Innovation helps keep harmful stormwater from Tahoe

By Zack Bradford, Tahoe In Depth

Winter snow is a welcome sight at Lake Tahoe, particularly since four of the last five winters were exceptionally dry. But as much as we all enjoy skiing or riding and as much as our towns depend on winter tourists to keep our economy going, there is a hidden cost to a return to winter: stormwater, and the pollution that it transports into Lake Tahoe.

Lake Tahoe is designated an outstanding national resource water by the U.S. Environmental Protection Agency, affording it protections that most lakes its size don't have. EPA, however, also lists Tahoe as "impaired" by fine sediment pollution and an excess of the nutrients nitrogen and phosphorus. Both are carried into Lake Tahoe when rain and snow washes off Tahoe's roads and parking lots. Unlike grains of sand, which sink, fine sediment particles – each smaller than the width of a human hair – remain suspended in the lake, reducing its clarity. Plants need nutrients to grow, but excessive nutrients fuel the growth of algae.

Under federal law, Tahoe's special status requires agencies in the basin to reduce the inputs of these contaminants and restore Lake Tahoe to its historic clarity. When Charles Goldman began dropping the Secchi disk in the lake in the 1950s, clarity reached over 100 feet in depth. It worsened over the decades, but for the past four years, the Tahoe Environmental Research Center's clarity measurements at the center of Tahoe have been better than any other year in the previous decade. It's no coincidence that these same four years were a record drought.



Many Tahoe agencies have begun to change the treatment they use to treat snowy roads. Illustration/League to Save Lake Tahoe

So, what can we expect when Tahoe again experiences above-average winters, with accompanying stormwater transporting these pollutants to the lake? Many agencies at Tahoe have been preparing for that scenario.

From engineered stormwater “infiltration basins” on the South Shore, to curb and gutter projects on the West Shore, agencies have been acting to reduce the amount of fine sediment coming off our urban streets, roads, and developments. But the biggest impact, perhaps, has been made by agencies modifying their road sanding practices.

Scientists have found that road traction abrasives, or road sands, are responsible for the vast majority of fine sediment ending up in Lake Tahoe. Road managers apply abrasives in the winter for public safety to provide traction for vehicles traveling on snowy roads. These traction materials are crushed

by our car tires and ground into clarity-degrading fine sediment.

Staff from state and local public works departments balance public safety and the environment by monitoring and analyzing storms, applying road salts at precise times, and spreading road sands in precise locations before temperatures drop. They also sweep up road sands after storms. The improvements they've made over the past decade have been challenging.

One major change has been to switch, over the past five years, from a material known as "volcanic cinders" to "Washoe sand." The cinders are a brittle volcanic rock that cars easily crush into an ash-like dust, while the sturdy grains of Washoe sands can withstand more abuse. Washed into a body of water, more of the finely crushed cinders remain suspended, while the larger and heavier grains of Washoe sand sink harmlessly to the bottom.

Research conducted by El Dorado County and Caltrans showed that switching to Washoe sand could reduce ultra-fine particles, those most responsible for clarity loss, by as much as 90 percent.

Agencies have also taken steps to improve efficiency in applying these road abrasives.

"Our drivers now focus on spot sanding at key intersections, steep areas, and critical public safety areas," said Jason Burke with the city of South Lake Tahoe. Caltrans now relies more heavily on weather forecasts, and has installed vehicle sensors to measure road temperature. Both Caltrans and El Dorado County have also begun treating roads with a brine solution, which lowers the freezing point of the road, as a potent ice-prevention step before storms arrive.

"The brine technology allows the county to prevent ice buildup, use less salt, and be strategic in placement of road sand," said Russ Wigart, stormwater coordinator for El Dorado

County.

South Lake Tahoe also engages in what Burke calls a “combined effort of refined sand application and enhanced street sweeping after storm events to recover traction materials as soon as feasible.” The city recently purchased new spreaders to enable the use of brine on city streets for the first time this winter.

“Brine use reduces the bounce and scatter typical when dropping dry sand onto the roadway,” said Burke, allowing the city to reduce the amount of sand it needs to apply by 30 percent.

Nevada public works officials are also using the best available technology, from road temperature sensors to high efficiency street sweepers, to combat the fine sediment runoff problem.

The results of some of these changes have been encouraging. Caltrans’ Sean Cross reports that “water quality monitoring and testing have shown reductions to fine sediment particles,” while Wigart said “the concentrations of fine sediments in urban runoff appear much cleaner.” The real impact though, may not be known for several years, as it takes time for sediment to reach the center of the lake where TERC takes its clarity readings.

So, what can community members like you do to protect Lake Tahoe?

