

NEWS CLIPS

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**Resource Conservation and Public
Outreach**

Organized by date

California braces for 'once-in-10-year' storm amid fears of flooding, avalanches, blizzards

LA Times 1/06/2017

Atmospheric rivers are key to California's rainfall.

California was bracing for an epic series of storms this weekend that could bring flooding, avalanches, blizzards and road closures.

Northern California is expected to be hit Saturday, Sunday, Tuesday and Wednesday.

Up to 12 inches of rain below 8,500 feet is expected, and massive amounts of snow — up to 6 feet — above that elevation. A fourth, colder storm two days behind will drop yet more heavy snow.

“It’s a once-in-10-year event,” said Zach Tolby, a meteorologist with the [National Weather Service](#) in Reno. “It’s the strongest storm we’ve seen in a long time, the kind of setup we look for to get significant flooding.”

The atmospheric river, or “Pineapple Express,” will be felt across much of California this weekend, though rains will be much heavier in the north than in the south.

“It’s going to be like buckets of water for a fairly sustained period of time,” Tolby said.

Wind gusts on mountain tops could top 130 mph in the Northern Sierra, which is typical, Tolby said. At lower elevations gusts could reach 30 or 40 mph, he said, “but that’s an average windy day for us.”

Tolby said the storm is packing the same wallop as an atmospheric river that hit Northern California a decade ago that caused \$300 million in damage, according to the [U.S. Geological Survey](#).



Fed by a westerly flow, the rain is forecast to continue in four counties through midmorning.

Angelenos may remember the 2005-06 storm because it was the first time it rained on the Rose Parade in 51 years. But Tolby, who lives in Lake Tahoe, remembers the storm differently.

“It was pretty wild. I was here in 2005 and it was definitely the hardest rain I’d ever seen. It didn’t stop for 24 hours,” he said.

This weekend’s storm could bring 36 straight hours of heavy rain from Mammoth Mountain to Susanville, Tolby said.

Below clear blue skies Friday, people in the snow-shrouded ski town of Mammoth Lakes were gleeful about the prospect of several more feet of snow.

Yet some also worried that the big, wet storm could dump so much rain and snow that it could shut down some ski runs or roads.

In preparation, snowplows were scraping icy roadways. Excavators and snowblower operators stayed busy clearing and moving huge piles of snow. Some cars sat abandoned on the roadside or at gas stations, covered with thick blankets of snow from the most recent storm.

Outside Kittredge Sports, store manager Terry Lucian took advantage of the clear weather to shovel away some of the mounds of snow that had built up outside the entrance.

“If the storm comes in as wet as they’re talking about, it’ll make for a big mess,” the 60-year-old said as he scooped icy snow off the entrance to the A-frame building.

Lucian said recent storms definitely helped to boost business, but he worried some skiers traveling to the area this weekend could be in for disappointment if storm conditions worsen to the point that they shut down parts of Mammoth Mountain.

“Everybody wants the snow, they just don’t want it while they’re here,” the 39-year Mammoth resident said. “It’ll be a rough couple of days, but we need the water. So it’s going to be OK.”

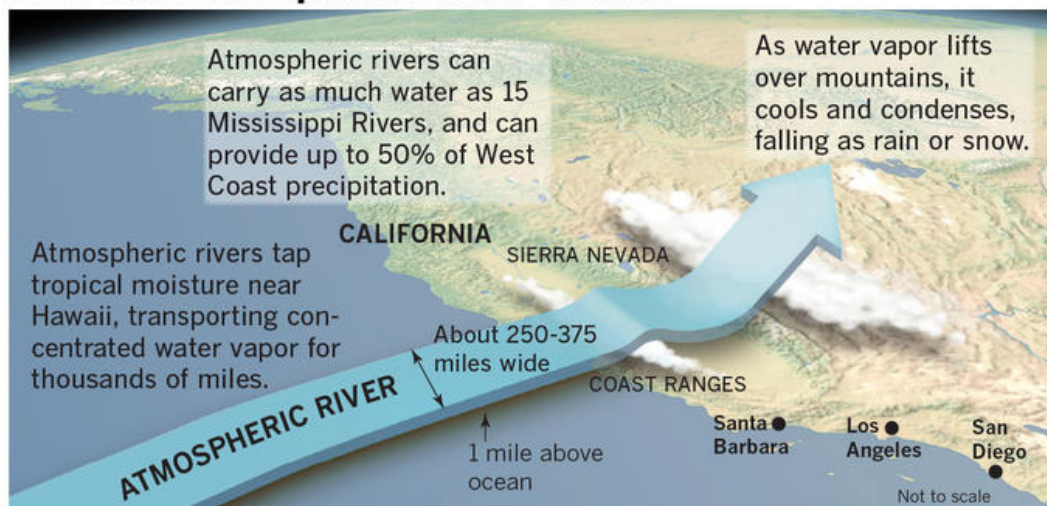
Up north, South Lake Tahoe Mayor Austin Sass urged residents to prepare for the storm.

