TRUCKEE MEADOWS WATER AUTHORITY

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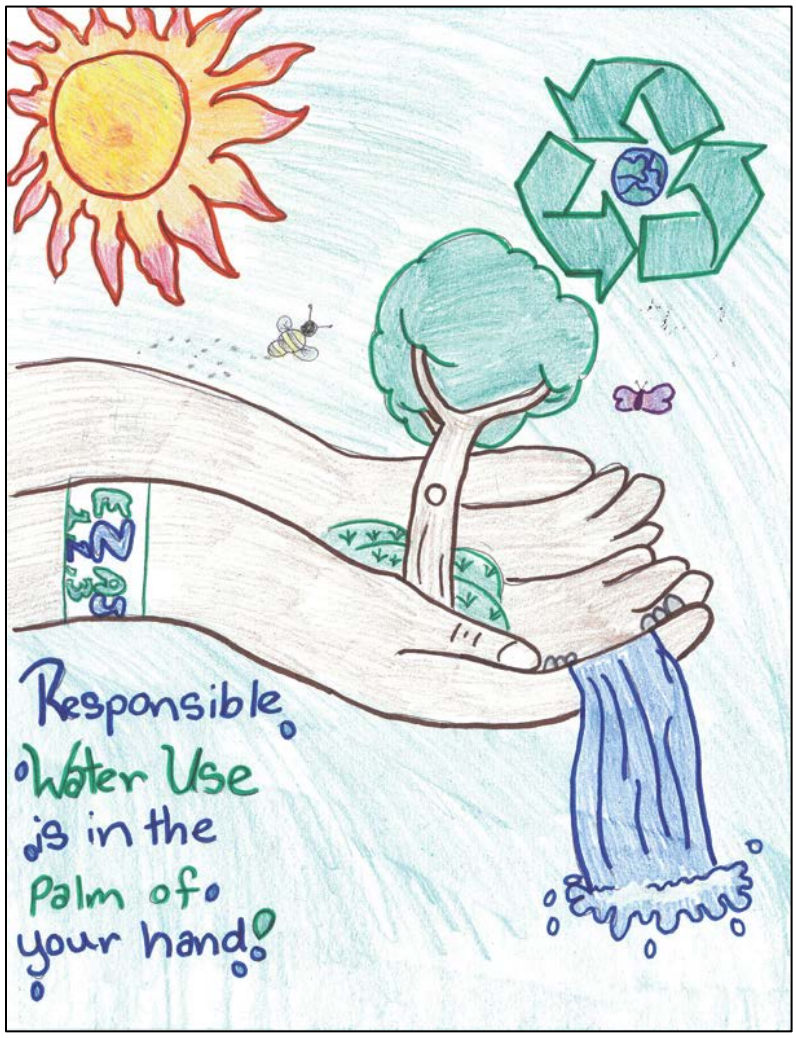
TMWA Board Meeting

Wednesday, August 19, 2015

Press Clippings

July 7, 2015 – August 12, 2015



Nahin Chowdhury (Mamie Towles Elementary School)
2010 Poster Art Contest – Honorable Mention, Grades 4-6

Dave:
I am very happy to relay. We thank you very much for taking the time to let us know.

Marlene Olsen
GoodStanding Outreach
775-829-2810
775-772-0020-cell

From: Dave Fritz [mailto:[redacted]
Sent: Monday, July 27, 2015 10:18 AM
To: Marlene Olsen <marlene@goodstandingoutreach.com>
Subject: Thank You to the Maintenance Crew

Hello Marlene,

I wasn't sure who to send this to but maybe you can forward this to the correct division.

The maintenance supervisor and crew who responded out to the Monte Rosa Home Owners Association and cleaned up the area around our water tank did an outstanding job and made the area much more fire safe. They worked hard and deserve a big "Thank You" from all the residents who live here.

Please pass this on if you can.

Thanks Again,

Dave Fritz
Board of Director

From: "Westlake, Marci" <mwestlake@tmwa.com>
Date: July 20, 2015 at 8:57:35 AM PDT
To: [redacted]>
Subject: FW: Tell the Board Submission

Hello Thomas,

The deposit was charged based on a soft credit check that was done using Online Utility Exchange, Online Utility will be sending you an adverse action letter that you can dispute and see if it is possible to have the deposit waived.

Your current water bill was for only 1,000 gallons of water and yes the cost for that was $1.72 but, included in that bill was also a monthly customer charge that was prorated the 20 days for $12.36. You will be charged a monthly Customer charge of $18.54 plus your water usage every month.

If you are unable to have the deposit waived, after a year of good payment history the $100.00 dollars would be credited back to your account and would take 4-5 months to use up that credit.

Thank you and have a nice day.

Marci Westlake
Office Supervisor
Truckee Meadows Water Authority
1355 Capital Blvd. I Reno, NV 89502
O: (775) 834-8074
mwestlake@tmwa.com I www.tmwa.com

On Jul 18, 2015, at 12:59 PM, Tell the Board <[redacted]> wrote:

Name: Thomas Hagen
Email: [redacted]

Comments: Hello, I'm responding to my 1st billing but nothing necessarily regarding any impropriety other than the customer abuse by your agency of having to pay a $100 deposit. My current bill for the metered 1000 gallons of water is for 20 days = $1.72. Now figure, one full month would be approx. $2.58 - FOR ONE MONTH! 1st question: How many months at this current rate would equate to the usage for the $100 balance deposit? 38 months (3+ years)? Furthermore, I have an account with NV Energy that has never been overdue after 7 years but because I don't have a credit rating, I'm subjected to your requirement of having to have a credit report from some unknown agency that doesn't even know I exist. A $25 deposit I could understand, but your sense of public distrust is something unparalleled, even to customers of NV Energy. Have you people no shame? So yes, today I will pay this insanely abusive pre-customer service charge. You certainly could have interactively corresponded with NVE to verify this customer's reliability in making 'due' payments on time. Why do bureaucratic agencies as yourselves make thoughtless assessments of the common citizenry without regard for their basic needs and simple honorabilities? Honest to GOD, YOU SHOULD BE FRIGGING ASHAMED!!!

Tell the Board Submission: Steve K.

From: **Steve Klutter** <[redacted]>
Date: Wed, Jul 8, 2015 at 7:36 PM
Subject: TMWA issues
To: "jardonn@reno.gov" <jardonn@reno.gov>
Cc: "rsmith@cityofsparks.us" <rsmith@cityofsparks.us>

Ms. Jardonn/Mr. Smith-

I would like to call attention to what I see as shortcomings
in the "Report Water Waste" program at TMWA,
and overriding issues with *commercial landscaping/irrigation.*

I own 2 homes, 1 each in Reno and Sparks.
I have education and experience in related fields.
I lived in Portola, CA during the 90's, when it had water supply issues.

Recently, an egregious overuse of water involved a malfunctioning irrigation timer,
which ran for about 20 hours, in plain view of hundreds of drivers.
That same week, after repairs, the system was on again at least twice and maybe more.

This week, hours after a huge downpour,
sprinklers near Meadowood Mall were running as usual.
There isn't a good response from TMWA,
I will withhold further criticism here.

Since i arrived here in 2003,
I have observed/reported numerous repeated overuse, wrong day,
and malfunction issues to the Water Waste Program
without meaningful results in many instances.
This is particularly acute with respect to Commercial properties.

There is no certainty with respect to water supply,
Mr. Hauck's assertions to the contrary.
These issues should be addressed before there isn't any to "conserve".
There seems to be no "middle management" that is willing to discuss the obvious.

soggily,
Steve K.

> Dear Phil:

> We take all Board of Directors submissions seriously. Your last email was submitted to the Board of Directors, as this one will be, as well.
> As mentioned before, the only funding mechanism TMWA has available for a turf removal program is increasing all customer rates. That is taken very seriously and will require months of public meetings, noticing and workshops to raise rates. As we move into the planning phase for next year, all tactics will be discussed and analyzed by staff and the Board, including a turf removal program.
> As for the 10% voluntary request to reduce water use: so far the community has saved 19% in May and 10.5% in June (compared to 2013). This equates to 817 million gallons of water that is actually retained and saved in upstream reservoirs and can be saved for later. Truly every gallon of water customers save now benefits our future.
> Thanks for your concern.
>
> Marlene Olsen
> GoodStanding Outreach
> Principal Strategist
> Direct- 775-434-0308
>
>
> -----Original Message-----
> From: Phil Carr [redacted]]
> Sent: Sunday, July 26, 2015 8:06 AM
> To: tmwaboard@tmwa.com
> Subject: Water conservation
>
> Dear Board Members, I just spent about 30 minutes reading the RGJ "investigative" report on saving water in a growing city. I found the article "TMWA hasn't fined a single water waster since 2012"
> interesting. I think the TMWA's response to the current situation by calling for a 10% voluntary reduction in water usage is a bit lame.
> I've exchanged emails with Mayor Martini and Laine Christmas about the idea of incentives for customers to remove turf and replace it drought tolerant landscaping. It seems that idea hasn't caught on with the TMWA Board. The conversion of my front yard turf (approximately 1,000 square
> feet) would cost several thousand dollars but I would be willing to do it if the TMWA would offer to help in some way. It's becoming quite common in California. I just don't understand why it's not on the TMWA radar.
>
> Sincerely,
>
> Philip Carr

Battle Born drought event: Ask experts your questions

 Mark Robison, RGJ 2:13 p.m. PDT July 30, 2015

A Battle Born drought discussion with water experts will be start at 6:30 p.m. Aug. 12 at Heritage Restaurant & Bar inside Whitney Peak Hotel.(Photo: Handout)

3 CONNECT 3 TWEET 4 LINKEDINCOMMENTEMAILMORE

Northern Nevada is home to some of the nation's top drought and water experts — and you will have the chance to ask them your questions Wednesday Aug. 12.

The Battle Born drought discussion will be live from 6:30 to 7:30 p.m. at Heritage Restaurant & Bar inside Whitney Peak Hotel in downtown Reno.

The winner of a drought and water trivia contest will win a $25 gift card to Heritage.

The experts will include David Simeral, one of 11 authors of the weekly U.S. Drought Monitor report that pinpoints drought conditions around the country. He is also a climatologist at Desert Research Institute who has extensive experience designing and implementing weather and climate observation networks in extreme environments.

Also on the panel will be John Erwin, director of planning and management for natural resources at the Truckee Meadows Water Authority. Among other activities, he directs TMWA in forecasting water resources in the future.

RGJ environmental reporter Jeff DeLong will also participate. He has done in-depth investigations into water usage in Northern Nevada by residents and home owner associations.

The event will be moderated by RGJ engagement editor — and Ask the RGJ: Drought Edition columnist — Mark Robison.

No need to RSVP but you can let us know you're coming on the "Battle Born Drought at Heritage" Facebook event page.

Any questions, contact Robison at mrobison@rgj.com.

Despite Our Recent Rain Storms, Area Drought Continues

Posted: Jul 07, 2015 3:18 PM PDT Tuesday, July 7, 2015 6:18 PM EDT*Updated: Jul 07, 2015 6:15 PM PDT*
Tuesday, July 7, 2015 9:15 PM EDT
By Paul Nelson
Email
Connect
producers@ktvn.com

The recent rainstorms to hit northern Nevada have been leaving some areas a little soggy. But the precipitation has not done much to improve our water supply. Still, it is having a positive impact on Lake Tahoe. The area's largest reservoir is still about one inch below its natural rim and would be about three inches lower if it weren't for the rain. Instead, lake levels are staying consistent. Neither dropping or rising.

"The rain is great," Chad Blanchard, U.S. District Court Water Master said. "I'd like to see this, the rest of the year. Unfortunately, that probably won't happen. But it's not doing anything for storage."

Most of the rain has been in isolated positions and not enough of it has been around the upstream reservoirs. Those storms create a short-term spike in river levels but they don't have the same impact as a winter storm.

"They're more localized and they put down a tremendous amount of precip, but in a very small area and very short duration compared to a winter storm where you get four days straight, over the entire region," Blanchard said.

The rain may not be helping water supply but it is having quite an effect on customer demand in the Truckee Meadows.

"Customers are doing their part," Bill Hauck, TMWA Senior Hydrologist said. "They're responding to the rain storms. They're going out and turning off or dialing back their irrigation systems. We're on the right track and we're well on our way to achieving our goal."

The Truckee Meadows Water Authority's goal is to conserve 5,000 acre feet of water this summer. They are already halfway there, through May and June.

"In the month of June, customers conserved another 10.5%, and that combined with the 19% savings in May, that's over 2,500 acre feet or enough water to serve 5,000 homes for up to a year," Hauck said.

So far, TMWA has only tapped into about 5% of our drought reserves.

"There should be no call for mandatory conservation if people continue to water responsibly," Hauck said.

The rain is also good news for Nevada's agriculture, giving some much-needed relief to crops. Areas like Lovelock have zero water allocations, this year. Fallon farmers are getting a little more than 20% of their annual water.

"It's helping anybody whose ditches are shut off and they're not able to irrigate," Blanchard said. "They're getting some rain from that. It's helping that."

Blanchard says Lake Tahoe drops about two feet, every year, just from evaporation. But if the rain continues, it could be a lot less, this year

Ask the RGJ: Water savings not apparent on TMWA bill?

 Mark Robison, RGJ 12:49 p.m. PDT July 8, 2015

TMWA says its average water customer uses 20,000 gallons a month during the summer in large part because they are watering outdoors.(Photo: Getty Images/iStockphoto)

This week's question is about how the Truckee Meadows Water Authority calculates customer water usage.

Short answer: TMWA rounds to thousands of gallons because that's the industry standard, it always rounds down, and, yes, sometimes you can't tell how much you saved because of the rounding.

Full question

RGJ investigative reporter Anjeanette Damon once again provides this week's question. She said she sometimes has trouble telling how much water she's saved because TMWA's bills are rounded to thousands of gallons. She wanted to know why.

As we discussed the issue, an example was formulated about why this matters: If you use 4,000 gallons in a month and you save 10 percent as requested, that means you used 3,600 gallons. Does TMWA round this up to 4,000 so it looks like you saved nothing?

Full answer

To find out, TMWA was contacted. Kim Mazeres, director of TMWA customer relations. responded via email. Here is our back and forth:

RGJ: Why does TMWA round to thousands of gallons instead of finer detail?

TMWA: Industry standard is to bill in either increments of thousand gallons or hundred cubic feet. Gallons are easier for customers to understand, so TMWA (like our predecessor) bills in thousand-gallon increments. Also, billing in smaller increments is not practical. For example, one thousand gallons costs $1.72. If we were to bill by the gallon, it would cost $.00172 cents per gallon.

RGJ: At what point are the gallons rounded? For example, does TMWA say you used 2,000 gallons when you reach 1,001 gallons on your meter? Or at 1,500 does it round to 2,000?

TMWA: We *always* give our customers the benefit in billing — gallons are always rounded down to the nearest thousand. For example, even if the water meter registers 19,999 gallons for the month, the customer is only billed for 19,000 gallons. The other 999 gallons is carried over to the next month.

RGJ: Is there anything customers can do to get more exact usage figures such as call customer service? If not, does TMWA have any other suggestion for how people can tell if they've been successful in saving 10 percent if their usage stats aren't refined enough to show it?

TMWA: Since all monthly bills have the same standard and are rounded down, all customer usage is calculated the same way. Customer Service does not have access to any finer detail.

If a customer uses a small amount of water, it is true they may not see their savings in a given month as it may take several months for their reduction to reflect on their bill. However, these are typically not the customers who are using water outdoors, as our average residential customer uses over 20,000 gallons of water a month in the summer. Whether or not they are saving 10 percent is readily identifiable on every monthly bill.

Our View: Drought not over, keep saving water

The Opinion of the RGJ Editorial Board 6:02 a.m. PDT July 12, 2015

Vehicles drive through a flash flood Tuesday on South Virginia Street.(Photo: Jason Bean/RGJ)

6 CONNECT 1 TWEETLINKEDINCOMMENTEMAILMORE

With torrential storms this week, it is tempting to think the drought is over, but these summer rains do not get us closer to ending it.

Northern Nevada's drought situation is still dire, and we all need to continue doing what we can to conserve water.

The rains in May, June and early July have been helpful, no question about that. They have allowed people to water their landscaping less — if they remembered to turn off their sprinklers. The cloud cover has also helped.

The problem, though, is that this is not the type of precipitation the region needs most.

What is really needed to end the drought is snow this winter and temperatures cold enough to keep it frozen. The snowpack can then trickle water out for months, keeping the Truckee River flow strong and reservoirs and aquifers at good levels.

The situation we are now in is called a snowdrought. Areas in the northwest are experiencing the same thing. They are getting plenty of rain but not the essential winter snow that sticks because temperatures are not too high.

RGJ engagement editor and editorial board member Mark Robison communicated with three area experts to verify the drought is not close to being over.

David Simeral — associate research meteorologist at Desert Research Institute and a national Drought Monitor author — said via email, “The recent rains certainly have been welcome, but overall they have not impacted the current drought situation in a meaningful way.”

The Drought Monitor report released Thursday still shows Reno firmly in the worst category: exceptional drought. Other parts of the state are looking better, although every area is still experiencing some level of drought.

Simeral said the rains have not really affected flows on the Truckee other than a few spikes associated with runoff from storms, but they’ve been short-lived.

This is because of variability in how much rain fell and where. As many residents experienced when caught in a flash flood or cloudburst this week, the storms have not delivered steady amounts over Northern Nevada.