Slow down when driving in winter conditions and bring your vehicle to the car wash more frequently to reduce the spread of roads sands trapped under your car. Residents and business owners can also use less salt, and encourage private snow removal companies to switch to Washoe sand instead of cinders.

Reducing the number of cars on the road can reduce the fine sediment pollution that threatens Lake Tahoe’s clarity.

Community members can help by carpooling, and riding the bus and ski shuttles. Little steps add up, and together our actions can help protect Lake Tahoe.

Zack Bradford is the natural resources manager for the League to Save Lake Tahoe. He manages Pipe Keepers, a community-based volunteer monitoring program that examines stormwater entering Lake Tahoe and its tributaries, and Eyes on the Lake, a volunteer program to help prevent the spread of aquatic invasive plants in Tahoe's waters. This article first appeared in ***Tahoe In Depth****.*

Sierra roads horrid, nasty weather not stopping

By Lake Tahoe News

Don't drive. That is the message being delivered by nearly every agency dealing with roads in and around Lake Tahoe.

This was the South Lake Tahoe's message on Jan. 4, "Stay home. If you really don't have to go out, don't. Even if you can drive well in the snow, not everyone else can. Don't tempt fate: If you don't have somewhere you have to be, watch the snow from indoors."

Caltrans has no estimate when Interstate 80 will open. It's been closed since Wednesday afternoon. Traffic was preventing snow removal teams from being able to clear the road.

Motorists using cable (ladder) chains may be turned around on Highway 267 at the Northstar and Kings Beach chain control checkpoints. Although cable chains are legal traction devices,

they’ve proven to be ineffective when attempting to drive over Brockway Summit during heavy snow storms, according to Caltrans.

All the summits have been having issues because of the wet snow. Not all drivers are prepared or know how to drive in the conditions.

With Kingsbury Grade closed for what could be weeks because of a sink hole, drivers have to go over Luther Pass or Spooner Summit.

It took Amanda Adams 1½ hours to get from Gardnerville to the Y on Wednesday night.

“There are multiple cars stopped on the pass, some are putting on chains in the road, others are parked without anyone inside the vehicle (maybe they are doing some back country skiing). The road condition isn’t horrible, just packed snow with a few areas of deep ruts. But they should have chain control check point in Hope Valley. There were a couple 2WD cars without chains or spinning out trying to go up the road,” she posted on *Lake Tahoe News’* Facebook page.

While it was mostly rain in South Lake Tahoe at lake level on Jan. 4, it had been snowing in Incline and there are reports of multiple feet of snow at the top of Kingsbury Grade.

Both state transportation agencies expect the delays to continue as the snow keeps falling.

The National Weather Service in Reno is predicting up to 2 feet of snow for summit passes and continued snowfall for the mountains and at lake level on Thursday. Whiteout conditions may occur.

An atmospheric river is headed toward Tahoe. Flooding is possible in the basin, with Douglas County already issuing a flood alert. The next major storm will arrive Saturday, with

the brunt coming Sunday and Monday.

The Weather Service warns, “A flood watch has been issued for the Sierra and western Nevada this weekend. Rising snow levels and the potential to receive 6-12 inches of rain in the Sierra will create serious flooding concerns. If you have interests near creeks, streams, rivers or flood prone areas now is the time to prepare.”

Most of the ski resorts are rejoicing about the snow, though some have had rain and avalanche danger is a huge concern.

“This storm has been incredible. Five feet of snow has piled up over the past couple of days, and it’s continuing to fall fast this afternoon,” said Mike Pierce, director of marketing at Mt. Rose Ski Tahoe, said in a statement. “This system and those forecast to come behind it are setting us up for an incredible winter season, and one of the snowiest Januarys in years.”

Snowy forecast balances sketchy water content



Frank Gehrke trudges through knee-deep snow Jan. 3 near Sierra-at-Tahoe to measure the water content. Photo/Kathryn Reed

By Kathryn Reed

PHILLIPS STATION – While the water content of the Sierra snowpack is below average for this time of year, the October rains have reservoirs in California higher than most Januarys, especially considering the state is coming out of five years of drought.

No one is saying the drought is over, but the current situation and short-term weather forecast have officials cautiously optimistic.

At the Jan. 3 snow survey on Highway 50 in the field near the entrance to Sierra-at-Tahoe the water content was 6 inches, which is 53 percent of average. Statewide, the average is 70 percent. This location is one of the lower ones in terms of

elevation. As anyone who lives in the Lake Tahoe area knows, the snow line until now has been much higher.

It doesn't matter if the snow comes all at once or trickles in. The important thing is that the spigot stays on.