“If at all possible, get up on your roof and get off whatever snow you have on there because the moisture combined with the snow will be extremely heavy and we’re worried about the integrity of your roof structure,” Sass said in a Twitter message Friday.

Do not go outside Sunday or Monday, he told his constituents.

“When the snow comes mixed with the rain it’s going to be an absolute mess. So whatever you can do stay home and most importantly, stay safe,” he said.

How an atmospheric river works

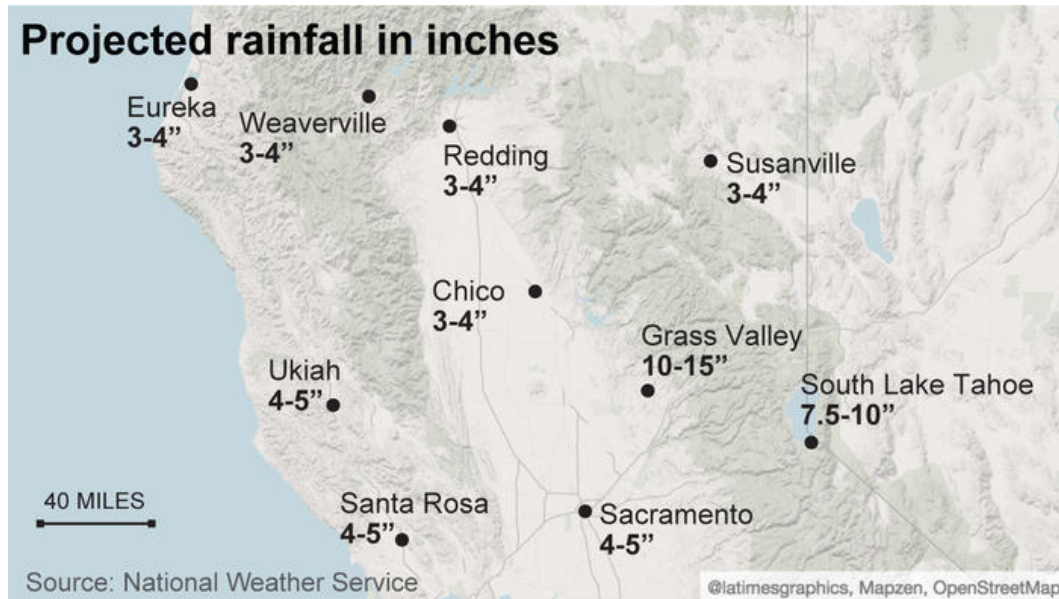


Sources: National Weather Service, Scientific American

@latimesgraphics

In the mountains, the rain could pile onto the snow and trigger early snow melts, feeding extra water into watersheds already swollen from a week of rain.

“A combination of intense rain on saturated soils will lead to excessive runoff,” the National Weather Service said in its weekend forecast.



The Carson, Truckee and Susan rivers are all expected to become overwhelmed, and the nearby communities may become increasingly isolated if the deluge triggers mud flows and rock slides.

Weather officials issued a flood watch from Saturday to Wednesday that covers much of Northern California and extends down through the Sierra to Tehachapi.

In Mono County, authorities offered sandbags to residents in preparation for the rain. In [Yosemite National Park](#), authorities were cautioning visitors to check with the park before heading in — the weekend storm could close Yosemite if the Merced River floods, they said.

The town of Colfax in the Sierra Nevadas, known as the turnaround town, is ready.

"It's something we prepare for — it goes with the snow, hand in hand," said Wes Heathcock, community services director for the tiny Placer County town that has perhaps one of the most used Interstate 80 on/off ramps in Northern California when it is a snow day.