Regional climatologist Kelly Redmond at DRI said, “Summer rain does not usually fall in uniform amounts over large areas, but rather tends to be concentrated in bands and in pockets, popcorn style. So it is typically very spotty.”

Many decisions pertaining to summer use of range and forage as well as access to stored water, especially for irrigated agriculture, were made a month or two ago.

“It’s too late for new precipitation to make much of a difference, even if it could,” Redmond said.

State climatologist Douglas Boyle at the University of Nevada, Reno said by phone, “Agriculture, tourism and municipal water supplies haven’t changed at all. Whatever conditions were there for (Truckee Meadows Water Authority) before the rains haven’t changed; the rains haven’t really supplied them with more stored water.”

Although the rains have brought a little relief, they are also a double-edged sword. They will cause the foothills to green up a little. But as temperatures return to normal and the vegetation dries out, there will be more fine fuels waiting to burn.

If all of this sounds dire, that is intentional. Rain day after day naturally makes people less concerned about drought and fire. This would be a mistake.

Revamping yards to use less water, finding and fixing leaks, upgrading to low-use water fixtures and evolving away from personal water-wasting habits — these are all still important for our high desert community. (Join the free RGJ Water Savers Club at RGJ.com/sierradrought to help you track your savings.)

The horizon contains a possible bright spot.

RGJ environmental reporter Jeff DeLong reported this month that there is a better than 90 percent chance the El Niño weather phenomenon will stick around until winter.

It is not clear yet whether it will influence Reno-Tahoe weather, but that possibility exists. “It has the potential to be the strongest since 1998, which caused flooding in California and left Lake Tahoe with nearly 160 percent of a normal April 1 snowpack,” DeLong wrote.

For now, though, the drought is still with us and water conservation remains the order of the day for Reno-Sparks

Donner Lake Drops Because of Drought

Posted: Jul 14, 2015 11:59 PM PDT Wednesday, July 15, 2015 2:59 AM EDT*Updated: Jul 14, 2015 11:59 PM PDT* Wednesday, July 15, 2015 2:59 AM EDT
By Amanda Ketchledge
Email
Connect
aketchledge@ktvn.com

The amount of water in Donner Lake is now 3 feet below average, the lowest in 20 years.

Lake activity isn't slowing down because of low water levels, but park officials are taking precautions like closing boat ramps and promoting safety on the docks.

Steven Ellmore, Donner Memorial State Park Interpreter said,"The biggest concern right now is people jumping off of docks since the water level is so low, it's causing some injuries so we need to be more careful."

Just the other day, Miranda Hasselman's son Will slipped on the pier and almost fell in the water. Because it's so shallow, Hasselman's biggest concern is her family's safety.

"Making sure the kids or the dog don't jump off just because it's maybe 3 feet deep. But other than that, we're just lucky to be able to have the lake to enjoy," said Hasselman.

The U.S. Geological Survey says Donner Lake is at 5,932 feet, that's three feet below the lake's capacity. So Donner Memorial Park closed several boat ramps.

"Launching boats you can only do it in one spot now. The far end, west end of the lake. So it's becoming trickier," said Ellmore.

Visitors can see the difference with low lake levels exposing rocks and sand bars.

"I've never seen the docks and the houses and we couldn't even believe how far the beach was," said Rocio Escandon from Seattle, Washington.

Jeff Heicksen and his friends aren't letting the drought bring down their fun.

"We do notice a little bit of a drop in the water level but I don't think it really inhibits us from enjoying the surroundings," said Heicksen.

It's their second time at Donner Lake to fish and camp, but one thing is different this time.

"The one thing we have noticed is they are closing the showers two days a week so you have to kind of plan your showers around that when you're camping," said Jeff Heicksen from Santa Cruz, California.

Chris White with Donner Lake Realty is seeing the impact too. While vacation rentals are steady now, winter is a different story.

"The weekend rentals have almost been none existent other than holidays," said White.

But he's optimistic.

"If anything there's more shoreline for people to enjoy. The only drawback is it's hard to tie up a boat to the dock right now," said White.

While people continue to enjoy the lake, they're hoping a good winter will come along to change things around for next year

Advisory Council Honors TMWA Member Chip Chadwick

July 28, 2015

Chip Chadwick accepts a plaque of appreciation from Business Manager Tom Dalzell.

Chip Chadwick was honored at the IBEW 1245 Advisory Council meeting in Reno on July 25 for his service to the union cause.

“Chip has been the heart, the soul and the face of 1245 at Truckee Meadow Water Authority,” said Business Manager Tom Dalzell in presenting the plaque.

“He has been everything we could ever have in terms of being a steward. He has represented his members in a way that exemplifies what trade unionism is,” Dalzell said, who noted that Chadwick has agreed to continue as an organizing steward in his retirement.

Chadwick, who has twice attended the Rocky Mountain Labor School, said that other unions marvel at IBEW 1245’s accomplishments in an era when many unions are struggling to hold their own.

“1245 has given us some good contracts and my passion has been to keep what we have,” Chadwick said

Truckee River Easily Polluted in Drought

By: Colin Lygren - Email
Updated: Wed 8:37 PM, Jul 15, 2015

By: Colin Lygren - Email

RENO, NV - Low water levels in the Truckee River mean the river is at increased risk for pollution. Less water means less water to dilute whatever gets into the river.

"We've got very low flows, so we have very vulnerable water and fish populations right now," said Lynell Garfield, hydrologist with the city of Reno. "When you have a fraction of that amount of water coming through the city, that means every little insult that might run into the water does more damage."

Pollution can come from anywhere. Every storm drain in the region eventually drains to the river without being treated.

There are ways to help prevent pollutants from getting into the river. Don't over water your lawn. Fertilizers can leech to the river.

"Fertilizer grows grass. It also grows algae," said Garfield.

Washing your car at home is bad news for fish.

"Detergents are very damaging for fish gills and other aquatic organisms. So that is the sort of thing that we want to keep out of the water," said Garfield.

Instead, wash your car at a professional car wash.

"They clean the detergents out of the water and then before it ever goes to the river, it goes to the sewer plant," said Garfield.

Finally, sunscreen is needed in this heat, but try putting it on at home, before you get to the river.

"It needs to take time to bond to your skin so that it doesn't just wash off in whatever water you come in contact with," said Garfield.

Ask the RGJ: Bath vs. shower, car wash vs. hose, more

 Mark Robison, RGJ 1:16 p.m. PDT July 15, 2015

Hand-washing your car does not need to use more water than going to a car wash if you use a spray nozzle.(Photo: Getty Images/iStockphoto)

CONNECT 1 TWEETLINKEDIN 3 COMMENTEMAILMORE

Updated to expand car wash water usage figures.

RGJ Water Savers Club's Facebook group members talked this week about how many gallons of water would be saved if different actions were taken. Here are the topics they wanted to know more about.

Shower

If you shorten your shower by 1 minute, you will save about 5 gallons of water if using a standard showerhead and about 2 gallons if using a low-flow showerhead, according to the U.S. Geological Survey' Water Science School website.

Shower vs. bath

On Facebook, Liz McFarland wanted to know the difference in water use for a bath vs. a shower. Obviously it matters how big your tub is and how high you fill it. But, the USGS says, "a good average amount" for a full tub is 36 gallons.

Using the shower figures mentioned earlier, a five-minute shower would use 25 gallons if you have an older showerhead and 10 gallons if using a low-flow head. So comparing them to a bath, you would save 11 gallons or 26 gallons by showering depending on how efficient your fixture is.

Teeth brushing

A newer bathroom faucet uses about 1 gallon a minute while older ones use 2 gallons, the USGS says. So if you brush your teeth for 30 seconds and leave the faucet running, you'll save between a half gallon and a full gallon.

Toilet

Perhaps you've heard the adage "If it's yellow, let it mellow; if it's brown, flush it down." It is a suggestion that you don't have to flush the toilet every time it's used.

Old toilets use 6 to 7 gallons a flush, slightly newer toilets use 3 gallons a flush and most all new ones use 1.6 gallons a flush (with some using even just 1.2 gallons).

If you skip one flush a day, you would save between 1.6 and 7 gallons daily.

And if you're grossed out by the "yellow," put the lid down. That keeps the dogs from drinking out of the toilet, too.

Dishwasher vs. hand washing

Laura Knight via Facebook asked the difference between using a dishwasher or washing by hand.

Newer EnergyStar models use 6 gallons or less per wash cycle, according to the USGS, whereas dishwashing by hand uses 8 to 27 gallons, depending on how new your kitchen faucets are and how efficiently you wash.

The USGS recommends soaking dishes in a basin of soapy water before getting started and not letting water run while you wash every dish. "It's best to have two basins to work in — one with hot, soapy water and the other with warm water for a rinse," it suggests.

Even if you are a really efficient hand-washer, a dishwasher will save at least 2 gallons and maybe 20. Of course, savings go down if you don't wait until the dishwasher is full to run it.

Rinsing recyclables

Knight also asked about the water usage while rinsing out cans or bottles before putting them in the recycling.

I responded with a previous Ask the RGJ column about Waste Management not requiring customers to rinse out their recyclables, just asking that they get most of the big stuff out.

Knight said sometimes you want to rinse out your recyclables anyway.

They can smell or attract varmints. At my house, if the cans are not rinsed well, animals scatter them around the yard.

The USGS says typical kitchen faucets use 1.5 to 2 gallons of water a minute. So if you have been spending five minutes a week rinsing cans and bottles, then stopping will save 7.5 to 10 gallons of water a week.

Car wash vs. hand wash

Amanda Vern via Facebook asked about the difference between hand-washing your car and using a car wash.

Most online sources use car wash industry figures. Let's be honest — these are biased to exaggerate the benefits of using a car wash.

The former president of the New England Carwash Association said at a public hearing in Rhode Island in 2012 that professional car washes use 28 to 30 gallons per car — and that washing in your driveway can use up to 140 gallons.

The Providence Journal newspaper, part of PolitiFact.com, decided to test the accuracy of the industry's claim about hand-washing.

A reporter used a hose with a nozzle on it, filled a bucket with 2 gallons of soapy water, washed a Dakota Sport pickup and rinsed it for just over 2½ minutes, using 9 more gallons. He added that even if he'd doubled the rinse time, he still would've used only 20 gallons.

This is less than the industry's estimates for water usage at a car wash by about 10 gallons.

The Massachusetts Department of Environment reports expanded figures for car wash water usage from the International Car Wash Association. It says a "self-serve" car wash uses 15 gallons, an "in bay" car wash uses 50 to 60 gallons and a "conveyor" car wash uses 66 to 85 gallons.

Based on these figures, hand washing with a nozzled hose is about the same for water usage as a self-serve car wash, but other types of car washes use much more water.

Got a water usage you want investigated? Email Mark Robison at mrobison@rgj.com.

BUS TOUR OF HISTORIC RENO WATER SITES ON JULY 25

A special insiders' bus tour of where Reno's water comes from with the RGJ Water Savers Club will be Saturday July 25. Featuring expert commentary, this five-hour trip departs at 9 a.m. from The Discovery museum. First stop is Fanny Bridge in Tahoe City. The tour includes facility tours of the Verdi hydroelectric plant and Reno's Chalk Bluff water treatment plant, plus viewings of Boca Reservoir and Donner Lake.

Cost: $30 a person for those whose families are RGJ subscribers, $50 a person for non-subscribers; $5 off if purchasing two tickets. (Get the Sunday newspaper home delivered for $20 for $20 weeks or a full-year digital subscription for $29 at RGJ.com/subscribe.)

Tickets are available now at tickets.rgj.com. Space is limited to 46 people. (Bus tour participants can get admission to The Discovery museum that afternoon for $5 on July 25 by showing your bus ticket. The museum features an interactive replica of the Truckee River system and will be hosting the popular "Inside Out" anatomy exhibit.)

Join the free RGJ Water Savers Club and help the community save water at RGJ.com/sierradrought

Speaking of TMWA

We have an exclusive look inside a new tunnel that is replacing a section of the flume along I-80 and the Truckee River.

Here's what Chuck King, former KRNV photographer, said about it: “You are officially kicking the ass of the TV stations on well shot and thought-provoking stories in the Reno area.”

Thanks, Chuck. Watch it here.

Ask Joe: Does watering day schedule apply to businesses?

- Video

- Ask Joe 7/20

Reported by: Joe Hart
Email: jhart@mynews4.com

Print Story
Published: 7/20 9:45 pm
Share
Updated: 8:13 am

RENO, Nev. (Mynews4.com & KRNV) -- One of our viewers has a question about watering schedules during the drought.

Amy Willow wrote in saying according to TMWA's watering schedule, no one should be watering on Mondays. She wants to know why some businesses in the South Meadows were watering on a recent Monday morning as she drove through the area.

Her question is, "Does the drought only impact residential customers?"

Here's what I found out:

I checked with Andy Burkhart over at TMWA, the Truckee Meadows Water Authority.

I also sent him the names of the businesses which our viewer is referring to.

Burkhart says those businesses are using reclaimed water to do their irrigation so the rules are different and it's actually the Washoe County Parks Department and not TMWA which oversees the use of reclaimed water.

Olsen says she will forward the information we provided (from our viewer) to the county so they can review it.

And make sure the businesses are following the rules.

The parks department does have a little more flexibility with watering so they can adjust their schedules to address children's safety and the use of the grounds.

In the meantime, for the rest of us, here is a reminder of the odd /even watering days schedule:

- *If you have an even address you can water on Tuesday, Thursday and Saturday*
- *If your address if odd, your watering days are Sunday, Wednesday and Friday*
- *Monday is a no watering day, a day set aside to give our water system a little break*

And again that goes for residents and businesses alike.

Effluent Water Could Soon Be Drinkable in Nevada

Posted: Jul 20, 2015 4:19 PM PDT Monday, July 20, 2015 7:19 PM EDT*Updated: Jul 20, 2015 4:42 PM PDT*
Monday, July 20, 2015 7:42 PM EDT
By Paul Nelson
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Potable water use increases, dramatically, during the summer months, but so does effluent water demand. The reclaimed waste water is used for irrigation along parkways, schools, parks, and golf courses.

"Water that's at a much lower cost than potable water and at the same time, preserving our potable water resources for drinking, for showering, for cooking," says Dwayne Smith, Director of Engineering and Capital Projects for Washoe County.

But the water does not meet drinking water standards. Not yet, anyway. Technology is available that would convert waste water into drinking water.

"Some of the challenges include what the public perception is of treated waste water," Smith said. "Remember, at the end of the day, it's just water."

Still, effluent water has been a major source of water for many years. The South Truckee Meadows Water Reclamation Facility treats more than 3 million gallons of waste water per day, but summer demand reaches 12 million gallons per day.

Smith says a team of local water experts are working with the Nevada Department of Environmental Protection to establish regulatory framework to allow Indirect Potable Recharge. The practice involves injecting effluent water into the ground, that would eventually be used as drinking water. Several states are already using this method, including California, Arizona, Texas, and Colorado. Regulations could be in place, in the Silver State, by next summer.

"That would tell us how far we would have to treat the water, how many of the impurities that we would have to take out of it before we could get it back into the ground," Smith said.

The regulations would have to be adopted by the legislature during the 2017 session. Smith says he is hopeful that, eventually, water can be treated and piped directly to people's homes. The practice is already being used in Texas and Singapore. Smith says with time and community outreach, it could also be used in Nevada.

"It really is a community approach but I think it's going to pay us big dividends in the end," Smith said.

Reclaimed water is more than 30 percent cheaper than potable water. Smith says if this new technology takes hold in Nevada, it would allow water to be used, multiple times. That would decrease the demand on Truckee River water, allowing more of it to continue it's path to Pyramid Lake.

Recent Rainstorms Give Boost to Area Agriculture

Posted: Jul 21, 2015 5:17 PM PDT Tuesday, July 21, 2015 8:17 PM EDT*Updated: Jul 21, 2015 7:18 PM PDT*
Tuesday, July 21, 2015 10:18 PM EDT
By Paul Nelson
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Fallon farmers typically get four hay cuttings a year. But with just 21% of their normal water allocations many are lucky to get 2% this summer.
That's why the rain has been a nice surprise.

"Usually, if we get an inch of rain, here in the valley, that's a huge rain. We have had some rains, this year, that have been upwards towards three inches," says Walter Winder of Truckee-Carson Irrigation District.

Rick Lattin adds, "The rain has been awesome. In fact, the rain is what's given us the second cutting of alfalfa."

The rain has also been good for Lattin's watermelons, cantaloupes and vegetables. "We were able to shut our drip systems off, several times this year and conserve the water for later in the season."

Still, the drought's impact is obvious, here - with many farmers leaving their fields bare. "We had to leave about half of our crops out. Didn't grow them at all, particularly the corns and the grains."

"It's almost eerie. We have almost no corn in the valley," says Winder.

The rest of the summer is not expected to get much better. The last water delivery of the year was two weeks ago. "We delivered to everybody that we possibly could with the water that we had in the system, until that ran out, and that was the end of it."

But farmers have found new ways to manage during droughts. Lattin is using a method that requires 30% to 40% less water. "We just irrigate exactly where the plants are and then we cover them with this mulch to try and hold the water."

But without irrigation, farmers are hoping Mother Nature will deliver. "If we could order up a rain, the end of July, the first of August, it would be awesome because we've still got our perennial hay alfalfa crops. Any little kind of rain will give us a little more feed and a little more income."

Lattin says one thing farmers want is consistent weather and this summer has been anything but consistent. While the rain has helped, the weather has also brought hail that has ruined crops in some parts of Nevada.

