering” techniques for reducing reservoir evaporation include covering surface water with thin films of organic compounds, reflective plastics or extremely lightweight shades. Other proposals include moving reservoir water underground into new storage areas or aquifers or relocating or building new storage reservoirs at higher elevations where less evaporation occurs. “One thing we do know is that you can only reduce evaporation and not

eliminate it unless you store it underground," said Friedrich. "But that has its own set of problems. Our intention is to help water managers reduce evaporation for current and future reservoirs." To study evaporation differences in different reservoirs, a team of scientists, water managers and federal and state agency representatives led by DRI researcher Justin Huntington deployed high-tech buoys at reservoirs in California, Idaho and Nevada to better understand the water evaporation process. In addition, there is ongoing research on evaporation from the Great Lakes by CU-Boulder geography Professor Peter Blanken and his Canadian and U.S. colleagues. Participants in the October evaporation workshop included a number of universities and federal and state agencies like the U.S. Bureau of Reclamation, the Colorado Water Conservation Board, Environment Canada and the National Center for Atmospheric Research. The researchers hope to test new techniques and tools related to evaporation on a Front Range reservoir starting next year, said Friedrich. Contact:Peter Blanken, CU-Boulder, 303-492-5388blanken@colorado.eduJustin Huntington, DSI, 775-673-7670justin.huntington@dri.eduJim Scott, CU-Boulder media relations, 303-492-3114jim.scott@colorado.edu

Experts Expect Frozen Pipes As Temperature Drops

Posted: Dec 28, 2015 4:18 PM PST Monday, December 28, 2015 7:18 PM EST*Updated: Dec 28, 2015 6:12 PM PST* Monday, December 28, 2015 9:12 PM EST
By Paul Nelson
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The cold, winter months have arrived, meaning Nevadans could face issues with frozen pipes if they have not winterized their homes. Luckily, there haven't been many calls for broken indoor pipes, yet, but the Truckee Meadows Water Authority is still responding to calls for broken sprinkler systems. In fact, almost all of their emergency calls have been those types of issues.

"This last weekend, we had about 23 calls of people that forgot to winterize their irrigation system or needed to get the water shut off for one reason or the other," Andy Gebhardt, TMWA Manager of Customer Service said.

Plumbers say they've only had a few calls for frozen indoor pipes, mostly in Lake Tahoe, where temperatures are lower. Jerry Lowery is the vice president of D & D Plumbing, Inc. He says homeowners typically don't experience these issues until the mercury drops into the single digits.

"Then you get into periods where it stays cold all day, doesn't thaw out, and then you need to worry about frozen pipes," Lowery said.

A recent Allstate Insurance poll shows that claims for damages, due to frozen pipes, is 1,411% higher during the holidays. That coincides with the time when many people travel for extended periods of time. Lowery says failure to plan ahead can cost thousands of dollars.

"It can be flooded homes, it can be flooded crawl spaces, water running out the front door. We've seen everything," Lowery said. "There's no end to the damage that the freezing water can make."

"That's going to flood onto the carpet, flood onto the linoleum, you might have mold issues on the walls," Gebhardt said. "So, you don't want to have leaks in the house."

Closing the vents to crawl spaces is recommended to prevent frozen pipes. Keeping your indoor temperature above 55 degrees should help to keep pipes thawed, and keeping cabinets open to allow more heat on pipes can also help.

"If you avoid a room because it's always so doggone cold in there, it might be a good idea to fix those cracks or check where that cold air is coming from," Gebhardt said.

Along with these tips, keeping a trickle of water running through a faucet can be helpful.

"It's probably cheaper to let your water trickle a little bit, than it is to pay a plumber to come and fix it, let alone the repairs of the damages," Lowery said.

For emergencies that involve broken pipes, Gebhardt says people can call their emergency phone line at (775) 834-8090

Burst pipe could result in asbestos woes at Reno school

 Chanelle Bessette, cbessette@rgj.com 6:19 a.m. PST December 29, 2015

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Washoe County School District Superintendent Traci Davis addresses the media in front of the water-damaged gym floor at Pine Middle School. The school experienced flooding over the holiday weekend after a cafeteria pipe burst.(Photo: Chanelle Bessette/RGJ)Buy Photo

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A burst pipe in the cafeteria of Pine Middle School over the Christmas holiday caused large-scale water damage, flooding 95 percent of the first floor and possibly delaying students' return after winter break.