When snow conditions become too treacherous, the [California Highway Patrol](#) typically closes Interstate 80 at Colfax, as it did Wednesday during a snowstorm that also brought a car-semi collision. Perched at an elevation of 2,400 feet, Colfax bills itself as "above the fog, below the snow."

The options for stranded travelers are slim in the Old West railroad town, whose most famous mention is a passing reference in Jules Verne's "Around the World in 80 Days." Even Phileas Fogg did not stop.

There is a Starbucks and a single motel.

"They're welcome to spend some tax money in Colfax, but generally you'll see they'll trickle back down, try to locate hotels a little closer to the [Sacramento] Valley," Heathcock said.

Colfax gears up for the die-hards, travelers who believe the solution to snow-blocked passes is to find another route to the same location.

"We all have this wonderful tool called GPS now," Heathcock said.

From Colfax, California Highway 174 makes a long northerly loop to the narrow, hairpin turns of Highway 20, eventually depositing drivers into the thick. They hit Interstate 80 at Yuba Pass, just before Donner Summit.

During Wednesday's storm, the city's public works crew joined the sheriff and California Highway Patrol to stand along that road and ward off drivers seeking the bypass.

Wednesday's storm dropped up to 2 feet of snow in less than 24 hours in the Tahoe basin, at times coming down at more than 2 inches an hour.

The Sierra Avalanche Center reported a slight improvement in backcountry conditions. The risk of avalanche was lowered to "considerable" even as the threat increased of historically large avalanches caused by slabs of snowpack as thick as 8 feet above a weak layer of ice laid down by a mid-December rain.

Near Lake Tahoe on Thursday, two skiers were caught in an avalanche that closed a local highway. But they were not injured, officials said.

Sierra residents are preparing for a third onslaught over the weekend, bringing up to 12 inches of rain below 8,500 feet, and more snow above that. A fourth storm system is forecast to roll across Northern California two days after that.

After the weekend storm, another rain-making system is expected to hit Northern California on Tuesday.

The storm moving through Southern California was significantly smaller than the one in the north. But it still caused problems.

Rain-slicked roads were clogged with commuters after a big rig jackknifed on the eastbound 60 Freeway in East Los Angeles, forcing authorities to shut down five lanes. In Burbank, several lanes were blocked after a semi-truck jackknifed across north and southbound lanes of the 5 Freeway.

By midmorning, firefighters rescued a man who was stranded on an island of branches and brush in the rain-swollen Los Angeles River near Fletcher Drive in Silver Lake, said Brian Humphrey, a spokesman for the [Los Angeles Fire Department](#).

Though the rain subsided Thursday afternoon, the problems kept coming. Crews were forced to temporarily close the northbound 710 Freeway north of the 5 Freeway to replace concrete slabs damaged by the weather, the California Highway Patrol said. Traffic backed up for seven miles, and the closure lasted more than four hours.

For all the problems the storms may cause, it will bring more good news for California's six-year drought. Officials have said steady rain in Northern California the last few months has filled reservoirs and increased the once-anemic snowpack.

They emphasize the storms won't end [the drought](#). But if the rains keep up for spring, they could make a major dent.

UPDATES:

10:50 a.m. Jan . 6: This article was updated with comments from Sierra Nevada residents.

7:45 a.m. Jan. 6: This article was updated with new forecast details.

9:25 p.m.: This article was updated with information on the flood watch.

4:20 p.m. This post was updated with information on California's drought.

3:11 p.m. This post was updated with information about L.A. rains.

2:10 p.m.: This post was updated with maps and updated forecast information.

This post was originally published at 12:20 p.m. Jan. 5.

How California went from drought to dangerous rain and snow

By [Paige St. John](#), [Joseph Serna](#) and [Shelby Grad](#)*Contact Reporters*
LA Times 1/06/2017

After years of dry conditions, California [is getting its winter back](#).

A series of storms over the last month have dumped feet of snow and rain in some parts of Northern California. And Southern California had its wettest December in several years.

Heavier precipitation in the north of the state [has slowly been easing the drought](#), though it is not over.

Storms over the next few days are expected to continue this trend but also bring dangers.

Northern California is expected to be hit Saturday and Sunday, then again Tuesday and Wednesday.

Up to 12 inches of rain is expected below 8,500 feet, and massive amounts of snow — up to 6 feet — above that elevation in the first wave. A colder storm two days behind will drop yet more heavy snow.