Whitewater parks: an unlikely drought bailout

Expensive artificial wave features can ease dry times for river economies.

Print

HARE

Paige Blankenbuehler July 23, 2015 *Web Exclusive*

River economies rely on the flow of water. Healthy fish populations live at around 65 cubic feet per second. Tubers thrive at around 100 cfs. And experienced kayakers need about 200 cfs to bother showing up. Big tour raft guides need somewhere around 300 cfs. All of this adds up to a kind of water currency for river towns that booms and busts. But when river flows are too low to float big rafts, some towns are finding they can still attract visitors through creative engineering — by building whitewater play parks.

A kayaker in the Truckee Whitewater Park during the 2009 Reno River Festival. The river was flowing at 1160 cfs during this event, according to USGS stream flow data. Reno-Sparks Convention and Visitors Authority

Whitewater parks have been popping up all over the West since the 1980s, engineered with low water levels in mind. The projects typically involve a redesign of riverbeds, often with the help of

concrete, boulders, sand and rocks to create bottlenecks, which create rushes of water, and “plunge pools,” which add depth. All of these additions, strategically placed to encourage recreation, make not only for more exciting whitewater but also for stabilized flows, which can squeeze a little more use out of water when levels are low.

In Reno, Nevada, the river recreation economy has suffered this year. The flow of the Truckee River through downtown in mid-July was 26 cubic feet per second, which is just a step up from stagnant, thanks to this year’s abysmal snowpack in the Sierra Nevadas. Private rafting companies haven’t toured that section of the river, which features a whitewater park built in 2004, for more than six weeks. James Bell, owner and operator of a private rafting company, Wild Sierra Adventures, says he will likely need to cancel trips on other stretches of the Truckee soon. “This has been the worst year ever,” Bell says; normally raft trips account for 60 percent of his business.

But surprisingly, people are still drawn to the slow waters downtown around the whitewater park — mostly families and children wading and swimming in the river. As drought conditions linger, “a modest splash from a man-made wave gives the river an extended life,” says Bethany Drysdale, director of public relations for the Nevada Commission on Tourism. And even though raft trips are waning, the park attracts tubers who rent gear from him, says Bell, which helps his business.

On the surface, the parks might not seem like wise investments when the water gets lower. Whitewater parks are expensive to build and,

though free to use, are almost always city-managed and publicly funded. Their economic impact is largely indirect.

Still, the Truckee Whitewater Park in Reno, which cost a relatively cheap $1.5 million, has become a draw for both businesses and tourists. Prior to its construction, the city's downtown section of the river had no access point, and few businesses flourished in that part of town. But the "beautification" of the river, says Ben McDonald, communications manager for the Reno-Sparks Convention and Visitors Authority, drew in new enterprises and created the new River Walk District. He says that area has provided a boost for Reno. "There wasn't much down there before that, but now the downtown river park is a tourist destination." According to a visitor profile study commissioned by the Reno-Sparks Convention and Visitors Authority in 2007, whitewater recreation attracted 13 percent of the approximately 4.3 million people who visit Reno each year. Those visitors spend an average of $680 each. "Even though the drought has been bad this year, people have been able to get closer to the waters than they were able to before," says Peggy Nelson-Aguilar, recreation supervisor for the City of Reno.

Reno was one of the few cities in the West whose whitewater suffered from the drought this year. The "May miracle" brought a lot of rain that boosted flows in Colorado, New Mexico and much of the Midwest. (In fact, a section of the South Platte, in Colorado, was closed for part of the summer because its flows were dangerously high.) Either way, though, many cities see parks as worth the cost, one that will help out on the off-miracle years. "When it's a drought year, the park still provides a good wave," says Cathy Metz, parks and

recreation director of the City of Durango. “Without a whitewater park, we would see a downfall in users.”

When the Reno project was accepted in 2002, projections of the return on investment ranged from $1.9 million to $4.1 million in the first year, according to the Truckee River Recreation Plan. For comparison, Durango, Colorado, commissioned an economic impact study of its whitewater park in 2006 and found that the park and the Lower Animas River generated $18 million per year.

Beyond dollars and cents, whitewater parks offer other incentives in dry years. Around the West, engineered parks extend the paddling season, says Nathan Fey, the Colorado River stewardship director for American Whitewater. “With low flows, whitewater parks begin to address some of the demand of the varied users attracted to rivers,” Fey says. The natural peaks provide recreation opportunities for seasoned paddlers, but whitewater parks keep the water exciting even as the levels dwindle. The features also attract new people to water sports. The big question, though, is how far into the future water parks can be beneficial? As of yet, there’s no such thing as a drought-proof river. And, as Gary Lacy, engineer of the Truckee Whitewater Park, says: “You can’t make water out of nothing.”

Paige Blankenbuehler is an editorial intern at High Country News.

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More People Turning to Artificial Turf During Drought

Posted: Jul 24, 2015 3:19 PM PDT Friday, July 24, 2015 6:19 PM EDT*Updated: Jul 24, 2015 4:19 PM PDT* Friday, July 24, 2015 7:19 PM EDT
By Erin Breen
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More and more homeowners in Nevada are trading in the sound of lawn mowers for nailing....and sanding...of artificial turf.

"This is our tenth install of artificial turf," said Christopher Roth with Two Crazy Gardeners of Reno. "And since this season began we've only put in two real grass lawns. This is expensive but it pays for itself in about four years and people love them."

Debbie and Tom Foley expect to. They have invested about $7,000 into tearing the grass out of their backyard and installing artificial turf instead.

"You should have seen this before," Debbie said. "It was all lumpy, It had dry spots in it and we wasted a lot of water trying to bring it back. We've actually replaced this twice and then we decided this was a lot less work and looked a lot better."

Her husband Tom couldn't agree more.

"No more watering, No more mowing. This is flat and should last longer than we need it," he said.

"I love it. I can't wait for them to finish. It's gorgeous," Debbie added.

They were both smiling today. And they've be smiling again when they get their next water bill

Master Gardener: Are you overwatering your lawn?

John Cobourn 4:34 p.m. PDT July 23, 2015

Perform a water audit, or “can test,” to find out if your lawn is being watered properly.(Photo: Susan Donaldson)

2 CONNECT 3 TWEETLINKEDINCOMMENTEMAILMORE

For many properties, inefficient irrigation of lawns is the biggest water-waster.

If a lawn irrigation system is not adjusted properly or needs repair, it often leads to overwatering. People sometimes notice brown dry spots on a lawn and turn up the watering time until those spots turn green. This means most of the lawn is getting too much water.

To reduce water waste, do a lawn water audit. You can hire a professional or do the audit yourself.

First, inspect the system and check for obvious leaks or for broken or clogged sprinkler heads. Look for brown spots in the lawn or areas where water ponds. Push an 8-inch screwdriver into the soil in your brown spots. If it is hard to push it in more than 2 to 3 inches, the soil is too dry.

Look for any areas where irrigation water is landing on pavement or walls. Make a rough map of your lawn and make notes on what you find, so you can make repairs.

Next, perform a water audit or “can test” to determine the water application rate and distribution uniformity. You want even distribution of water across the lawn to be efficient. This test may sound difficult, but it is actually easy and interesting to see how much water your lawn is receiving.

Use empty, clean containers with vertical sides 4 to 6 inches tall when conducting your lawn water audit. Measure the water in each can. (Photo: Susan Donaldson)

Find out if you have even distribution by spacing 15 to 30 empty “soup cans” evenly around your lawn. The cans need vertical sides and should be 4 to 6 inches tall. Assuming you run your irrigation system three days a week, run the system for one day of its cycles, then measure the amount of water in each can. Record the amount of water in the can and the location of each can on your map of the lawn.

Next, make note of any places in the lawn where cans have 50 percent more or 50 percent less than the amount of water in most of the cans. The spray heads in those areas need adjustment, repair or replacement by a professional. After this repair, all cans should collect approximately the same amount of water.

In June, July and August, the lawn needs about one and a half inches of water per week, so the goal is to collect one-half of an inch per day of irrigation. Run the can test for another day to see if most cans have a half-inch of water. Then adjust the timer until a day of watering produces a

half inch in the cans. Generally it is best to apply the water two or three times during the morning on each day of irrigation, with the cycles about an hour apart. This “water and wait” method is particularly important if you see runoff or puddles during irrigation.

In April, May, September and October, the lawn needs only 1 inch of water per week, or one-third of an inch for each of your three watering days.

John Cobourn is a water resource specialist with University of Nevada Cooperative Extension. Have questions about your plants? Contact a master gardener at 775-336-0265 or mastergardeners@unce.unr.edu, or visit www.growyourownnevada.com. For information on drought, visit www.livingwithdrought.com.

RGJ Water Savers Club: Bus tour visits key water sites

Tyler Hersko thersko@rgj.com 5:05 p.m. PDT July 25, 2015

The Verdi hydroelectric power plant overlooks the Truckee River on Saturday, July 25. The plant is currently offline due to low water levels.(Photo: Tyler Hersko/RGJ)

Saturday's RGJ Water Savers Club bus tour answered a number of drought-related questions and offered an inside look at some of Reno's most historic water sites.

The tour, which began at The Discovery museum in downtown Reno at 9 a.m., shuttled more than 40 guests to key areas such as the Verdi hydroelectric facility and the Chalk Bluff water treatment plant — both more than a century old. The first stop on the tour was the Boca Reservoir, an artificial lake created by the construction of the nearby Boca Dam.

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The RGJ Water Savers Club takes a tour of Truckee Meadows Water Authority's Verdi Hydroelectric Power Plant in Verdi on Saturday. The plant is currently offline due to low water levels. Jason Bean/RGJ
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The RGJ Water Savers Club takes a tour of Truckee Meadows Water Authority's Verdi Hydroelectric Power Plant in Verdi on Saturday. The plant is currently offline due to low water levels. Jason Bean/RGJ
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The Boca Reservoir is visited as part of the RGJ Water Savers Club bus tour on Saturday. The artificial lake was the first stop on the five-hour event. Tyler Hersko/RGJ
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The Verdi hydroelectric power plant overlooks the Truckee River on Saturday. The plant is currently offline due to low water levels. Tyler Hersko/RGJ
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The RGJ Water Savers Club takes a tour of the Chalk Bluff Water Treatment Plant on Saturday. The plant operates around the clock to deliver clean water to the region. Tyler Hersko/RGJ
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Part of the Chalk Water Treatment Plant's distribution is pictured on Saturday. The plant was part of the RGJ Water Savers Club bus tour. Tyler Hersko/RGJ
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Truckee Meadows Water Authority employees Kim Mazeres and Bill Hauck provided expert commentary and answered guest questions throughout the tour.

Many of the questions concerned the region's response to the ongoing drought. Hauck, a senior hydrologist at TMWA, noted that the last several years — among the driest in the region's history — had left the Lake Tahoe area in dire shape.

"The rivers fell off in the middle of April and we had to start using drought reserves in June," Hauck said. "The backup supply will get us through next year if the drought persists."

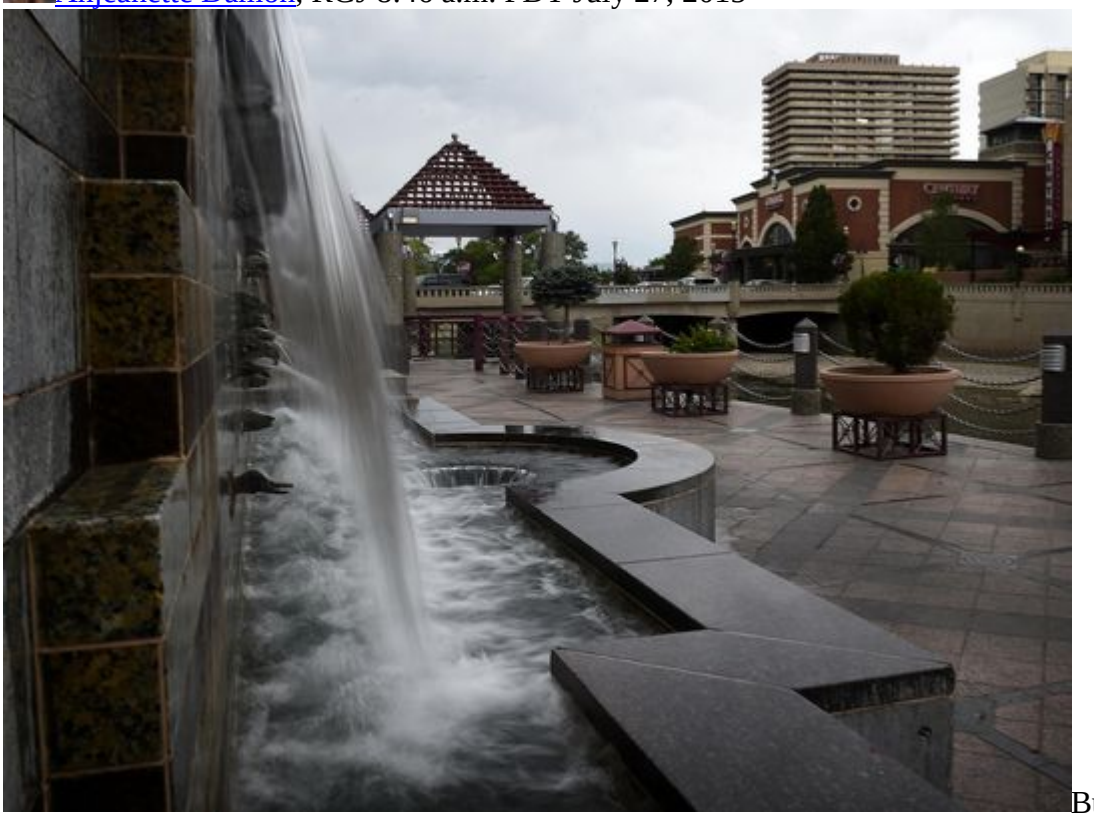
While the region's water reserves give the state something of a safety net, there are several implications for local companies. The region's three power plants, including the toured Verdi hydroelectric facility, were forced to temporarily shut down due to low water levels. According to Pat Nielson, manager of distribution and generation at TMWA, Verdi would require around four times as much water as what is currently in the river to operate.

Although currently offline, employees continue to work at the Verdi plant, which has been consistently updated and maintained since its inception 104 years ago.

The event concluded with a tour of the Chalk Bluff water treatment plant. The plant, which is open 24 hours a day, seven days a week and 365 days a year, provides clean, drinkable water to the region

Reno city fountain uses twice the water of homeless shelter

 Anjeanette Damon, RGJ 8:46 a.m. PDT July 27, 2015

 Buy Photo

The Riverwalk Fountain is seen on the south bank of the Truckee River in downtown Reno on Tuesday, July 21, 2015.(Photo: Jason Bean/RGJ)Buy Photo

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It's not just homeowners and businesses cutting back on water use during the drought.

Washoe County and the cities of Reno and Sparks are, too, mostly by cutting back on irrigation of parks and landscaping.

But while the local governments, which are among the community's largest water users, are joining conservation efforts, a review by the Reno Gazette-Journal found they either don't have specific drought response policies or aren't following the one they have.

And even with the irrigation cuts, some elected officials are calling for a more aggressive approach.

"There is widespread hesitation, I believe, across all the local governments to not be too alarmist about our drought situation," Reno Councilman David Bobzien said. "But the fact of the matter is any business looking to relocate here and make an investment in Northern Nevada knows darn well our situation, and they expect to see some blunt analysis and some forward thinking on how we get ahead of the drought rather than see all the actors be timid."

Sparks and Washoe County have cut irrigation by 10 percent and are exploring long-term fixes to improve water conservation. But neither has a specific policy that outlines conservation actions the jurisdictions should take as large water customers when a drought is declared.

The city of Reno has a drought response plan, which calls for such things as reducing hours at water play parks and postponing any turf projects. But the Reno City Council hasn't activated that plan despite the fact "exceptional drought conditions" have been declared in the city by the federal drought monitor for more than a year.

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- Ask the RGJ: Where does the GSR get its water for its 'pond'?
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Instead, Reno staff is working to find ways to cut back usage by 20 percent on their own, reducing irrigation on a park-by-park basis, hunting down and repairing leaks, recapturing water during fire training exercises and finding more efficient ways to clean equipment.

"It really comes down to our front row staff checking irrigation and making the conscious decision to make a difference and show the community we can still have beautiful spaces while using less water," said Andy Bass, Reno's parks director.

The cities and the county are among the community's top commercial water users. Reno alone has 293 metered properties.

Local governments have not reduced hours or closed area water play parks during the drought. (Photo: Emerson Marcus/RGJ File)

According to data provided by the Truckee Meadows Water Authority, the city of Reno's top water-using sites consumed 186 million gallons in 2014. Washoe County's top water users consumed 126 million gallons and Sparks' top sites consumed 118 million gallons last year.

Bass said the parks department is working to strike a balance between providing water-intensive amenities enjoyed by the community and reducing water use in the drought. So far, his department is trying to avoid the more draconian measures called for in the city's drought response plan such as closing or reducing hours for parks with water features.

Reno's top two water users are Idlewild Park — a sprawling neighborhood park that includes a swimming pool and ballparks — and the Terrace Sports Complex in northwest Reno. Bass said athletic fields are the city's top priority in the parks system, saying water will be curtailed at the high-use fields only as a last resort.

Priorities for city

But parks aren't the only water consumers. Reno continues to run the Riverwalk fountain in downtown Reno — a popular feature that consumed more than 4 million gallons of water last year — and uses water pressure washers to scrub downtown sidewalks of grime.