In addition to water damage, the flooding also brought up a new problem: airborne asbestos.

Floor tiles in the school were held in place with a glue that contained asbestos, which wasn't a danger until the water caused the tiles to pop up, releasing the asbestos into the air, according to Pete Etchart, chief operations officer for the district. Now, in addition to other damage, the Washoe County School District must also perform asbestos abatement.

"The goal is for kids to come to a dry school that's safe and warm," said WCSD Superintendent Traci Davis when she addressed the media on Monday.

The school district has removed the water and is currently assessing the damage, but the cost and time frame of the cleanup is yet to be determined. District officials hope to announce a contingency plan for Pine Middle School students, parents and staff by the middle of this week.

District schools are set to return from the winter holiday break on Jan. 11. Given the extent of the damage, Davis said one option the district is considering is to start classes a week later at Pine and make up the time later in the semester.

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The gym floor of Pine Middle School is warped after flooding occurred over the holiday weekend. (Photo: Chanelle Bessette/RGJ)

The broken pipe and subsequent flooding were discovered on Saturday when a site facilities coordinator was checking the school. The school district is currently in "arctic alert" mode, meaning schools are being inspected regularly for winter-related problems.

According to Davis, the WCSD doesn't think the pipe was frozen. Instead, they believe damage to the pipe may have happened during Northern Nevada's recent seismic activity when a 4.4 earthquake struck on Dec. 21.

The WCSD hired contractors from Core Construction and Belfor Property Restoration to assess the damage. The school district will announce more details as they become available.

Drought Forum's Recommendations Could Help Shape Water Policy

Posted: Dec 29, 2015 6:09 PM PST Tuesday, December 29, 2015 9:09 PM EST*Updated: Dec 29, 2015 6:40 PM PST* Tuesday, December 29, 2015 9:40 PM EST
By Paul Nelson
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In April, Governor Brian Sandoval signed an executive order that created the Nevada Drought Forum. Eight months later, the eight-member panel released its recommendations for dealing with drought.

"It was eight months of work and there was a fair amount of back-and-forth, and a lot of information, but at the end of the day, the recommendations were all unanimous. We all felt good about them," Leo Drozdoff, Chairman of the Nevada Drought Forum said.

Drozdoff says a lot of emphasis went into new ways to conserve water, which could include restrictions for water usage during certain times of the day and week. It could also incentivize residents who meet certain conservation benchmarks.

"There's a study out there that shows Nevada uses 190 gallons of water a day, per person. Maine uses 54," Lynn Hettrick, Deputy Director of the Nevada Department of Agriculture said. "So, I think we have opportunity and I think we can move forward with some savings, yet."

Hettrick says he is pleased with the drought forum's findings. Since Nevada is the driest state in the country, he knows how important water is for industries like agriculture.

"We're always in a drought," Hettrick said. "Agricultural folks are always dealing with drought and drought conditions, preserving as much water as they can. So, they're very careful of what water they get. They are good stewards of the land and the water they have."

The drought forum says many policies can happen immediately, to help plan for water management in the future. Others could take many years to implement. Part of that means educating the public and teaching kids how to use water in a more practical way, at a young age. Other recommendations, like making some changes to water law, could take some time. One of those policies would be changing the "Use it or Lose it" provision.

"That's there to make sure that people don't speculate with water, that water is actually going to be put to beneficial use, but in times of drought, what it means is that people, in order to show that they're beneficially using their water, are basically pumping a lot more water than they need to," Drozdoff said.

A change in law could also allow people to capture small amounts of rainwater as long as it doesn't interfere with other residents' water rights.

The forum believes a long-term plan needs to be put in place, that could include more recycling of water, and even possible investments in desalinization technologies, as long as they are affordable. Officials say Nevada has a very cooperative relationship with other western states. Nevada has interest in desalinization technologies because Las Vegas and San Diego both get their water from the Colorado River.

"If we put a desalinization plant in San Diego and supplied their water off the ocean, then Nevada could retain the fresh water in the Colorado River and offset it," Hettrick said. "So, it could have a huge impact in the state of Nevada."

Some of the forum's plans may seem ambitious and come with high costs, but Drozdoff says that is why they are making recommendations, now, hoping they can be accomplished, down the road.