Melted snow provides 30% of the state's water as it flows into streams, rivers and reservoirs over the spring and summer.

The conditions haven't added up to a drought-buster quite yet. But officials said that if the wet conditions extend into the spring, 2017 could prove a turning point for the epic dry spell.

"Generally speaking, to get out of [the drought](#) California would need to establish a trend of above-average snow-water content, above-average storage in reservoirs and above-average precipitation," Doug Carlson, a spokesman for the state Department of Water Resources, said earlier this week. "We're on a great trend. We'd like to see it all year."

The Sierra Nevada

Several days of solid snowfall have left feet of snow in the Sierra Nevada and created a winter wonderland from the Sacramento foothills to Reno. There have been some road closures and at least one avalanche that trapped two skiers (neither were hurt). But the weekend storms are expected to cause more problems.

Mammoth Lakes

The eastern Sierra Nevada has been hard hit this week by snow, luring skiers. So far this season, some parts of the region have gotten 145 inches of snow.

Yosemite National Park

Officials have said they might close the park this weekend depending on snow conditions created by the arriving storms.

Rivers

Officials have warned of potential flooding from the weekend storms. Two places of concern: the Truckee River and American River.

Southern California

The region had less rain than the north, but there were steady shows Thursday.

Southern California will see partly cloudy skies for most of the weekend, with rain likely Sunday night and into Monday. Heavy rain could occur along the Central Coast.

Editorial

Neither snow nor rain nor sleet nor hail can end California's drought? Really?



Snow-covered peaks on the San Gabriel mountains from recent storms frame the skyline of downtown Los Angeles on Dec. 27. (Eugene Garcia / EPA)

The Times Editorial Board
LA Times 1/06/2016

OK, so let's get this straight: California is soaked, Los Angeles had its wettest December in six years, the new year's first storm is making way for a second with a third due over the weekend, roads are closed due to flooding, ski resorts at Mammoth in the Eastern Sierra are expecting 20 feet of snow, skiers are being warned of avalanche conditions, reservoirs are refilling — and yet we still can't put our drought and all those emergency conservation efforts in the rearview mirror?

No, we can't. Despite all that December rain and snow, the year's first official measurement found that the water in the crucial Sierra snowpack hovers at around two-thirds of the historical average for early January.

It's only natural to think of a drought in its most literal sense: Too little water falling from the sky. Or rather, the same number of storms producing the same amount of water but in the wrong places — Texas, for example, instead of California.

That has been the story over nearly a decade of drought, broken only by a wet winter in 2010. Last year's El Niño brought rain and snow to the northern part of the state but was a bust in the south.

As a practical matter, though, the state's water situation must be measured in terms of geography and temperature as well as precipitation. Winter storms move in from the Pacific and drop rain until they hit the Sierra Nevada and move up the mountains. The higher they get in elevation, the colder the air gets, dropping up to five degrees for every 1,000 feet. The climate on mountain peaks is comparable to the Arctic. Storms that push high enough up the mountains will drop their water as snow.

That's important, because the Sierra snowpack is by far the state's largest "reservoir." It's generally at its biggest by the end of March. Then, at least through much of the 20th century and into the 21st — it steadily releases its water into streams and rivers with rising spring and summer temperatures, exactly when it is needed to irrigate crops and quench the thirst of urban dwellers.

But if the storms aren't cold enough to begin with, or if the mountain air with which they collide is too warm, the water may come down as rain instead of snow. Or if spring and summer come too early, the snowpack will melt too fast. In either case that means too much water coming all at once, and at the wrong time. Instead of a steady flow to fields, homes and reservoirs, we will have floods.

Scientists are cautious about attributing any particular season's apparent anomalies to global climate change, but they also note an unmistakable increase in temperature in recent years. Plant and animal life once at home in the foothills are retreating up the mountain slopes along with the cooler temperatures. It may still be Arctic-like at the summit, but the Arctic itself is warmer. Just as the icepack at the top of the world is endangered, so is the Sierra snowpack — even if California's winter storm pattern is back to stay.

So should we build more dams to replace the shrinking snowpack? New dams up and down the state would yield only a tiny fraction of the water held in Sierra snow, and besides, most viable sites already have been dammed. One or two dams might help recharge the state's depleted groundwater.