The Riverwalk fountain, which runs 24 hours a day, used almost twice as much water last year as the homeless shelter near downtown.

Public works director John Flansberg said the sidewalk washing is a priority for keeping the downtown area enjoyable for residents and visitors and isn't something the city can forgo. He added downtown businesses, particularly a local wedding chapel, have asked the city to continue running the Riverwalk fountain.

"We're trying to impact businesses as least as possible," Flansberg said.

 Buy Photo

People hang out by the Riverwalk Fountain on the south bank of the Truckee River in downtown Reno on Tuesday, July 21, 2015. (Photo: Jason Bean/RGJ)

The city's public works corporation yard, which uses an average of 2.8 million gallons a year, topped out at 6.3 million last year because of a leak that has been repaired, Flansberg said. The corp yard cleans the equipment used for road striping and also mixes the salt brine used on area roads during snowstorms.

Flansberg said he's hoping to reduce that number to 2 million this year.

Reno also hasn't been able to implement a 2009 plan to reduce turf landscaping by 25 acres, largely because of budget cuts during the recession.

And, complicating Reno's effort to reduce irrigation, it's using an aging central watering system that's connected to a single weather station in Idlewild Park, which was recommended for replacement in 2009.

The city is spending $90,000 this year to upgrade its controllers so the system will run more efficiently, but has not yet budgeted money for a new weather station or to buy additional stations needed to better react to weather conditions outside of Idlewild Park.

Both Reno Mayor Hillary Schieve and Bobzien, however, said it's time for Reno to do more.

"It doesn't matter whether it's the city or even just a personal water user, now more than ever we have to be super diligent about how we use water," Schieve said.

Washoe County's largest water user is Rancho San Rafael Park, which consumed 40 million gallons last year. In response to the drought, the county stopped irrigating the pasture at the park that acts as a dog park. While the water used for that pasture doesn't come from Truckee Meadows Water Authority, the county opted not to pipe TMWA water to the dog park because of the drought.

Washoe County closed the dog park at Rancho San Rafael because of the drought. (Photo: Andy Barron/RGJ File)

"At the end of the day, we didn't think it was the right use (of TMWA water) for our community right now to water a pasture," said Washoe County community services director David Solaro.

The county also is letting non-critical areas of its golf course go brown.

Like Reno, Washoe County's largest parks are connected to a central irrigation system governed by a weather station that automatically shuts down irrigation during rain or windy periods, Solaro said.

At parks and buildings not connected to the central irrigation system, mistakes can occur, he said.

During a recent downpour, the sprinklers at Washoe County's headquarters on Ninth Street continued to run, earning the ire of both citizens and staff.

"The controller here at Ninth is a little more finicky," Solaro said. "I've got a note here to talk with our landscape contractor to make sure we are following those guidelines."

The county jail also is a top water user, consuming 33 million gallons last year.

Solaro said the jail has installed low-flow shower heads. Toilets are also equipped with an automatic shutoff if an inmate tries to repeatedly flush a toilet with the goal of wasting water.

"We have a lot of inmates up there that have a lot of time on their hands," Solaro said.

Washoe County also is looking to upgrade cooling systems at two of its libraries, Solaro said. Both the Northwest Reno and Sparks libraries have evaporative cooling system that drove water usage to about 1 million gallons at each property last year.

In Sparks, the largest water user is Oppio Park, which includes 24 acres of fields, a swimming pool and five baseball diamonds. Last year, it used 11 million gallons.

The second largest water user is Alf Sorenson Recreation Center, which also includes a pool. But city officials said TMWA's data may be incorrect after finding out the meter continued to run last year when the pool was shut down for repairs.

Sparks city officials also have cut irrigation by 10 percent and have upgraded some toilets at city hall to reduce water use. The Sparks city hall and police station use more water than their larger counterparts in Reno, but that's largely because of landscaping differences.

Sparks doesn't use water to wash downtown sidewalks except after events such as the Rib Cook-off.

"Clearly we are doing our part with what TMWA has asked, but should this drought become more prolonged at some point we may have to consider talking about further water reductions," spokesman Adam Mayberry said. "We haven't had discussion yet, but that would be on the radar should we go down that path."

All three jurisdictions significantly reduce water demands by using treated effluent — also referred to as gray water or purple pipe water — to irrigate parks and landscaping. Sparks installed artificial turf at its largest regional sports complex in Wingfield Springs, saving 42 million gallons a year.

All three also are looking for ways to expand the use of effluent for irrigation.

Here's what local governments are doing to reduce water use

Reno

•Trying to reduce irrigation by 20 percent, except at sports fields.

•Upgrading irrigation controllers to make the system more efficient.

•Working on a pilot program with the Desert Research Institute to use a soil sensor to optimize irrigation.

•Public works has set a goal of reducing water use from an average 2.8 million gallons a year to 2 million gallons this year.

•Recapturing water used in fire training exercises.

Washoe

•Working to cut water use at parks and buildings by 10 percent.

•Declined to use TMWA water to irrigate the dog park at Rancho San Rafael when ditch water stopped running.

•Allowing ancillary areas at Washoe Golf Course to go brown.

•The public is asked to call (775) 328-2311 if they notice a leak or improperly operating irrigation system.

Sparks

•Reprogrammed irrigation systems at city parks to cutback water use by 10 percent.

•Installed high efficiency toilets in the public restroom at city hall.

•Converting two parks to effluent (treated waste water).

•Implementing anti-theft measures on backflow devices, which are copper and often attract thieves.

Reno's Drought Policy

In response to a drought declaration by the appropriate agency, the Reno City Council is supposed to take the following actions:

•Drought Watch: Reduce irrigation by 10 percent starting in September.

•Drought Alert: Reduce irrigation by 10 percent starting in August and reduce operating hours of parks with water play features.

•Drought Emergency: Reduce irrigation by 15 percent immediately, turn off water play features, discontinue turf renovation programs and postpone new turf planting.

Have an opinion on how local governments use water? Find contact information for the Reno City Council and Washoe County Commission below. Sparks City Council members can be found here

Ask the RGJ: Where does the GSR get water for its ‘pond’?

 Bill O'Driscoll, RGJ 10:13 a.m. PDT July 27, 2015

A young golfer takes a swing at the Sierra Bay Aqua Golf driving range at the Grand Sierra Resort & Casino in Reno on July 21, 2015.(Photo: Jason Bean/RGJ)

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You’ve seen it, the lake – some call it a pond – on the south end of the Grand Sierra Resort and Casino property in Reno where a driving range business, “Aquarange,” operates.

The pond dates to the resort’s construction in 1977-78 when crews moved a lot of dirt to build the foundation for the hotel-casino’s base, leaving behind a giant hole that eventually filled in with groundwater.

At 142 feet at its deepest point, the lined pond is cold , 47 to 50 degrees, officials say, and as such it’s used by the 1,990-room Grand Sierra in its air-conditioning cooling towers.

Best part, they say, is the water is then pumped back into the pond in a closed system that ensures a reliable, on-site source resulting in little, if any, water loss.

“It saves us 2.2 million gallons a month in water that we’d normally use for the cooling towers,” said Christopher Abraham, GSR vice president of marketing. “It allows us a stable, cool water source and any evaporative loss is mitigated.”

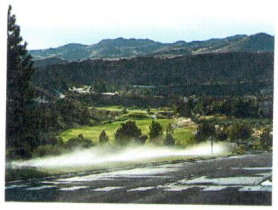
RGJ Investigates: Here's how much water businesses are using in Reno-Sparks

BY TYPE, HERE ARE THE TOP COMMERCIAL WATER USERS IN RENO-SPARKS

The Reno Gazette-Journal obtained the water use data for the top commercial water uses in 2014. We broke them down by type of user -- from the hotel-casinos to restaurants. Here's how those institutions are using water.

RGJ Research
Brian Duggan/RGJ

9:47 a.m. PDT July 25, 2015



(Photo: Jason Bean/RGJ)

Leaky pipes. Old buildings. Years of living with lush landscaping.

The drought, now grinding through a fourth year, is pushing our city's largest businesses and institutions to reconsider how they use water. Some are hamstrung by an aging infrastructure. Others are finally hunting down water waste on their properties.

The Reno Gazette-Journal spent the last month analyzing the water use records for the top commercial users of the Truckee Meadows Water Authority as part of a four-part series into the historic drought affecting Northern Nevada.

The investigation includes details on how our local governments, schools and largest businesses use water — including how much. The series also examines how a strained water supply could affect the future of growth and economic development in the region and the pressures our community faces because of a lush landscaping culture that was imported from the eastern United States decades ago.

Be sure you can read the entire series by getting full digital access to RGJ.com (http://offers.rgj.com/specialoffer?onSuccessRedirectURL=http%3A%2F%2Fwww.rgj.com%2F%3Ffrom%3Dglobal%26sessionKey%3D%26autologin%3D%26gps-source%3DCPAPFOOTER). All of our coverage will be posted at RGJ.com/sierradrought (http://RGJ.com/sierradrought).

Key findings for the latest RGJ investigation include:

We don't definitively know how much growth and new housing our water supply can handle due to changing water trends and conditions. (/story/news/2015/07/25/growing-pains--water-come/30657885/) The tug of war between economic development and those who caution against unfettered growth is back as Northern Nevada's economy begins to grow again.

Washoe County schools use more water per square foot than most large school districts, including Clark County (/story/news/education/2015/07/25/washoe-schools-water-use-far-national-average/30658287/). The Las Vegas school district uses about 29 gallons per square foot. Washoe County uses 56. Now, district officials want to remove turf at the five schools that use the most water.

Some want to ease the rules on turf for new projects. (/story/news/2015/07/25/lush-landscapes-reno-slow-change-despite-historic-drought/30658125/) The biggest water user in the Truckee Meadows are the lawns that dot it, and many are now saying that needs to change, including the rules that require homeowners and businesses keep them green.

The city of Reno runs a fountain along the Riverwalk that uses twice as much potable water in a year than the homeless shelter (/story/news/2015/07/31/local-governments-enough-save-water/30645025/). Reno City Council members are now saying the local government response to the drought needs to be much more aggressive.

The 10 biggest hotel-casinos in Reno-Sparks are the largest commercial water users. (/story/news/2015/07/25/resorts-largest-water-users/30658103/) Combined, the resorts used about 850 million gallons of water in 2014, more than any other commercial sector. The properties are pushing for better water conservation, though many face an aging infrastructure that can lead to water waste.

The University of Nevada, Reno is installing water conservation measures around its campus. (/story/news/2015/07/25/unr-tackles-water-use-drought/30658161/)The university as a whole used more than 140 million gallons of water in 2014.

TMWA hasn't fined a single water waster since 2012. (/story/news/2015/07/25/tmwa-fined-single-water-waster-since/30648744/) The water utility hasn't fined a single water waster since 2012. Instead, the agency has upped its education program instead of issuing fines.

Commercial customers are using more water since 2011, the last year that started with a healthy snowpack. Four years ago, commercial customers used 6.1 billion gallons of water. Last year, it was 6.7 billion gallons — an 8.9 percent increase.

The top 926 commercial customers consumed 3.6 billion gallons of water in 2014. Those customers include some of the largest institutions in the city, from the Washoe County School District to the top hotel-casinos to the University of Nevada, Reno to local governments. Those 926 customers make up more than half of all commercial water use out of a total of 8,843 commercial customers.

How we did it

A year ago when the Truckee Meadows was mired in its third year of drought, the Reno Gazette-Journal requested that water-use data for the Truckee Meadows Water Authority be made public to examine how our community is using water.

While the water authority initially denied the request, the RGJ pursued the information and successfully obtained it from TMWA by using Nevada's public record laws.

In the past six months, the RGJ requested a database of the top 1,000 metered residential users, the top 1,000 flat-rate residential users and the top 1,000 commercial users based on the number of gallons they consumed in 2011, 2012, 2013 and 2014. Using this information, the RGJ was able to analyze how much water the top users in town consume.

Because the water consumption data was obtained from TMWA, it does not include homes and businesses in the Arrowcreek, Double Diamond or Geiger Grade neighborhoods because those customers were served by the Washoe County Department of Water Resources in 2014. Those 24,000 homes, schools and businesses became TMWA customers on Jan. 1.

And here's how many gallons each commercial sector used in 2014 among the top 926 water users:

Resorts: 860,533,000 gallons

Industry: 432,557,000 gallons

Medical: 298,361,000 gallons

Government: 290,153,000 gallons

Schools: 261,484,000 gallons

Retail: 239,396,000 gallons

Residential: 184,400,000 gallons

Motels: 162,269,000 gallons

UNR: 145,335,000 gallons

Professional Offices: 135,072,000 gallons

Restaurants: 85,834,000 gallons

Hotels, non-gaming: 67,535,000 gallons

Car washes: 53,623,000 gallons

Supermarkets: 52,797,000 gallons

Entertainment/Event Venues: 52,607,000 gallons

Casinos: 46,073,000 gallons

Airport: 38,605,000 gallons

Churches: 37,953,000 gallons

Water Purveyor: 30,369,000 gallons

Dry Cleaners/Laundromats: 21,584,000 gallons

RV Parks: 21,161,000 gallons

Community College, adult education: 20,378,000 gallons

Reno Sparks Indian Colony: 18,333,000 gallons

Waste Management: 10,700,000 gallons

Gyms: 9,842,000 gallons

Gas Stations: 8,461,000 gallons

Water Park: 8,091,000 gallons

Day Cares: 7,328,000 gallons

Community Services 5,036,000 gallons

The Reno Gazette-Journal: 4,903,000 gallons

Storage units: 3,348,000 gallons

Unknown: 2,514,000 gallons

Strip Clubs: 1,944,000 gallons

Cemetery: 1,240,000 gallons

Fraternity: 1,001,000 gallons

Sierra Drought: A four-part series

Part 1: Residential water use and how we're using more than before the drought started (/story/news/2015/06/19/rgj-investigates-using-water-today/28949079/)

Part 2: Commercial and municipal water use: Our current coverage examines water use by municipal and commercial entities in the Truckee Meadows

Coming up

Part 3: How agriculture uses water in Northern Nevada.

Part 4: What's the future of our water system in an arid climate?

Read or Share this story: http://on.rgj.com/1S09l8o

Hotel-casinos and water: Reno-Sparks' biggest users

The area's 10 biggest consumers of water went through an estimated 844.5 million gallons in 2014, according to data from the Truckee Meadows Water Authority. Here are the biggest users by resort:

- No. 1: Grand Sierra Resort and Casino

  Northern Nevada's biggest with 1,990 rooms used 170,576,000 gallons.

- No. 2: Peppermill Resort Spa Casino

  The south Reno resort with 1,623 rooms used 164,266,000 gallons.

- No. 3: Nugget Casino Resort

  The Sparks landmark with 1,382 rooms used 97,788,000 gallons.

- No. 4: Silver Legacy Resort Casino

  The tallest building in Northern Nevada, 35 stories with 1,711 rooms, used 88,515,000 gallons.

- No. 5: Harrah's Reno Hotel & Casino

  One of the oldest high-rises in Reno opened in 1969, the 928-room hotel used 86,425,000 gallons.

- No. 6: Atlantis Casino Resort Spa

  South Reno's other major property, with 824 rooms, used 72,089,000 gallons.

- No. 7: Eldorado Resort Casino

  Opened by Don Carano in 1973, the Eldorado, now with 814 rooms, used 67,723,000 gallons.

- No. 8: Circus Circus Reno Hotel & Casino

  Another hotel opened in the 1970s, the 1,572-room complex used 50,824,000 gallons.

- No. 9: Western Village Inn & Casino

The Sparks property, with 147 rooms and four restaurants and owned and operated by the Peppermill, used 25,999,000 gallons.

- No. 10: Sands Regency Casino & Hotel

  The resort on the west side of downtown Reno, with 833 rooms, used 20,356,000 gallons.

-

Truckee Meadows Water Authority; RGJ research
Bill O'Driscoll

 Bill O'Driscoll, RGJ 2:39 p.m. PDT July 27, 2015

 Buy Photo

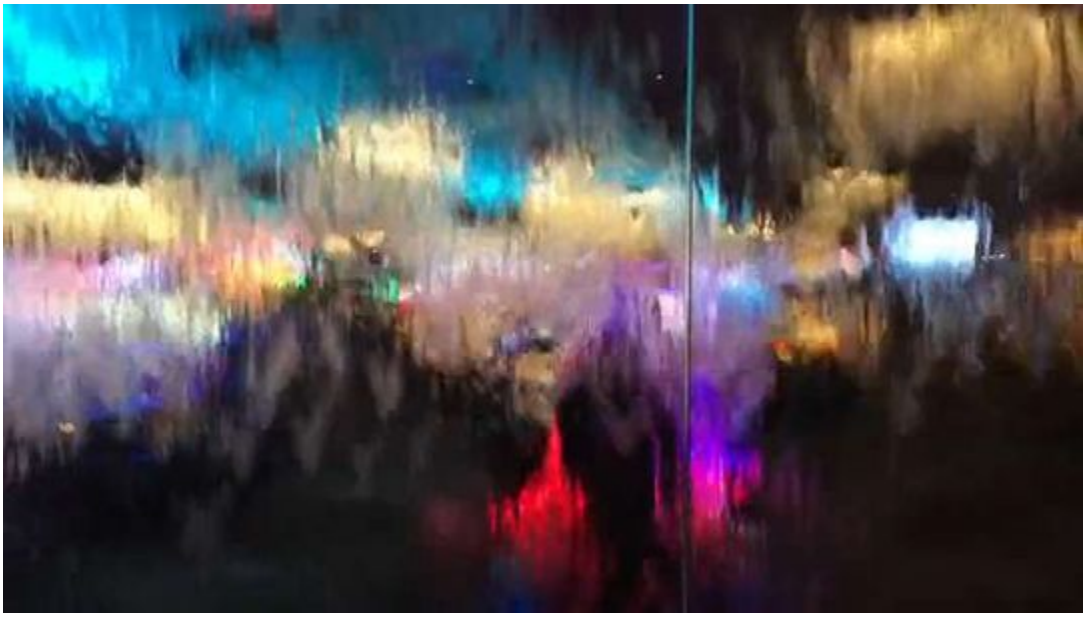
Workers do the laundry at the Grand Sierra Resort & Casino in Reno on July 21, 2015.(Photo: Jason Bean/RGJ)Buy Photo

1 CONNECT 8 TWEET 2 LINKEDINCOMMENTEMAILMORE

From filling glasses to washing linens, the Reno-Sparks area's 10 biggest hotel-casinos for water use in 2014 consumed more than three-quarters of a billion gallons.