"We don't get piddly storms, we get big dumps," Frank Gehrke, who does the snow survey for the state Department of Water Resources, said. "January, February, March – any one of those can produce record precipitation."

For part of December this swath of land was more dirt than snow; proving things can change quickly.

The importance of the snowpack is that it provides water for people and farms downstream mostly in the form of runoff in the spring that is kept in various reservoirs throughout the state.

Lake Shasta, California's largest surface reservoir, is at 118 percent of its historical average for January. This is a dramatic improvement from 2016 when it was at 50 percent of its average. Lake Oroville, the State Water Project's largest reservoir, is at 91 percent of its historical average, while a year ago it was at 47 percent.

The series of storms lined up to descend upon Tahoe will keep adding to what was measured on Tuesday. However, it's not the snow depth that matters, but the water content. What has been falling the last few days is super light, making for incredible powder days, but it does not pack as much water content.

Prescribed fire ops to resume in basin

If conditions are favorable, the North Lake Tahoe Fire Protection District and the U.S. Forest Service may continue prescribed fire operations on Jan. 3.

Operations may take place near Tahoe City, Kings Beach, Carnelian Bay, and Incline Village.

To receive prescribed fire notifications, send an email to pa_ltbmu@fs.fed.us.

Smoke from prescribed fire operations is normal and may continue for several days after an ignition depending on the project size and environmental conditions.

Adult hockey tournament benefits SLT team

There will be a 3-on-3 adult “pond” hockey tournament at the South Lake Tahoe ice rink on Jan. 7.

This is a benefit to support the Grizzlies youth hockey team.

There will be A, B and C divisions. Cost is $200 per team. The tournament is from 1-5pm.

Beer and pizza will be provided.

For more info, email rich@tahoearena.com.

Looking at Super Bowl pairings with betting buzz

By Case Keefer, Las Vegas Weekly

Many NFL bettors have gotten the best of sports books this season—the house's profit margins have declined, along with the overall handle. But gamblers have more work to do to send books into the offseason on a down note.

With the money it commands on an annual basis, the Super Bowl could pull casinos up. Bettors have wagered a record sum on the Super Bowl in three of the past four years, according to the Nevada Gaming Control Board, including the $132.5 million gambled on 2016's Super Bowl 50.

With 10 of 12 playoff spots clinched heading into the regular season's final week, it's time to start thinking about likely championship match ups. Odds on potential Super Bowl pairings aren't available locally, but these are the most probable match ups according to offshore sports books.

Read the whole story

Avalanche group's first Tahoe-area director speaks

out

By Benjamin Spillman, Reno Gazette-Journal

You might not know anything about Richard Bothwell.

But Bothwell knows things about you.

He knows that as a human you're prone to making bad decisions.

And if you like to play in the Sierra Nevada snow he knows how those bad decisions could get you killed in an avalanche.

"People who die in avalanches are not dumb people … they just made bad decisions," said Bothwell. "And usually they made bad decisions in the face of evidence telling them they were bad decisions."

Read the whole story

Heated necklace takes chill out of outdoor sports

By Chadd Cripet, Idaho Statesman

Jarid Davis was working in a ski shop in Whitefish, Mont., when he started using Christmas light ropes to warm himself – first by holding them, then by stringing them around his neck.

"I was pretty impressed," he said. "I thought, 'Wow, someone should do something like that.'"

That someone is South Lake Tahoe resident Davis, who is selling the Kozy Core – a heated necklace designed to warm the central part of the body. It runs off a power bank like the ones many people use to charge their phones.

Read the whole story

Feds' bird habitat plan isn't flying in Nevada

By Benjamin Spillman, Reno Gazette-Journal

A proposal from the Obama administration to withdraw nearly 10 million acres of western land from future hard rock mining to protect the greater sage grouse landed with a thud in Nevada on Thursday.

That's because state and federal officials are lining up behind their own vision for protecting both the upland game bird and the lucrative mining industry that drives local economies in the state's rural counties.

"Today's announcement does nothing to protect the greater sage grouse," said Gov. Brian Sandoval. "But (it) does cripple the mining and exploration industry."

Read the whole story

Cinder the bear in hibernation

By Ann McCreary, Methow Valley News

Cinder, the black bear that was badly burned in the 2014 Carlton Complex Fire, spent her second year in forests north of Leavenworth, Wash., and is now denned up for the winter not far from the site where she was released in June 2015.

Cinder was rescued by WDFW officials in French Creek in August 2014, about two weeks after the Carlton Complex swept through the valley. The bear cub was emaciated and unable to walk on severely burned paws.

She spent months in treatment at Lake Tahoe Wildlife Care.

Read the whole story