The Sierra Nevada rises higher, and therefore colder, in the southern part of the range, where the snowpack could survive. That could make the water that flows northward from that part of the Sierra through the San Joaquin River and its tributaries more important than ever for migrating fish and the health of the fragile Sacramento-San Joaquin River Delta, which supplies much of the state's irrigation and drinking water. But the San Joaquin currently runs dry much of the year due to excessive diversions to

upstream dams. A legal settlement to restore it is under threat not just by [the drought](#) but by interests with designs on the water before it makes its way to the Delta.

It's complicated. Even with the return of rain and snow, California has to rethink its water use. The drought may finally be skulking away. But our water challenges are here to stay.

More rain to soak soggy county

'Atmospheric river' fuels state storms

STAFF AND WIRE REPORTS
Ventura County Star 1/06/2017



The Carmel River breaks through the sand bar and flows to the bay Thursday in Carmel. An 'atmospheric river' weather system dumped rain and snow on California Thursday.
ASSOCIATED PRESS

An 'atmospheric river' weather system continued to bring light rain to Ventura County on Thursday during the area's first extended storm of 2017 — and more is ahead.

According to the Ventura County Watershed Protection District, multiple locations in the county have seen rain totals of an inch or more since Wednesday morning.

Oxnard, Saticoy and Ventura, for example, each had received 1.29, 1.17 and 1.19 inches, respectively, as of Thursday night. Camarillo and Port Hueneme followed close behind with over 0.9 inch each.

On the heels of the rain that's fallen during the week, forecasters said another, stronger, plume of moisture from the Pacific Ocean will slam the state during the weekend.

Scott Sukup, a meteorologist with the National Weather Service in Oxnard, said although Friday is predicted to be dry, rain is expected to return Saturday and last into the early parts of next week. Monday will see the hardest rainfall from a system that could provide half an inch to an inch of rain, Sukup said.

The storm system will bring a lot of rain in a short amount of time, he said.

The storm systems are results of an 'atmospheric river' — a long and narrow region of the atmosphere that horizontally transports moisture out of the tropics, according to the National Oceanic and Atmospheric Administration. An atmospheric river that brings moisture to the West Coast from near Hawaii is sometimes called a 'Pineapple Express.'

The first system brought heavy snow in the Sierra Nevada, where the Mammoth Mountain ski resort reported accumulations ranging from 44 inches to 7 feet in 1 1/2 days. The snowfall closed mountain routes or forced chain and snow tire requirements.

Torrential rain fell in some areas, including parts of Tulare and Kern counties, where flashflood warnings were in effect after as much as 9 inches of rain fell, the National Weather Service said. On the Central Coast, more than 8 inches of rain fell at Rocky Butte in San Luis Obispo County. Rock slides closed Highway 1 from 11 miles north of San Simeon to about 4 miles south of Big Sur, the California Department of Transportation said. Rainfall amounts across most of Southern California were much more modest but contributed to continuing relief after five years of drought. Hillsides covered in long-dead brush have turned from brown to green as January rains follow a wet December.

This week's second, wetter, atmospheric river is expected to bring heavy snow to the Sierra Nevada above 9,000 feet and heavy rain in the Sierra and foothills below 8,000 feet. The highest elevations of the Sierra can expect 3 feet to 6 feet of snow and some locations could get 8 feet, the weather agency said. Forecasters said potential hazards could include flash flooding, mudslides, debris flows near recent wildfire burn scars and urban and small stream flooding in the San Joaquin Valley. 'It cannot be emphasized enough that the forecast amounts of rain will cause extreme flooding for the Sierra, foothills and adjacent lower elevations,' the Hanford weather office wrote. 'Yosemite Park has the potential for a major flood as well as most other locations along rivers and streams in the Central California Interior.' The National Park Service said visitors should be aware that Yosemite might close for several days due to predictions of significant rainfall and the Merced River rising well above flood stages. A flood in January 1997 cause so much damage to roads, campgrounds, lodging and utilities that the park was closed until the following March.



Los Angeles County Fire Department swiftwater rescue team members come to the aid of a man stranded in the Los Angeles River on Thursday. ASSOCIATED PRESS

Homeowners, HOA clash over landscape rules

Dispute goes to court

By Rob McCarthy
Special to The Acorn



STANDING THEIR GROUND— Carole and Richard DeProspero are in a legal battle with their HOA over their decision to install crushed-rock landscape in front of their home. They have been fined between \$250 and \$500 a month for a year because the HOA says they violated rules about how front yards should look. MICHAEL COONS/Acorn Newspapers

Richard and Carole DeProspero say they wanted to curb their outdoor water use in light of the drought, not pick a costly fight with their homeowners association.