A splash, maybe, by Niagara Falls standards. That's as much water as what flows over the famed falls on the New York-Canada border every 24 minutes by some estimates.

But in arid, drought-plagued Northern Nevada, the collective 844.5 million gallons tallied in Truckee Meadows Water Authority 2014 data is a lot of water.



Hotel-casinos have been challenged to cut water consumption as supplies wither during the drought. Bill O'Driscoll/RGJ

While it takes millions of gallons to conduct their daily business, drought has prompted area hotel-casino operators to be more attentive to consumption.

For years, they have all done the little things that can add up, from installing low-flow shower, toilet and other fixtures to offering water only on request in their restaurants.

A deeper challenge awaited Carlton Geer, CEO of the Nugget Casino Resort in Sparks, when his company in 2013 acquired the 1,382-room former John Ascuaga's Nugget, one of the area's older resorts that dates back decades.

"When I first toured this building, virtually every faucet leaked," Geer said. "If you walk by a leaking faucet long enough, you no longer see the leak. But we're more aware now, from the top down. We're creating an awareness."

In the beverage department, he came upon an ice machine that he said dated to 1961 – not long after the Nugget first opened on what then was B Street and is now Victorian Avenue.

That machine has since been replaced, Geer said.

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"We know efficiency in machinery is light years ahead in 2015 from where it was in 1961. We had an aging infrastructure here designed in an era when energy wasn't a big issue. We're addressing it. Awareness is so much higher now than even 10 years ago."

He said the 29-floor, twin-towered Nugget has spent $60,000 on three new ice machines in the last year, adding, "We are not only saving water but creating enough ice to save $90,000 on outside purchases the first year."

The Nugget also has upgraded its air-conditioning cooling towers which reduces water demand, Geer said, but landscaping presents another challenge.

The Nugget's five-floor parking garage is adorned on each level with greenery, adding to its eye-pleasing profile.

"If I said we'll take it out, I'd get a lot of complaints that it's not as pretty. It's a dilemma," Geer said. "People aren't looking at its cost but at pure aesthetic value."

He said the Nugget also sits atop an underground aquifer and basement pumps continuously re-inject the water back down.

But by law the non-potable water cannot be used for any purpose at the Nugget, he said, adding, "If we didn't pump it out, it would flood. So it's a cost to us. That would be incredibly great if we could use it for our cooling towers."

The Sierra Bay Aqua Golf driving range is seen at the Grand Sierra Resort & Casino in Reno on July 21, 2015. (Photo: Jason Bean/RGJ)

Saving water? 'No doubt'

Tops among area hotel-casinos in water used last year was the Grand Sierra Resort and Casino at 170.5 million gallons, in large part because of its size as the biggest hotel with nearly 2,000 rooms.

Deep in the bowels of the 27-story resort east of downtown Reno lies a laundry room covering thousands of square feet and holding a 50-foot-long "Laundry Tunnel."

It's a horizontal cylinder that in the peak summer season washes 225,000 pounds of towels and linens a week on average, said Kent Vaughan, GSR senior vice president of hotel operations.

The laundry system dates to the resort's beginnings as the MGM Grand-Reno in 1978, but upgrades, notably in 2013 when the GSR invested $1.6 million in a new laundry tunnel, have shrunk water consumption dramatically.

"It uses 60 percent less water than the previous tunnel," Vaughan said. "We've gone from 1.2 gallons per pound to point-5 gallons."

As with other hotels, the GSR asks its guests if they don't want their towels washed to hang their bathroom towels instead of leaving them on the floor.

"They appreciate that. People are very conscious now of water consumption," Vaughan said.

He said the new laundry tunnel's impact on GSR water savings since it was installed in 2013 has been sizable, and TMWA's data prove it: Overall consumption has fallen 7.8 percent from 2012 to 2014 even as hotel occupancy has gone up.

"It's a win-win for us," Vaughan said.

Other resorts, too, have taken steps, big and small, to reduce their thirst.

The Peppermill Resort Spa Casino was second in water consumption in TMWA's 2014 data at 164.2 million gallons, and officials believe their nine restaurants as well as high room occupancy helped.

But the 1,623-room Peppermill has countered consumption with several conservation measures, said Stephen Ascuaga, corporate director of business development, including:

- Removing all natural grass in 2012 and replacing it with artificial turf, saving an estimated 6 million gallons of water a year.
- Renovating laundry machinery with a "gray water" recycling program capable of saving another 78 million gallons a year.
- Installing monitors on the fountain fronting onto South Virginia Street and the waterfall at the pool that turn them off when winds exceed 20 mph, thereby reducing spray and evaporation loss.
- Tapping into geothermal wells thousands of feet beneath the resort for water used in heating the property, eliminating any need for outside water in that regard.
- "Have there been millions of gallons saved? No doubt," Ascuaga said. "We are way more water efficient over the past five to seven years."

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A worker wrestles with a load of towels at the Grand Sierra Resort & Casino in Reno on July 21, 2015. (Photo: Jason Bean/RGJ)

The situation elsewhere

The small (147-room) Western Village Inn and Casino in Sparks, owned and operated by the Peppermill, was the ninth-biggest hotel-casino user of water per gallon last year, according to TMWA's records.

"That casino, day in and day out it's a very busy place, 100 percent occupancy, the volume on the floor, masses of people. So we see that (water usage) as a function of utilization," Ascuaga said. "That doesn't surprise me."

How other resorts are doing:

Atlantis: "We've always conserved going back many years," said Jimmie Oaks, director of facilities. "We're getting more artificial turf, installing more rock, beautifying without wasting water.

"We have property watchers, daily. It's embedded in our brains."

Eldorado: "Most of our efforts went into effect after the last drought," said Jody Eddy, Eldorado chief engineer. "Our consumption has gone down since 2008."

Added Cindy Carano, executive director of hotel operations: "Our restaurants are a place where we continually go through training with our employees. Turning off faucets, etc. That's just good management."

Sands Regency: "It really is guest demand that drives (water use)," said CEO Ferenc Szony.

"Before the recession, we put in a lot of water-savings equipment. We're one of the bigger resorts at 835 rooms, but we're also downtown, so we don't have a lot of landscaping, things like that that don't eat up a lot of water."

Circus Circus: Besides water-saving plumbing and kitchen fixtures, the resort's "Sustainability Team" issues a periodic "Green Bits" internal newsletter to staff.

The summer newsletter read, "No two ways about it, we are in a drought. But by working together and doing the right things, we can minimize the use of water reserves stored in our local aquifers and reservoirs, saving that water for the future, should we need it."

Silver Legacy: The downtown Reno resort is conserving like the others, but also has tried installing "faux" plants inside and low-water native plants outdoors, said General Manager Glenn Carano.

But he said his main mission with staff is awareness.

"We have signs everywhere reminding our members, reinforcing that we are in a drought situation and watch out for dripping faucets, things like that," he said.

"We live in a high desert. The bottom line is we're all in the same pool, so to speak," he said. "It's simple awareness, and when you're aware, that faucet that's on gets turned off."

TOP WATER USERS AMONG RENO-SPARKS RESORTS:

1. Grand Sierra Resort:170.5 million gallons

2. Peppermill Resort Spa Casino: 164.2 million gallons

3. Nugget Casino Resort: 97.7 million gallons

4. Silver Legacy Resort Casino: 88.5 million gallons

5. Harrah's Reno Hotel & Casino: 86.4 million gallons

6. Atlantis Casino Resort Spa: 72.1 million gallons

7. Eldorado Resort Casino: 67.7 million gallons

8. Circus Circus Reno Hotel & Casino: 50.8 million gallons

9. Western Village Inn & Casino: 25.9 million gallons

10. Sands Regency Casino & Hotel: 20.3 million gallons

Source: Truckee Meadows Water Authority

THE BIGGEST WATER USERS IN LAS VEGAS

Think Reno-Sparks hotel-casinos use a lot of water? The biggest, Grand Sierra Resort at 170.5 million gallons in 2014, would pale next to the biggest commercial users in Las Vegas in 2013, the latest year data available. Among them:

1. Wynn Las Vegas: 555.4 million gallons

2. Madalay Bay Hotel: 508.4 million gallons

3. Venetian Casino Resort: 452.3 million gallons

4. Bellagio Hotel and Casino: 435.4 million gallons

5. Caesars Palace: 434.3 million gallons

6. Oasis Residential Inc.: 411 million gallons

7. Angel Park Golf Club: 403.2 million gallons

8. MGM Grand Hotel: 397.4 million gallons

9. Red Rock Golf LP: 394.2 million gallons

10. Southern Highlands Golf Club: 391.5 million gallons

Source: Southern Nevada Water Authority

TMWA hasn't fined a single water waster since 2012

 Anjeanette Damon, RGJ 7:44 a.m. PDT July 25, 2015

A TMWA employee drops a card on a home watering on the wrong day in 2008.(Photo: RGJ File)

The Truckee Meadows Water Authority hasn't fined a single water waster since 2012, opting instead for the softer approach of educating those who don't abide by water conservation ordinances.

The Reno area has been under an exceptional drought declaration — the most severe category used by the federal drought monitor— for more than a year after experiencing three extremely dry winters in a row.

Under such conditions, TMWA's drought response plan calls for both an increase in education and enforcement.

But while TMWA has upped the number of water-wasting notice cards its conservation consultants have delivered to individual customers, it appears to have completely eliminated its practice of fining water wasters.

Not that the agency was a heavy finer before the drought.

According to data obtained by the Reno Gazette-Journal, TMWA — an agency that serves 90,000 customers — issued 38 fines in 2010, 30 fines in 2011 and seven fines in 2012.

Zero fines have been issued since then.

TMWA stops fining water wasters

TMWA hasn't issued a single fine for wasting water since 2012, even during the exceptional drought conditions plaguing the region.

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TMWA

Anjeanette Damon

"Here's our philosophy," said Andy Gebhardt, TMWA's customer services manager. "If someone is working on the issue and is earnest about it, then we're not going to be the heavy. I don't think that's being a good community member."

But some members of TMWA's board, which is made up of local elected officials, were unaware the agency has stopped fining water wasters.

"That is surprising," said Councilwoman Jenny Brekhus. "That may be one of the water conservation strategies for the board to dig a little deeper into."

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- Washoe Schools use more than national average
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- Reno's largest resorts consumed 850 million gallons in 2014
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- UNR tackles drought

At the start of the drought, the number of contacts made by TMWA for water wasting dropped, according to the data obtained by the Reno Gazette-Journal. But the number has started to climb this year with the addition of six more conservation consultants, who patrol the community for water wasters and respond to specific complaints.

So far this year, TMWA has delivered 3,425 notices, close to its 2014 total of 3,544 cards.

TMWA warns water wasters

Instead of fines, TMWA is relying exclusively on warning notices for those breaking water rules during the drought. Here's a look at the numbers.

Gebhardt said the waste prevention program relies heavily on complaints made to TMWA's hotline and email center. Consultants deliver a card notifying the property owner of the problem, as reported or as witnessed by the consultant on patrol.

That usually does the trick, Gebhardt said.

"Most people really want to follow the rules," he said.

So far this year, TMWA water customers have responded to the call to save at least 10 percent because of the drought. In May, users saved 19 percent and in June they saved 10.5 percent.

Gebhardt acknowledged the agency runs into repeat violators, but said it often takes time to correct a problem.

"It may take trial and error (to fix) or they may have a vandalism problem," Gebhardt said. "A lot of people don't understand sprinkler timers."

Often violators don't know they are watering on the wrong day, that a sprinkler head is broken or that they are over-irrigating to the point water is running off the property, Gebhardt said.

The debate over fines versus education isn't exclusive to Northern Nevada. In 2014, when the state of California upped its water wasting fine to $500, some jurisdictions objected, saying they had been able to achieve water savings purely through education campaigns.

According to the Los Angeles Times, L.A. city has "shied away" from issuing fines, opting instead to write warning letters. The same story references a different approach in Santa Cruz, which issued $1.6 million in water wasting fines in 2014, but gave offenders the opportunity to attend "water school" to get out of the penalty.

TMWA's fines are much lower than in California. A first offense is $25, with subsequent offenses costing $75. They are assessed on a customer's monthly water bill.

Reno City Councilwoman Neoma Jardon, who sits on TMWA's board, was surprised to learn that TMWA has stopped issuing fines. She said repeat offenders, in particular, should be targeted.

"Here's what I think, the even bigger impact is on those doing their level best to conserve and the frustration that they feel when they do see a repeat offender property and that something's not being done to get them to be more compliant with the water rules," Jardon said.

Sparks Mayor Geno Martini, also a board member, said education is a great first step, but fines may have to pick up if the drought carries on much longer.

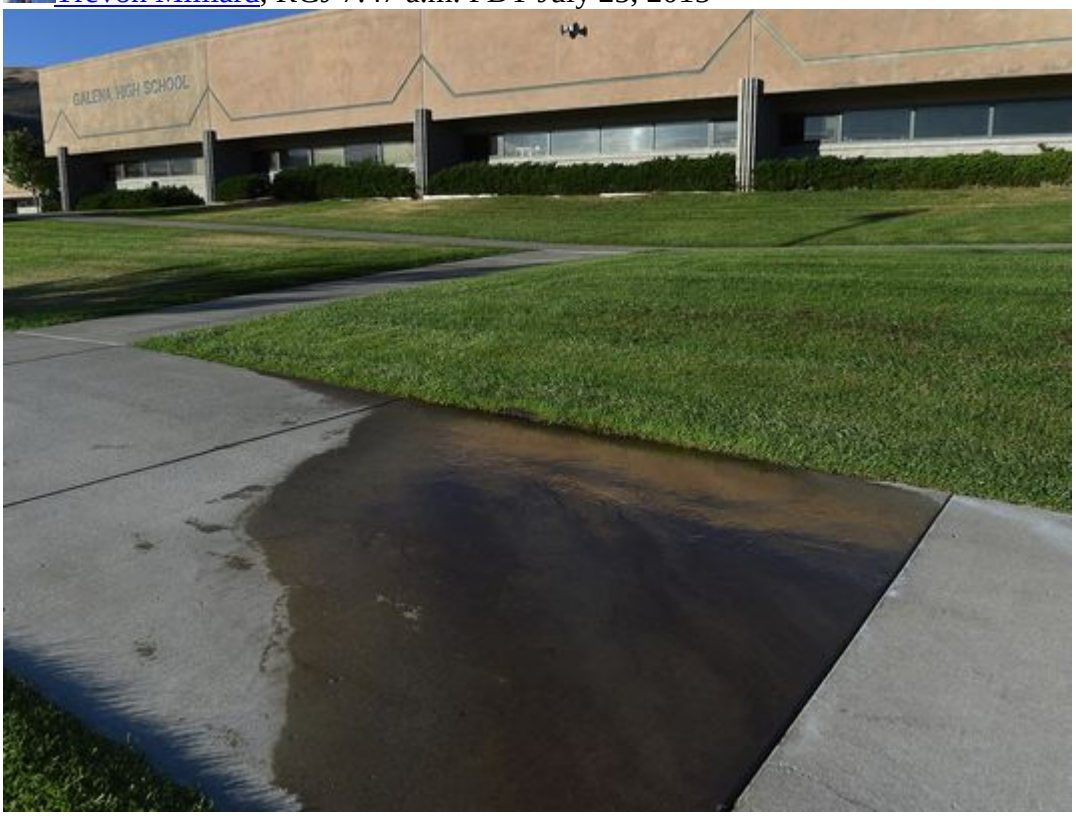
"The education part is great for the short term but long term, if it keeps getting worse, I think we have to get a little more proactive and maybe do some citations," Martini said. "Here again, it depends on how much longer this lasts. A couple more years and we may get to the point where we start cracking down on people."

Board member and Washoe County Commissioner Vaughn Hartung is a fan of the education program.

"I don't know whether being more aggressive necessarily works," Hartung said. "You get pulled over for a traffic violation and citations aren't necessarily a good way to change people's behavior."

Washoe schools' water use far above national average

 Trevon Milliard, RGJ 7:47 a.m. PDT July 25, 2015



Water is seen as the result of an irrigation system leak at Galena High School in Reno on July 23, 2015.(Photo: Jason Bean/RGJ)

Imagine funneling away every drop of the Truckee River for 7 minutes a day.

At the river's usual July flow rate of 2,650 gallons per second, it would fill one Olympic-size swimming pool to its rim and another two-thirds deep — or supply the Washoe County School District with the water it uses in any given day.