"Some of these can be done, fairly quickly, and some of these need to be prioritized, based on other demands for resources and the like," Drozdoff said.

Lakes, rivers, and groundwater are all affected during prolonged years of drought. It can take many years to make recharge those sources. That is why the drought forum says it is important for people to have good conservation practices during dry and wet years.

"We have a few dry years, people talk about it a little bit," Hettrick said. "Then we have a wet year and it kind of goes away. It's not on the top tier anymore. We can't do that anymore."

Officials say they are encouraged by the snowpack from the early winter storms, but know that more dry years are inevitable, and that's why the state is planning ahead. They

Early snow boosts Lake Tahoe, Truckee River water forecast

Benjamin Spillman, bspillman@rgj.com 4:44 p.m. PST December 28, 2015
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Lake Tahoe at Sand Harbor taken March 19, 2013. It's looking increasingly likely the lake will rise above its natural rim in the coming months, according to a recent streamflow forecast for 2016.(Photo: Photo by Tim Dunn/RGJ)Buy Photo

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It's looking increasingly likely water levels in Lake Tahoe will climb above the natural rim at some point in the coming year.

That's according to the Natural Resources Conservation Service streamflow forecast published Monday.

How high above the rim the water level will rise, however, remains a question because there are still too many variables to play out between now and the end of the April-through-July period covered by the forecast.

Still, given the dismal snowpacks of recent years it's comforting to know the winter of 2015-16 is off to a strong start.

"Getting above the rim is a big deal because until that happens the Truckee River is bone dry in Tahoe City so no summer recreation," said Jeff Anderson, who helped prepare the forecast for the NRCS.

Official: California snowpack at 136 percent of normal

By RICH PEDRONCELLI and SCOTT SMITH
Associated Press

ECHO SUMMIT, Calif. (AP) - The water content of the Sierra Nevada snowpack in drought-stricken California was 136 percent of normal Wednesday when officials took the winter's first manual survey - an encouraging result after nearly no snow was found at the site in April.

The latest snow level is a good sign, "but that's it - it's a start," said Frank Gehrke, chief of the California Cooperative Snow Surveys Program for the Department of Water Resources.

After four years of drought, Gehrke plunged a measuring pole into a thick field of snow in the Central Sierra, which includes Lake Tahoe. His survey followed an electronic measurement last week that put the water content of the snowpack at 112 percent of normal. Even more snow has fallen since then.

The snowpack provides about 30 percent of California's water supply during the months when it melts and rushes through rivers and streams to fill reservoirs that remain critically low.

Last Jan. 1, the snowpack was a meager 45 percent of the historical average. On April 1, it had dropped to a record low of 5 percent.

Gehrke said snow must continue falling through April for him to feel confident the drought is easing.

"There's going to be those anxious moments when we start to get into a week, a week-and-a-half with no snow," he said.

A brewing El Nino system - a warming in the Pacific Ocean that alters weather worldwide - is expected to impact California and the rest of the nation in the coming months, according to a NASA report released Tuesday.

Its effects on California's drought are hard to predict, but Jet Propulsion Laboratory climatologist Bill Patzert said it should bring some relief. El Ninos in the early 1980s and late 1990s brought about twice as much rain as normal, he said.

The weather also caused mudslides, flooding and high surf in Southern California.

"The water story for much of the American West over most of the past decade has been dominated by punishing drought," Patzert said. "Now, we're preparing to see the flip-side of nature's water cycle - the arrival of steady, heavy rains and snowfall."

Forecasters expect a light to moderate storm system in Northern California early next week

Water users asked to approve sale of Donner Lake assets

- Article
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Lahontan Valley water uses from both the Fernley and Fallon areas have a special election on Monday to determine if TCID should sell its Donner Lake assets to settle the litigiation from the 2008 Fernley floods.

Expand Photo STEVE RANSON / LVN |

TCID District Manager Rusty Jardine discusses the sale of Donn r Lake assets during a Wednesday night meeting to water users.

- «
- 1 of 2 images
- »

Water users in Fernley and Fallon learned this week that the fate of the Truckee-Carson Irrigation District rests in their hands.

TCID District Manager Rusty Jardine and members from the board of directors addressed a proposed sale of the district's Donner Lake assets to satisfy litigation arising out of the Fernley flood almost eight years ago with provisions implemented by the Truckee-River Operating Agreement.