It should come as no surprise that the school district uses more water than almost any other business or government agency in the Washoe area, according to records provided by the Truckee Meadows Water Authority and school district.

All the district's properties combined would span 2 square miles.

Its turf grass could cover 209 football fields.

Its buildings — schools and supporting facilities — are equal in size to 40 Walmart Supercenters.

Not to mention, the district has 3,442 toilets, many of which are older models using anywhere from 4 to 7 gallons per flush. There's also 1,389 urinals.

But could the district be using less water?

Read more drought coverage by visiting RGJ.com/sierradrought.

With the district consuming 400 million gallons of water last year, any changes — good or bad — to its water use have huge impacts, said Jason Geddes, who was hired in December for the new position of energy conservation and sustainability program manager.

His job: reduce the district's draw on natural resources and its annual utility bill for electricity, gas and water, which totaled $9.6 million last year.

With the area hit hard by an ongoing and historic drought, he's focused on the water side of spending.

And he's starting with five schools, which may seem insignificant in a district of 95 schools. However, those five campuses use a third of all water consumed by the district.

The target schools – Galena, McQueen, North Valleys, Spanish Springs and Wooster high schools – were identified by compiling all water bills for the district in 2013, Geddes said.

Here is a map of how each school in the Washoe County School District uses water.

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Using more water than most

To see how Washoe's water consumption stacks up, it's best to compare against another large district in a similar environment. Look no further than Las Vegas' Clark County School District.

The Southern Nevada district used 29 gallons per square foot in 2014, according to records provided by the district to the Gazette-Journal. That's about half as much as Washoe schools' 54 gallons per square foot, and in a harsher environment.

Looking further, Washoe schools use more water than most large school districts nationwide, according to the Council of the Great City Schools, an organization of 67 large urban school districts.

While Washoe County School District doesn't belong to the group, it is the nation's 58th largest district with 63,000 students, ranking in the top 0.3 percent nationwide for enrollment.

The council surveyed member school districts in 2012 and found a median water use of 17 gallons per square foot.

Geddes said Washoe's high water use is due largely to the dry climate. However, Clark County and Los Angeles school districts belong to the council. And while the council didn't identify the water use of specific districts, water use ranged from 7 gallons per square foot to 38 gallons per square foot.

School systems like Clark County have worked at water reduction for years while Northern Nevada schools are only now starting.

Clark County schools have reduced water use by 32 percent since 2000, according to district officials.

But the district got help from its water utility, the Southern Nevada Water Authority, paying its customers a rebate of $1.50 per square foot of grass removed up to 5,000 square feet. Beyond that, the utility pays $1 per square foot.

In 12 years, the Clark County district removed 1.4 million square feet of turf — equal to 24 football fields — and earned nearly $2 million in rebates to do so.

The Truckee Meadows Water Authority doesn't offer any such program for Washoe County customers. Why not?

"We get that question multiple times a day," said Andy Gebhardt, customer services manager for the authority, claiming there's been no sustainable funding mechanism proposed besides increasing everyone's water rates to offset the cost of rebates for some.

Nevertheless, Washoe schools are heading in a similar direction as Clark County, planning major landscaping and irrigation changes to its five thirstiest schools this year.

Unlike Clark County, Washoe's school district will have to foot the full bill, which comes to $3 per square foot to rip up sod and replace it with xeriscaping.

Pinpointing the problems

To see what changes could be made at Galena, McQueen, North Valleys, Spanish Springs and Wooster high schools, the district hired landscaping consultants for about $26,000.

Engineering firm Lumos & Associates recently performed audits at each school, interviewing school staff and analyzing entire irrigation systems.

At Wooster, engineers found sprinkler heads original to the 1965 school. The outdated sprinkler heads are about 50 percent efficient, meaning only half the water reaches the ground.

New sprinkler heads are 80 to 90 percent efficient, according to Dale Doerr, manager of landscape architecture for Lumos & Associates.

They also discovered signs of a leak in Wooster's main water line, made evident by the sound of running water underground through 5 feet of dirt. North Valleys is much newer, built in 2001, but has been experiencing "very large leaks" at joints on its main water line, according to Lumos & Associates.

At McQueen, water pressure is so low that groundskeepers hand water dry patches with a hose. With such low pressure, groundskeepers only let one area of sprinklers run at a time, causing the school to water six days a week. All that adds up to inefficient water use.

Galena and Spanish Springs are plagued by high winds at all hours and have large lawns surrounding the schools, compounding the problem of long watering.

"It's just a lot of lawn," Doerr said of the largest issue facing all five schools, pointing specifically to the newer campuses, Galena and North Valleys.

Galena was built in 1992 and has 698,000 square feet of turf, which is equivalent to 12 football fields. That's more turf than any other Washoe school.

All five of these schools combined have 3.3 million square feet of turf, which amounts to a quarter of all turf in Washoe County School District.

Inside vs out

Water waste doesn't stop outside schools.

"You go into some of the restrooms and, wow, these things are from the 1930s," Doerr said of bathroom fixtures.

However, he only assessed irrigation and landscaping, and for good reason, said Geddes.

The district's sustainability manager is well aware that building inefficiencies exist. But changes come easier, cheaper and quicker outside schools, while having about the same — if not more – impact on water use.

On average, about 53 percent of a school's water use goes toward irrigation. The rest is used inside, Geddes said.

That's why the district recently sent a directive to groundskeepers of all 95 schools, telling them water-efficient ways to to mow, fertilize, irrigate, weed and aerate turf. Methods as simple as not mowing too low. Longer grass sets deeper roots, allowing it to absorb water from lower soil.

Fixing small leaks inside schools saves water but can be arduous and sometimes requires special contractors to deal with asbestos in walls. The district usually waits until an aging school needs a renovation to make energy-efficient upgrades.

Plus, bathroom fixtures are expensive. Efficient sprinkler heads cost $50 apiece.

For the five targeted schools, Doerr's firm is drafting major changes specific to each campus, updating sprinklers and fixing leaks. Plans entail restoring fertilizer regiments, which were reduced in budget cuts of recent years.

More fertilizer means less watering, Geddes said.

"We probably won't save money there, but we'll save water," he added.

The firm doesn't recommend removing any sports field turf but does suggest changes to the sod surrounding these schools. In some areas, plans call for replacing grass with decomposed granite, bushes and trees. In other areas, sod will be replaced with more natural grasses requiring less water and mowing monthly instead of weekly.

Lawns wouldn't be entirely removed under the proposal, just reduced and re-imagined with different grasses, Geddes emphasized.

"You don't want the dust and the heat," said Geddes, standing outside Galena High School, a green oasis at the southern edge of Reno.

Galena groundskeeper Domingo Hernandez would be happy to see some grass go.

"Save water, save money," he simply said, looking over the wide ribbon of grass surrounding the school. All 111,000 square feet of it, not counting the sports fields in the distance. "People like Xeriscaping as long as it looks good."

The school already replaced some sod with stones, bushes and trees along the parking lot.

If all recommendations are taken, the district could reduce water use at these five campuses by 20 percent, Doerr estimates.

That's about 22 million gallons of water saved each year, enough to fill 33 Olympic-size swimming pools.

And it comes from changes at five schools.

"These (plans) are for these five schools to start with, but it's certainly applicable to all schools," said Doerr.

The district sees its targeted five schools as only the beginning, a pilot program of something to come district wide, Geddes said.

First, the district needs to figure how much it will cost to make improvements at these five schools, and what it can afford.

All the irrigation improvements and turf removal would eventually be paid off in water savings, which amounts to $63,000 a year if estimations prove true.

Water Savers Club on way to 5 million gallon goal

Kelly Ann Scott 11:56 a.m. PDT July 25, 2015

KELLYSCOTT

1 CONNECT 5 TWEETLINKEDINCOMMENTEMAILMORE

Our second installment of reporting on Northern Nevada's drought focuses on commercial water use in our region.

And, RGJ Media's water use is part of that.

You might remember from our first installment that the RGJ's water use mirrored a regionwide trend of using more now than before the drought started in 2011.

In 2011, the RGJ used 4.1 million gallons of water, according to our analysis. In 2014, we used 4.9 million gallons, ranking us No. 118 among Truckee Meadows Water Authority commercial customers, the analysis found.

To help curb our water use, we instituted several irrigation and landscape changes. To figure out if it's helping, I talked through our bills with Kim Mazeres, TMWA's director of customer relations.

The good news is that we have seen an almost 24 percent reduction in our water use during May and June this year compared to 2014. Those are the months when irrigation is typically part of the bill.

In May and June, we used just over 1 million gallons of water. Last year, it was almost 1.3 million gallons for the same time frame.

Overall, our water use is down almost 11 percent from last year. From January to June, we used about 1.5 million gallons. Last year, we had used about 1.7 million gallons in the same time frame.

To find out more about our water use and ways to cut back, we have scheduled a TMWA water audit for the first week of August. We'll report on what we find from that, too.

In the meantime, we're continuing with the RGJ Water Savers Club. The goal of the club is to help you share tips and tricks so that the group can save 5 million gallons of water through the summer months.

The club also has partnered with the Girl Scouts of the Sierra Nevada to help the more than 4,500 members in our area learn more about water conservation. The Girl Scouts are able to earn an RGJ Water Saver patch through club participation.

So far, the more than 50 members who are using the Water Savers Club tools to track their usage are off to a solid start. They've collectively saved 762,034 gallons of water.

We've had two events for the club. One was a water-wise landscaping workshop at Moana Nursery that drew about 70 attendees. And Saturday, we led a sold-out bus tour of the region's water from Lake Tahoe into Reno.

If you missed those events — don't fret. There's more upcoming:

•Aug. 12 Battle Born drought discussion: Ask your questions of drought and water experts at 6:30 p.m. at Heritage Bar & Restaurant inside Whitney Peak Hotel in downtown Reno. The informal event will feature RGJ environmental reporter Jeff DeLong, TMWA director of natural resources management John Erwin and a climatologist/hydrologist to be named later. No need to RSVP but you can let us know you're coming on RGJ Water Savers Club Facebook page.

•Aug. 20 tour of Peppermill's water-saving upgrades: Free behind-the-scenes tour of the Peppermill's high-tech water-saving upgrades at 5:30 p.m. The 60-minute tour will feature looks at the resort-spa-casino's geothermal heating and cooling system using water, wind monitors on fountains, AstroTurf, graywater laundry, and water-saving showerheads and toilets in the rooms. Limit of 20 participants; free reservation tickets are available now at tickets.rgj.com.

•Sept. 15 kids event to learn about Truckee River and water conservation: Free Truckee River ecosystem and Wonders of Water event from 6 to 8 p.m. at McKinley Arts & Culture Center. Learn about the uniqueness of the Truckee River as the only closed-lake system in the United States. Kids and parents will then learn creative ways to save water with the Girl Scouts' Wonders of Water activities. Recommended grade range: kindergarten through 5th. Limit of 120 people; reservation tickets are available now at tickets.rgj.com.

It's not too late to track your water use and sign up for the free RGJ Water Savers Club. Go to RGJ.com/sierradrought. And, RGJ subscribers can get the RGJ's weekly drought and water-savings newsletter by visiting RGJ.com/newsletters

University of Nevada Copes With Drought, Cuts Back On Water

Posted: Jul 29, 2015 10:36 AM PDT Wednesday, July 29, 2015 1:36 PM EDT*Updated: Jul 29, 2015 2:06 PM PDT* Wednesday, July 29, 2015 5:06 PM EDT
By Landon Miller
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"One of our biggest water use is, of course, landscaping," said John Sagebeil, Assistant Director of Environmental Programs at the University of Nevada, Reno.

The campus, of course, is known for its lush, green landscape. However, in order to keep it green, the university uses quite a bit of water.

"It's about 144 million gallons," he said.

Sagebeil says the campus is cutting back water use in quite a few ways.

"Especially in the last few years, we've gotten very aggressive," he said.

In 2005, the campus used about 200 million gallons.

"When you consider the fact that we have more buildings, students, and employees than we did in 2005, so I think that speaks to our efficiency."

The campus continues to explore how they can be more efficient with water. They're in the process of looking at decorative turf, and replace it with a more desert-appropriate landscape. They've already transformed a 400-square-feet area near Lawlor Events Center.

"Absolutely," he said. "We are always looking for opportunities to take out turf grass that's not really needed, and put in something that's a more water efficient landscaping."

The campus has also cut back from watering from 3 cycles to 2 on their assigned watering days, and where spots are beginning to brown, they are letting them die.

"We're just going to let this happen here on campus," he said.

But don't expect the Quad to go dead anytime soon. Despite these efforts, the university does face some criticism, some argue the campus uses too much. Their response?

"Yes," he said. "144 Million gallons of water sounds like an enormous number. But there's an enormous number of people, and a large amount of landscaping to take care of with that water."

That averages to about 22 gallons per person, per day.

Ask the RGJ: Is river vegetation stealing our water?

Mark Robison mrobison@rgj.com 7:07 a.m. PDT July 29, 2015

Vegetation along the Truckee River consumes a lot of water.(Photo: Provided by NDOW)

This week's question is whether we should be concerned about water-sucking plants draining the Truckee River.

Short answer: They do consume a lot of water but we need them for river health and to help during floods.

Full question

The RGJ held an online live chat recently where people could ask questions of environmental reporter Jeff DeLong and hydrologist Bill Hauck of the Truckee Meadows Water Authority. One comment not responded to during the chat came from Emily Smith of Reno via Facebook. She wrote:

RENO GAZETTE JOURNAL

Ask the RGJ: Where does the GSR get water for its 'pond'?

“Why aren’t the county and TMWA more concerned about removing the phreatophytes? They suck more water out of the river than all the residents.”

Full response

My first stop was a Google search to learn the definition of phreatophytes, pronounced free-at-oh-fights. It was coined by C.E. Meinzer in the 1920s from two Greek words meaning “well plant.”

They are plants whose roots directly access groundwater, such as in streams and rivers, as opposed to plants whose roots take moisture out of the soil.

John Erwin, TMWA’s director of Natural Resources Planning & Management, said via email that TMWA does not have control of the lands below the high-water mark of the Truckee River.

“TMWA is simply one of many users on the Truckee River,” he said. “Any project to reduce phreatophytic stands is the prerogative of the property owner and may even need proper permitting, whether it be to work on the banks of the river, or in the river bed.”

On all TMWA properties and facilities that include open canals and ditches, he said, crews regularly cut back or remove willow stands that can be destructive to concrete lining because of their tendency to grow toward easy sources of water.

Sherm Swanson studies phreatophytes. He is a rangeland and riparian (river banks) specialist with the University of Nevada Cooperative Extension, as well as an associate professor in UNR’s department of natural resources and environmental science.

It turns out water-suckers are essential to healthy streams and rivers. They provide a transition between streams and surrounding land. He said some familiar examples are cottonwood and willow trees and rushes.

RENO GAZETTE JOURNAL

Ask the RGJ: Bath vs. shower? Car wash vs. hose?

“Phreatophyte removal was popular in the 1960s,” he said, but this had disastrous effects.

“The part that’s closest to the riverbank is most important for bank stability and for providing roughness or friction for flood flows, which slows the velocity (of the water),” he said. “Slower water reduces the erosion risk on the bank. The vegetation closest to the channel is also most important to fish habitat because it provides insects that fish like to eat and shade for the water to keep it cool as well as bank stability, which helps the channel stay narrower and deeper and thus less warmed by the sun.”

When water is warmed by the sun, this increases evaporation and warm water holds less oxygen. “That’s a problem for cold water fish like trout,” Swanson said.

Estimates of how much water phreatophytes pull out of rivers are difficult to come by.

The only estimate I could find on how much water they consume came from 1952 so who knows how accurate that remains? Nonetheless, the U.S. Geological Survey report estimated that in the 17 Western states, phreatophytes consumed 25 million acre feet annually. For comparison, TMWA currently uses 74,000 acre feet a year to supply all its customers in Reno-Sparks.

Swanson’s own back-of-the-envelope estimate on how much water phreatophytes use is 1 to 2 percent of that used by urban vegetation such as lawns, trees and shrubs.

“We have those because they had value to our lives and I’m arguing the riparian vegetation adds a lot of value to our lives as well,” he said.

“They make our community more beautiful, the river more stable. They provide a place for fish and wildlife to live close to where people live so people can enjoy fish and wildlife in their daily lives. It improves water quality by keeping water cooler and less polluted because the plants take up nutrients and prevent bank erosion, which would add sediment that brings pollutants into the water.

“Whether they make the river drier or wetter is an open question. But the day that changed my life 30-plus years ago was seeing a place where riparian vegetation changed a stream that used to dry up. Recovery of riparian vegetation allowed it to become perennial. The riparian vegetation created a system of underground water storage that leaked back into the river slowly between snowmelt and rainstorms.”

Bottom line: Don’t fear the phreatophytes.

Battle Born drought event

Ask your burning questions of drought and water experts at 6:30 p.m. Aug. 12 at Heritage Bar & Restaurant inside Whitney Peak Hotel in downtown Reno. The informal RGJ Water Savers Club event will feature RGJ environmental reporter Jeff DeLong, TMWA director of natural resources management John Erwin and a climatologist/hydrologist to be named later. No need to RSVP but you can let us know you’re coming and get event updates on the event’s Facebook page.

If you haven’t joined the club yet, sign up for the free RGJ Water Savers Club at RGJ.com/sierradrought and we’ll help you track your water savings and alert you to more public events this summer to learn more about water.

Experts Discuss Area's Water Demand, New Growth Patterns

Posted: Jul 30, 2015 6:24 PM PDT Thursday, July 30, 2015 9:24 PM EDT*Updated: Jul 30, 2015 8:48 PM PDT* Thursday, July 30, 2015 11:48 PM EDT

By Amanda Ketchledge
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Impacts from the drought can be felt throughout the Truckee Meadows region. So Thursday, experts talked about our water demand and the new growth patterns we're seeing in our area.

One housing developer is taking matters into his own hands after seeing water go to waste.

"The vast majority, somewhere between 75 and 80 percent I believe, of the water allocated to a single family residential unit which we have to supply goes to the landscaping," said Perry DiLoreto, developer of DiLoreto Homes.

DiLoreto builds hundreds of properties, all the while, staying water conscious.

"We went a step further with the xeriscape concept, we think we took that to another level," said DiLoreto.

Desert landscaping is required in front of all the homes on his new development, but it's up to the homeowner to decide what they want in their backyard. And you'd be surprised, grass isn't as popular as it once was.

"You can do xeriscaping or grass, whichever you prefer. Myself, I took all xeriscaping and a large patio, simply because I didn't want to have a lot of work," said Marian Lindsey, from Reno.

Her dog Charlie is enjoying his new backyard, much different than his previous home with a lot of grass.

"Xeriscaping and it has artificial turf so he's got quite a big area to run into," said Lindsey.

Many of Lindsey's neighbor's have made the same choice as well.

"We didn't want to have to do the lawnmower thing and the weeds and all that kind of stuff," said Dawn Baldwin, from Reno.

Overall experts say 10 percent water reductions throughout Truckee Meadows are helping our water supply.

John Erwin, Director of Natural Resources for TMWA said, "We're now heading into fall so we're very optimistic about our water supply, at least for the remainder of this year. We're anticipating a lot of snow this upcoming season but it remains to be seen."

Experts are depending on a good snowfall this winter, but they say we all need to do our part and save water in any way we can

Lovelock Suffers From Ongoing Drought

Posted: Jul 31, 2015 5:35 PM PDT Friday, July 31, 2015 8:35 PM EDT*Updated: Jul 31, 2015 6:18 PM PDT* Friday, July 31, 2015 9:18 PM EDT
By Paul Nelson
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Cities across Nevada are feeling the negative impacts of four dry winters. Perhaps none have it as bad as the farmers in Lovelock.

"As far as I know, we're the worst in the state," Bennie Hodges, Secretary Manager of the Pershing County Water Conservation District said. "I can't think of anybody that does flood irrigation in any kind of irrigation district that's worse than we are."

Two years ago, the small town only received 10% of its water allocation. For the past two summers, they have not received any water to irrigate their fields. No water means no crops. So most farmers haven't planted for more than three years.

Mike Phillips is a long-time farmer at Nevada Nile Ranch, south of Lovelock. He says he has never seen such a devastating drought.

"Typically, on a normal year, we'll put up 27,000 tons and we've put up zero hay this year," Phillips said.

Phillips says ranches have been forced to lay farm workers off, including 22 at Nevada Nile Ranch. The ripple-effect has been felt through town. The population is shrinking and revenue is decreasing. Mayor Mike Giles says the city has been innovative in finding ways to save money by receiving federal grants and cutting costs. Luckily, they haven't had to cut staff, but he says water is needed to revive the local economy.

"We're going to reach a point, here, where something is going to have to give," Giles said. "We either get water and get employees back in or we'll have to cut services."

Lovelock farmers rely on water storage at the Rye Patch Dam, on the Humboldt River. The reservoir will hold up to 200,000 acre feet of water but it is currently only 5% of capacity. Snowfall in the Ruby Mountains has been too light to recharge the river and the reservoir.

"We are trying to make a living on the bottom end of one of the most meager stream systems in the driest state in the nation," Hodges said.

The infrastructure that makes the valley's agriculture possible, also requires maintenance.

"It's frustrating," Hodges said. "We have to stay and operate and these guys have to pay us a salary and operate the district. Yet, we're not seeing any of them receive any income for their labors, and basically, it's been like this for the last three years."

After three years, many of Lovelock's fields are withering away. Some ranchers have put their cattle on alfalfa fields for grazing, since the crop is too thin to harvest. Some farmers are plowing their fields to prepare them for next year and to prevent wind erosion. Unfortunately, the summer rain has not helped either. Phillips says he has already sprayed weeds in irrigation ditches, four times.

"Our weed budget has tripled, this year," Phillips said. "Weeds just keep coming. Every time we get a rain, another batch of weeds."

Most of the area's farmers do have crop insurance but it does not make up for more than two years of lost production. Some farmers are in danger of losing their insurance because a viable crop is needed to qualify. The drought is wiping many of those crops out. All they can do is plan for better days.

"A lot of work, a lot of diesel, a lot of tractor work for us," Phillips said. "With 7,500 acres, we can't do it overnight. So, we're starting early on a gamble that we will have water, next year."

Some of that work includes clearing irrigation canals that have been dry for more than two years, overgrown with weeds. That growth will have to be removed in order for the ditches to be operational again

11:31 a.m. PDT July 31, 2015

Washoe County is using rental goats to clear weeds in Anderson Park

 Buy Photo

Goats from Sparks-based Goat Grazers are removing weeds from Washoe County's Anderson Park on the south side of Reno.(Photo: Washoe County Parks and Open Space/Contributed to the RGJ)Buy Photo

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Think of this as just a bunch of grown up kids enjoying the park.

Because that's exactly what it is.

Washoe County is using goats to clear weeds from trails in Anderson Park on Reno's south side.

The rental ruminants are an experimental attempt at weed abatement county officials are hopeful could be safer more environmentally friendly than other methods.

"It is an alternative method for sure," said Andy Brown, a Washoe County park ranger. "Typically we would use herbicides or we would use machinery."

The goats come from Sparks-based Goat Grazers, a company that rents goats for weed abatement purposes.

Brown said the cost of the effort at Anderson park is about $1,000 and will be paid for through grant money the county acquired via the Nevada Land Trust.

Buy Photo

Washoe County Park Ranger Andy Brown says this map shows how trails at Anderson Park will be affected by a weed abatement project that continues through August 15. The project involves using goats to eat weeds along trails. (Photo: Washoe County Parks and Open Space/Contributed to the RGJ)

He said the drought gripping the Truckee Meadows and much of the west as dried out vegetation which makes using machinery a greater fire risk. And, unlike herbicides, goats aren't leaving chemical residue.

He also said it's more efficient than using park workers to try to remove weeds with hand tools.

"The goats wil actually do more work per pound than we could with the same energy using staff," Brown said.

The goats started their work on July 25 and are expected to be at the park through August 15.

Access to some of the park's trails will be restricted until the goats are gone, he said

Our view: Local government not taking drought seriously

The Opinion of the RGJ Editorial Board 9:57 a.m. PDT August 3, 2015

The downtown Reno Riverwalk fountain used 4 million gallons in 2014 and has not been limited this year.(Photo: Jason Bean/RGJ)

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We are not in the first year of a drought. Nor the second or third.

Northern Nevada is in the fourth year of a drought. It is a drought more serious than the one that ended in 1994.

That one lasted eight years but had wet years mixed in that allowed municipal water sources to be recharged.

The current drought has involved four straight dry years. It is exceptionally bad, the worst of the worst — this description is not hyperbole but the label given yet again this week for Reno-Sparks by the U.S. Drought Monitor.

These facts need to be repeated and emphasized because the city of Reno has protocols in place that are supposed to kick in during a drought. It has not invoked them, and there does not seem to be any reason why.

Sparks and Washoe County do not even have drought protocols.

Perhaps like most of us, they keep hoping the drought will end. This would make moot the need for serious action. Or perhaps they think voluntary requests will do the trick.

Neither of these reasons justify local governments' inaction.

The latest El Niño news shows the weather phenomenon is getting stronger and is likely to continue into winter — but even if it is exceptionally strong, it does not necessarily mean Reno-Sparks will benefit.

If we do get a dream winter with lots of precipitation and temperatures cold enough to build the snowpack, that will certainly help — maybe a lot — but it will not get us out of the drought.

As NASA hydrologist Jay Famiglietti said in December, "It takes years to get into a drought of this severity, and it will likely take many more big storms, and years, to crawl out of it."

Voluntary calls for saving more water have not worked as much as they should. Between 2011 and 2014, residential and business customers in Reno-Sparks *increased* their water usage 13 percent while Reno's population rose only 3.6 percent, according to TMWA and U.S. Census data.

RGJ government watchdog reporter Anjeanette Damon reported recently the city of Reno's drought policy says that if a drought is declared by the appropriate agency, the City Council is supposed to take the following actions:

•**Drought Watch:** Reduce irrigation by 10 percent starting in September.

•**Drought Alert:** Reduce irrigation by 10 percent starting in August and reduce operating hours of parks with water play features.

•**Drought Emergency:** Reduce irrigation by 15 percent immediately, turn off water play features, discontinue turf renovation programs and postpone new turf planting.

If the city believed we were in a drought emergency, it would not have allowed a single fountain last year — the one on the Riverwalk — to use 4 million gallons. Running the fountain has not been limited this year either.

Another problem with Reno's policy: It is unclear who the "appropriate agency" is that is supposed to declare a drought. The policy references the Northern Nevada Water Planning Commission but that panel does not declare droughts.

It is troubling that the most significant problem facing the region is largely being ignored by all three local governments. They have taken some piecemeal actions, but little that shows they consider this drought exceptional.

For example, Sparks installed more efficient toilets in its city hall, Reno's public works department set a goal to reduce water use by 800,000 gallons this year, and the county is working to cut water use at parks and buildings by 10 percent this year.

These and other drought actions are good, but not enough. Residents and businesses are being asked to cut back, yet Sparks and Washoe County do not even have a plan to implement protocols in the event of a serious drought while Reno does and is ignoring them.

Even if we get four wet years in a row, invoking drought protocols now would be worthwhile. There has not been a serious drought in more than 20 years and the region has changed significantly. Implementing drought plans would help reveal flaws and allow the community to troubleshoot them now to better prepare for future droughts or if the current one worsens.

Our local governments should be having big drought discussions that demonstrate to everyone serious action is needed for a serious problem. One possibility: A cash-for-grass program has been wildly successful in Las Vegas. How would one work here? What about residents who have already xeriscaped?

Reno, Sparks and Washoe County must improve their drought policies and they must get more specific about what actions they will take themselves and demand of the community. Voluntary suggestions are not enough. This drought is exceptional. It is time to act like it.

Letter: Reported water-use info didn't seem to add up

9:06 p.m. PDT August 3, 2015

RGJ.com LETTER TO THE EDITOR

Just finished the Sunday articles on water use (http://rgj.com/sierradrought) [RGJ, July 26]. On the front page you state "resorts" in 2014 used 860 million gallons, residential 184 million. You then show a graph on page 6 showing "retail" used 21 billion gallons (B, not M), and residential used 15 billion.

My question is what percentage of TOTAL use goes to residential?

The page 6 graph indicates that it is important for me to reduce home use. The front page numbers indicate that in total home use is a very minor part of the total. Which is correct?

Incidentally, I am intrigued that in the front page article you show water use by cemeteries, but do not show use by golf courses. You also do not mention recycled water use.

(Photo: RGJ)

My conclusion is that your articles are very poorly done, and raise far more questions than they answer.

Bert Eykelbosh, Reno

Editor's note: *The residential water use reported on July 26 referred to commercial water customers billed on "general metered water service." That refers to laundries for apartment complexes and clubhouses for homeowners associations, but not single family homes. Residential usage was the focus of the first part in our four-part drought investigation published June 21. Total residential water use – those billed on residential metered water service – was 14.6 billion gallons in 2014. That's roughly 70 percent of the 21.3 billion gallons of water consumed by all Truckee Meadows Water Authority customers last year. As for why no golf courses were included in our reporting on July 26, that's because no golf courses were included in the database of the top 1,000 "general metered water service" – or commercial – customers from 2014. The data analyzed by the Reno Gazette-Journal did not included "metered irrigation service" customers, which may have included more details about local golf courses.*

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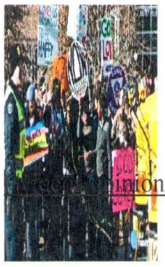

Ask the RGJ: Why no ‘cash for grass’ in Reno?

 Mark Robison, RGJ 7:18 a.m. PDT August 5, 2015

Denise Hurst shows the drought-tolerant garden she planted with the help of a city program that offers rebates of $3.50 per square foot for residents who tear up their water-guzzling lawns and plant drought-resistant plants that require little to no watering earlier this year in Long Beach, Calif.(Photo: Nick Ut/AP)

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This week’s question looks at why the Reno area does not have a “cash for grass” program, such as in Las Vegas, that pays people to tear out their lawns in favor of less water-intensive landscaping.

Short answer: To pay for one here would require higher water rates for all customers or government funding. Neither option is likely to happen.

Full question

Whenever talk turns to ways to save water in Reno-Sparks, soon someone will mention that outdoor landscaping is the No. 1 use for water. And this inevitably leads to questions about why Reno-Sparks does not have a “cash for grass” program to help citizens, businesses and government agencies defray the cost of replacing lawn with more desert- and drought-friendly landscaping.

One reader emailed about the success of Southern Nevada Water Authority’s program: “Homes and businesses removed enough turf to cover more than 2,600 regulation football fields & saved

enough water to fill 63,000 Olympic-sized swimming pools. The program was called Water Smart Landscapes. This is a program that Reno could very well copy."

Indeed, for years in Las Vegas, residents have been paid $1.50 a square foot to replace lawn with a xeriscape alternative. The incentive has started to catch on in some California communities, where Gov. Jerry Brown has mandated 25 percent cuts in water usage.

Full response

To learn why such a program is not available here, I contacted the Truckee Meadows Water Authority and received an emailed response by TMWA resource economist Laine Christman.

He agreed with the success of "cash for grass" programs:

"Research on the effectiveness of turf removal programs was conducted this year and presented to TMWA's Standing Advisory Committee in May. Overall, results for communities in the West with rebate programs indicate that the average annual reduction in water usage after turf is removed is approximately 30% per residence. On average, a resident would save $206 on maintenance costs and 2.2 hours of labor annually, as well as a $240 reduction in their annual water bill."

Depending on the rebate and amount of lawn removed, Christman wrote, residents can recoup the cost of converting their landscaping in one to five years.

Now for the main reason Reno-Sparks does not have a lawn-replacement program: "A rebate program that significantly reduces water usage comes with a large price tag. For example, in Northern Nevada, a $10 million dollar program that offers a $1 per square foot rebate would save approximately 1% in total system water usage annually," Christman said.

In Las Vegas, the water utility recoups the cost of its rebate program by reselling the saved water to developers so they can build more homes — it sells the same amount of water to more people.

RENO GAZETTE JOURNAL
Ask the RGJ: Does removing lawn raise electric bill?

In the Truckee Meadows, any saved water either flows downstream for other users on the river or is held upstream in reservoirs, depending on the time of year, Christman said.

TMWA does not sell conserved water to allow for more growth. Here, additional growth must be preceded by the acquisition of existing water rights.

In California, the state offers grants to water utilities that help reduce the cost of turf removal programs. Other Western communities have increased customer water rates to cover the programs' costs.

"Without a revenue source derived from reselling conserved water, TMWA does not have a sustainable way to fund a rebate program at this time," Christman wrote.

"Moreover, the state of Nevada does not offer grants for turf removal. Without an outside revenue source, any turf rebate program would have to be funded primarily through customer rates. This creates inequity by making *all* customers pay for a small portion of customers who would want to remove turf."

He also notes that many homeowner associations do not allow residents to rip out their lawns, meaning some people could not participate in the program even if they wanted to.

All of this creates unfairness if rates are raised to help a relatively small portion of the community convert their landscaping. And this doesn't even get into fairness concerns for the many people who have already switched to xeriscaping without any outside financial help.

If the people in Reno-Sparks really want to push the idea of "cash for grass," they could lobby TMWA's board of directors. This is the public body that would create such a policy. It is made up of members of the Reno and Sparks city councils and the Washoe County Commission.

But expect an uphill battle — rate hikes that don't benefit everybody are not popular

RGJ water audit suggests some needed changes

 Jeff DeLong, RGJ 5:54 a.m. PDT August 5, 2015

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Truckee Meadows Water Authority customer service manager Andy Gebhardt, left, discusses the irrigation system schedule with RGJ maintenance technician Tony Zarate while conducting a water audit of the Reno Gazette-Journal property in Reno on Aug. 4, 2015.(Photo: Jason Bean/RGJ)Buy Photo

With regards to water use during a summer of drought, the Reno Gazette-Journal can make a few improvements at home.

That was the essential conclusion of officials from the Truckee Meadows Water Authority, who on Tuesday conducted a water-use audit of the RGJ's building. As the RGJ publishes a series of articles investigating the drought's effects and water use in the Reno area, we asked experts from our water provider to tell us how we are doing.

RGJ receives water audit from TMWA Jason Bean

While results were positive overall, the RGJ could save water by making some minor adjustments in irrigation practices and should fix a slow leak in a water line at the rear of the building, said Andy Gebhardt, manager of customer services for the water authority.

Gebhardt and a colleague spent about an hour on the RGJ's grounds. They took a look at the building's water meter, which tracks water use and bills accordingly. Accompanied by technician Tony Zarate of facilities maintenance company ABM, they looked at the irrigation system used to water the property's sizable lawn and at how water is used in printing operations. They inspected the RGJ's 11 bathrooms on the lookout for leaking toilets, which can waste a surprising amount of water.