TROA regulates the usage of water storage and flow in the Truckee River. The Newlands Project receives river water that is redirected at Derby Dam west of Fernley to the Truckee Canal.

PLEA FOR SETTLEMENT

A special election to determine if TCID should sell those assets is scheduled for Monday from 7 a.m. to 7 p.m. District polling locations are the District Office at 2666 Harrigan Road in Fallon (Carson Division) and Fernley City Hall, 595 Silver Lace Blvd. (Truckee Division).

The question is whether TCID acting through its board of directors should sell its interest in water storage rights and the dam facilities at Donner Lake, (Nevada and Placer counties California), which is 100 miles west of Fallon in the Sierra.

TCID bought its water interests in Donner Lake in 1943 for about $50,000.

The board of directors will have their monthly meeting on Tuesday and will canvas the voting results.

During the Monday presentation in Fernley and the Tuesday meeting in Fallon, Jardine outlined the reason for the sale and future ramifications if water users turn down the sale to the Truckee Meadows Water Authority.

“This seems to be the logical thing to do,” he said.

Both the TMWA and TCID boards of directors have approved the sale.

Jardine said his plea for water users is for TCID to go forward with the settlement and sale of Donner Lake assets. Jardine said he strongly feels TCID will be able to settle for $18.5 million, which includes $17.4 million from the Donner sale and the remainder from insurance.

Money derived from the sale, said Jardine, will pay the litigants.

“This settlement ensures our future,” Jardine said.

Additionally, Jardine reiterated this week that an approved sale by the water electors would also result in the lifting of a court imposed restriction of water flow in the Truckee Canal. Jardine said it is important to restore a higher flow in the canal to ranchers and farmers.

FUTURE IN WATER USERS’ HANDS

If the majority of water users don’t cast a positive vote, Jardine said TCID could face a judgment of $30 million against the district based on earlier trials.

On Jan. 5, 2008, a 50-foot breach in the Truckee Canal’s embankment emptied water to the housing subdivisions below the canal. Jarine said at the time water flowed at 750 cubic feet per second and inundated 590 houses. Afterward, Jardine, who was not general manager at the time, said attorneys were contacting homeowners about taking legal action against TCID and other government entities. Consequently, TCID was sued in both state and federal court, and if the final stage for damages were to occur, Jardine said he is certain the court master would recommend a judgment of $30 million against TCID.

“We want to enter into a settlement agreement,” Jardine said, stressing why Monday’s vote is important for TCID.

Furthermore, Jardine said because of various rulings in both California and Nevada, TCID's allotment of Donner Lake water was reduced to under 5,000 acre feet of water, prompting Jardine to say the Lahontan Valley has not received any Donner Lake water in years.

"We would like to keep it, but we haven't been able to use (Donner Lake) water in our project for 25 years," Jardine added. "That's why we appeal to you that the time has come to use that asset for a resolution."

Jardine also said the lake is in California, which also poses another set of problems with policies and regulations that are different from Nevada's. He said TCID has used most of its assets for repairs and litigation for almost eight years. To move forward with the settlement, Jardine said TCID would avoid entry of judgment. With judgment against TCID, however, the agency's future would be in peril.

"If we lose the contract, there could be a three-fold increase in assessment," he said, adding another company could come into the valley and operate the canal system. Also, local oversight of another company operating the canal would diminish.

After taking a few more questions and elaborating on specific points, Jardine looked at the water users and opened his arms.

"My plea to you is to keep the district whole," he said

William J. Baerresen, Jr.
[redacted]

[redacted]

December 29, 2015

Board of Directors
Truckee Meadows Water Authority
1355 Capital Blvd
Reno, NV 89502

Re: Customer William J. Baerresen, Jr.
[redacted]

Subj: "Atta-boy"

Dear TMWA:

I just wanted to express my sincere appreciation for your outstanding "dig crew" who came to my residence to fix a low flow problem on 12/29/15. Specifically, Chris Hires, Steve Welch, Joe Brown and Matt White. They did a great job and each was courteous and helpful in troubleshooting the problem and correcting it. They were not only maintainers, but acted as ambassadors for the TMWA. I hope you will post this letter of appreciation and see to it they are each recognized accordingly.

If you have any questions please don't hesitate to call or email.

With appreciation,

William J. Baerresen, Jr.
TMWA Customer