"The inside of the building is tight. I think everything is good," Gebhardt said.

But inside water use at the RGJ is typically about 60,000 gallons per month, or 720,000 gallons per year. With a total of 4.9 million gallons consumed in 2014, that's obviously only a part of the picture. And if everything is OK inside, are there issues on the outside where the most water is actually used?

Some, Gebhardt said.

One was located at the building's rear parking lot, where a leaking water line is allowing water to seep to the surface and trickle across a stretch of pavement.

"It's a slow leak but it is a leak," Gebhardt said. "All leaks should be fixed no matter what."

More important, Gebhardt said, are irrigation practices at the RGJ. While the system functions properly, he said the RGJ is probably using more water than necessary to irrigate nearly 2 acres

of turf surrounding the building. Optimum irrigation practices allow for 30 gallons per square foot of turf per irrigation season and records suggest the RGJ is watering more than that, Gebhardt said.

How to cut back? Simple, Gebhardt said. The RGJ currently waters twice a day during its three assigned watering days, with cycles lasting 15 to 20 minutes depending on the area. He suggests adding a third watering period but cutting back to 10-minute cycles, for a 25 percent overall reduction.

“The lawn won’t know the difference,” Gebhardt said.

John Maher, president and publisher of the RGJ, said the company will follow up on the authority’s recommendations and suggested others take advantage of its free audit program.

“Based on the TMWA audit, we intend to work with our landscape services provider to follow up on these recommendations, and we’ll investigate costs to perform the water line repair,” Maher said. “We appreciate the services that TMWA provides. Based on our experience, I recommend that others pursue a water audit as a means to reduce water consumption.”

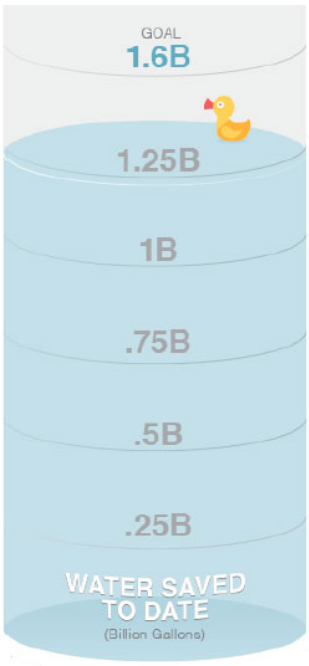
Optimum water use at the RGJ should be about 3.3 million gallons per year, Gebhardt said.

Even before any suggested changes are made in the wake of Tuesday’s audit, the RGJ was on track to reduce water consumption from the levels of 4.9 million last year. Changes already made to irrigation practices had dropped water consumption during the first seven months of 2015 by about 200,000 gallons compared to the same period last year, Gebhardt said.

“You’re making the effort. You have cut back,” he said.

Water Supply Report: Customers Reduce Use by 16% in July

Posted: Aug 06, 2015 3:20 PM PDT Thursday, August 6, 2015 6:20 PM EDT*Updated: Aug 06, 2015 3:20 PM PDT* Thursday, August 6, 2015 6:20 PM EDT



From Truckee Meadows Water Authority:

Customer response to a request for a voluntary 10% reduction in water use has again resulted in good news for the local water supply. Water demand for Truckee Meadows Water Authority (TMWA) for the month of July was 16% lower compared to July 2013 (2013 is the baseline-use year)*.

Factoring in May and June demand figures (down 19% in May and 10.5% in June), approximately 3,853 acre-feet (1.25 billion gallons) of water has been saved by TMWA customers over the first three months of TMWA's conservation campaign which began in May. "The cooperation and responsiveness of our community during this time of drought has been tremendous," said Mark Foree, TMWA's general manager. "Because of the daily attention our customers are paying to their water use, we are well on our way to achieving our 2015 target goal of saving 5,000 acre-feet of water. Every gallon saved now is held in upstream reservoirs, should we need it next year," Foree added.

The reduction in water use shows that TMWA customers are mindful of the drought and are doing their part by reducing water use and turning off sprinklers when it's raining.

*Note: TMWA's current request, that all customers reduce their water use by at least 10%, is measured against a 2013 use baseline. This is because 2013 was the last year TMWA operated normally and did not ask customers to conserve water. Those customers who reduced their use by 10% in 2014 have asked if they need to save an additional 10%. The answer is no. They should just keep doing what they are doing.

From Truckee Meadows Water Authority

Our weather: El Nino meets 'the blob' — but will it help?

 Jeff DeLong, RGJ 9:16 a.m. PDT August 11, 2015

Wind-driven waves from a powerful Pacific storm crash against oceanfront homes along the Pacific Coast Highway in Malibu, Calif., during an El Nino storm in the winter of 1997-98. Scientists are on the watch for how El Nino, combined with warm “blobs” of water in the Pacific might impact the coming winter.(Photo: AP file)

There's El Nino, and then there's "the blob."

Both are phenomena associated with warm water in the Pacific. Both could have some impact on the weather, including building hopes for a big winter that might help pull the West out of protracted drought.

No one really knows.

"This is a little bit of an unprecedented situation," said Kelly Redmond, deputy director of the Western Regional Climate Center in Reno. "It's like two sets of dice that influence the atmosphere. But do these sets of dice have a string connecting them?"

El Nino is characterized by warmer-than-normal surface water temperatures in the equatorial Pacific stretching from the coast of Peru to west of the international dateline. After a year of anticipation, conditions came together last March for an El Nino to be officially declared, with scientists now saying there's a better than 90 percent chance the condition will stick around into next winter.

Signs suggest this El Nino could be a strong one and while there is by no means any guarantee, strong El Ninos have produced some big winters for the Reno-Tahoe area in the past, including the blockbuster winters of 1997-98 and 1982-83.

Back to the blob, which emerged off the coast of the Pacific Northwest late in 2013, according to Washington State climatologist Nick Bond.

"We started to notice a big, almost circular mass of water that just didn't cool off as much as it usually did, (and) by spring of 2014 it was warmer than we had ever seen it for that time of year," Bond said.

The mass of water was 1,000 miles long, 1,000 miles wide and 300 feet deep, with temperatures 2 to 7 degrees above normal. Bond dubbed it "the blob."

In 2014, more blobs emerged. There are now three of the things — the orginal one off the Pacific Northwest, another off the coast of Southern California and Baja California, and a third in the Bering Sea.

"The whole pattern is, we really have warmer-than-normal temperatures in the Pacific all the way from the Gulf of Alaska down to the El Nino area," Redmond said, describing the blobs as "quite remarkable in their staying power."

Blobs of warm ocean water have occurred in the Pacific before but these ones are unusual, he said.

"These blobs are some of the biggest ones we've seen in the last 50 years. They are really outstanding," Redmond said.

The warm water is believed to be associated with types of fish normally not seen north of Baja being found off the coast of Oregon, Redmond said.

And an emerging question is how El Nino and the blobs might interact to influence the coming winter with the western drought, now in its fourth year, heightening the stakes.

"What would the blobs do with no El Nino and what would El Nino do with no blobs and what happens when we have the blobs and an El Nino," Redmond asks. "We've had very few cases in the past when we had both of these things going on at the same time.

"They could accentuate each other or subtract from each other. They could multiply each other or they might cancel each other. The jury is out."

Key Study Launched to Understand Increased Algae Growth in Lake Tahoe

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Algae along nearshore at Chimney Beach, Lake Tahoe. (High resolution image)

LAKE TAHOE, Nev.The U.S. Geological Survey and the University of Nevada, Reno, will study the cause of eutrophication, or increased algae growth, along the nearshore of Lake Tahoe. Supported by California's Lahontan Water Quality Control Board, the investigation is in response to widespread concerns with water quality and ecological degradation of the lake's nearshore environment.

"This study will provide important information on the most influential variables controlling the growth of algae in Lake

Tahoe," said USGS Scientist Rich Niswonger. "It could ultimately provide the context for managing activities that degrade water quality in the Tahoe Basin."

Over the last decade, nearshore periphyton growth, a form of algae, has increased dramatically in Lake Tahoe. The lake's fragile environment continues to be threatened by a changing climate and introductions of invasive species. The study will investigate the relationship between algae growth and sources of nutrients on the west shore of Lake Tahoe, north of Ward Creek.

"Periphyton is a water quality problem and a public health risk to those who recreate near and in Lake Tahoe," said Patty Kouyoumdjian, executive officer for the Lahontan Regional Water Board. "Once the investigation is done, we can develop regulatory and management tools to reduce periphyton growth in the nearshore of Lake Tahoe."

The investigation is a key component of the Lahontan Water Board's Lake Tahoe Nearshore Water Quality Protection Plan. The plan was released in 2014 to help guide management of Lake Tahoe and establish nearshore water quality protection policies. The 10-month algae study will sample nutrient concentrations and other important chemical and physical parameters at five sections of the lake. The findings will be used to distinguish whether elevated nutrient concentrations, a cause of increased algae growth, are from Ward Creek spring runoff, other on-shore locations, groundwater or from lake upwelling.

"This is a unique study," said Sudeep Chandra, biologist and director of the Aquatics Ecosystems Analysis Laboratory at the University of Nevada, Reno. "We're not just monitoring the lake, but looking at the mechanisms that are causing the algae to increase, using automated oxygen sensors provided by USGS."

This effort to help protect the Lake Tahoe nearshore environment is being funded with $200,000 from the Lahontan Water Board and $200,000 from the USGS in matching federal funds. The USGS and the University of Nevada, Reno, will produce a final report of the findings in the summer of 2017.

The mission of the USGS Nevada Water Science Center is to provide sound, technical, and unbiased research and monitoring

of water resources in the State of Nevada. Additional information can be found on the Nevada Water Science Center website.

The Lahontan Regional Water Quality Control Board's mission is to preserve, protect, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

The University of Nevada, Reno's Aquatic Ecosystems Analysis Laboratory conducts limnological studies related to the restoration or conservation of aquatic ecosystems, recognizing that science is critical in developing long-term and sustainable public policy. The lab works closely with local, state, federal, tribal and non-profit organizations to assist them in creating management strategies for their projects.

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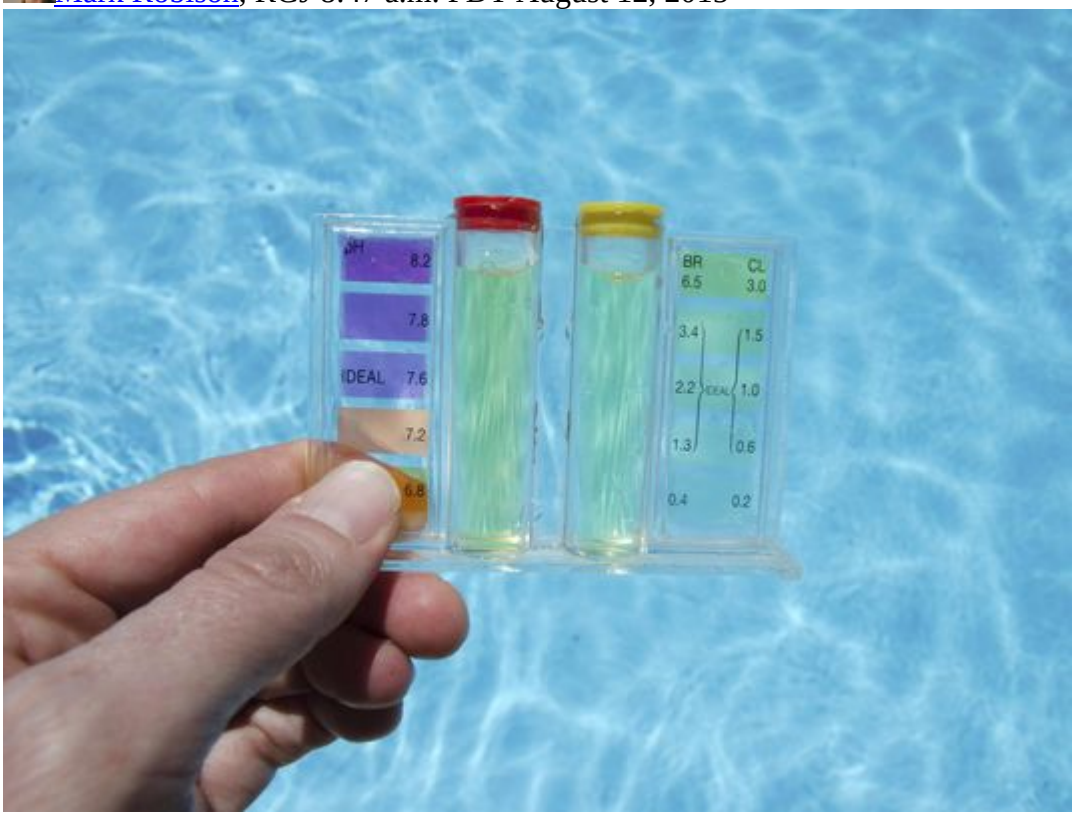
Ask the RGJ: Is water being wasted at apartment pool?

 Mark Robison, RGJ 8:47 a.m. PDT August 12, 2015



If cyanuric acid levels get too high in commercial swimming pools, the health department can close them.(Photo: Getty Images/iStockphoto)

A reader wrote in concerned about water seeming to be wasted because of the swimming pool at his apartment complex.

A related question of likely interest in drought-parched Reno-Sparks is whether anything can be done to decrease the need to drain swimming pools.

Short answer: Pools don't need to be drained if the chemicals are handled properly. Using popular chlorine tablets can increase the need to drain swimming pools, but alternatives exist that can require less water be used. The apartment complex in question has partially drained its pool to correct a chemical imbalance.

Full question

Robert Baker commented on Facebook about an RGJ drought story: “Why don't you do some worthy news like how my apartment complex at Sandpebble Spanish Oaks empties their pool every week and fills it again? Keep calling the water authority and continue to do nothing about it.”

Full response

A representative of Kromer Investments, the property management company for Sandpebble Spanish Oaks, suggested I talk to the Truckee Meadows Water Authority and Lee Joseph, a Reno pool company on South Wells Avenue that services some Kromer properties.

Lee Joseph general manager Judy Hesterley said her company tested water from the Sandpebble Spanish Oaks apartment complex’s pool and urged a full or partial drain be done to fix a chemical imbalance.

RENO GAZETTE JOURNAL

Ask the RGJ: Bath vs. shower? Car wash vs. hose?

Andy Gebhardt, TMWA’s manager of customer service, said via email: “In checking through our records on Conservation Hotline complaints, two calls came in regarding the pool at Sandpebble Spanish Oaks. We followed up on both complaints by contacting the apartment complex manager. They explained that they were having issues balancing the chemical levels in the pool, which required partial draining.”

A question of wider concern is how often apartment complexes, motels and other commercial pools need to be drained — and if anything can be done to decrease how often such water waste happens.

Hesterley said swimming pool water potentially never needs to be drained, either fully or partially, if the chemicals to treat the water are handled properly.

But here in Northern Nevada, she said, pools generally aren’t kept open year round so people drain them part way and put chemicals in to keep the water from turning green over the winter.

“This year because we had a warm winter, many pools had a tremendous amount of green water,” she said. “The pools were unsavable. It would cost more in chemicals (to treat the bad water) than people would be willing to spend.”

These pools had to be completely drained and filled from scratch.

Liquid chlorine, bromine and salt can also be used. If these are handled right, “there’s no reason you should have to change the water unless something major happened like the pumps went down and the water turned green,” Kennedy said.

Chlorine tablets are cheaper so people tend to use these. Lee Joseph urges its customers switch to bromine because the chlorine tablets create a byproduct called cyanuric acid that, when it builds up, can cause slime on the sides of pools, diminish the effectiveness of the chlorine and affect the water’s clarity.

RENO GAZETTE JOURNAL

Ask the RGJ: Why no ‘cash for grass’ in Reno?

If a health inspector happens to inspect a pool when the cyanuric acid level has risen high enough, the pool can be closed.

Phil Ulibarri of the Washoe County Health Department said via email: “Cyanuric acid is a component of the chlorine tablets and is used as an ultraviolet stabilizer in outdoor pools and spas to help shield the free available chlorine in the water (the sanitizing component) from premature destruction by ultraviolet light from the sun. There is a maximum allowed limit of 100 (parts per million) by regulation. Levels in excess of this may cause severe skin irritation. Once cyanuric is above approximately 50ppm, it will begin to stick to the plaster and will re-release back into the water when drained and refilled. Therefore, to sufficiently reduce levels above 50ppm, the plaster must be brushed or scrubbed just prior to draining.”

A “certified pool operator” is responsible for determining when a pool should be drained, Ulibarri said. If the operator is not aware that the cyanuric acid sticks to the walls and comes back if not scrubbed off *before* partial draining, this may cause pool operators to drain more often than is needed.

Memories of “Caddyshack” (video clip at bottom) may come to mind for those reading this next quote from Ulibarri: “Other reasons for draining may be ... a fecal accident in which the pool would typically be closed for a period of time along with chemical shocking and/or complete draining.”

Perhaps “fecal accidents” could be a subject of their own story.

The bottom line is TMWA looked into the reader’s complaint and found that the Sandpebble Spanish Oaks pool was being partially drained in order to correct a potentially dangerous chemical imbalance. It is unclear how often this happened.

The frequency of such drainings can often be decreased by switching away from chlorine tablets