And yet that's where they've found themselves—headed to court to ask a judge to relieve them of thousands of dollars in fines levied by the Westlake Ranch Property Owners Association over their crushed-rock-laden front yard, arguing that a recent state law protects their landscape decision.

Pre-drought HOA rules are clashing with new state-imposed water conservation measures, which means a judge ruling in favor of the DeProspos could be setting a legal precedent, said Southwestern Law School professor Roman Hoyos.



ROCKY ROAD AHEAD—The DeProspos' drought-tolerant landscape has met with disapproval from the Westlake Ranch Property Owners Association. MICHAEL COONS/Acorn Newspapers

Under existing property law, a court could terminate or modify an HOA's rule book if the conditions within the community have changed so much that the rule isn't deemed beneficial anymore, the property and land-use professor told *The Acorn*.

"I haven't come across any cases that discuss the impact of climate change on this doctrine. . . . If a plaintiff has the time and money, it's a question worth pursuing," Hoyos said.

Since January, when the DeProspos decided to tear up the turf in front of their Mesa Ridge Avenue home and install a flat-gray landscape, they've been fined between \$250 and \$500 a month by the HOA for violating longstanding rules about how front yards should look.

Jeffrey Beaumont, the attorney defending the Westlake Ranch Property Owners Association against the lawsuit, said the association is not opposed to drought-tolerant landscaping or native plants, just the DeProspos' particular use of stone.

"This is about the aesthetics," Beaumont said. "From our perspective, it's more about living in a community that has elected to govern themselves and to agree to certain requirements as far as exterior improvements."

As part of their defense, the DeProspos are citing the City of Thousand Oaks' water conservation rules as well as Assembly Bill 2104, otherwise known as the Brown is Beautiful Act.

Signed into law by Gov. Jerry Brown in 2014, AB 2104 says that a community's guidelines can't be enforced if they forbid water-conservation measures such as installing drought-tolerant plants or artificial turf, or if they require that lawns be watered.

"The question now for the courts comes down to whether an HOA can attempt to enforce guidelines that limit a resident's ability to comply with state and local ordinances," Richard DeProspos said.

Beaumont doesn't think the doesn't think the homeowners' defense holds water.

The Westlake Ranch community encourages homeowners to install and use water-efficient plants. And the attorney said the association's bylaws comply with AB 2104 because the bill's intent is that residents shouldn't be forced to maintain their lawns in a drought, he said.

"There are no prohibitions here. If a homeowner decides to stop watering, a homeowner association cannot fine them for that," the attorney said.

Beaumont, who sits on a legislative committee looking at water issues affecting homeowners associations, said he knows of no existing case law about a community's landscaping guidelines being challenged under AB 2104.

Judge to decide

The DeProspos' complaint, filed in November in Ventura County Superior Court, alleges that the association's board applied its 40-year-old landscaping guidelines in an "arbitrary, inconsistent and capricious" fashion when it rejected the rock-garden design and started issuing monthly fines.

Though he does believe the association's guidelines are outdated, Richard DeProspro told *The Acorn* he isn't suing to force a rule change. He said he simply wants to be treated equally and fairly by the board, which previously approved similar landscaping plans for other homes in the neighborhood that also use crushed rock.

"There are five properties that had rock in their landscapes before we put this in," he said.

Beaumont said the HOA board looks at each request for exterior changes separately and must consider a range of factors. In the DeProspos' case, their new landscaping is clearly visible from the street, he said.

"They may not understand how each case is very unique and determined on the characteristics of that property and its location and makeup," Beaumont said.

Richard DeProspro, a local financial adviser, said he was forced to turn to litigation after the association's board refused to allow a third party to referee the dispute. The homeowners wanted binding mediation—the association wouldn't go for it, he said.

Now both sides will argue their cases before a judge. They are required to be in court April 12, according to court records.

AB 2104 doesn't prevent a community association from applying landscaping rules as long as they don't conflict with a water-conservation ordinance or a declared drought emergency.

The law specifically protects homeowners' use of drought-tolerant plants but doesn't mention which nonplant materials would be acceptable under the change in law.

DeProspero said he decided on rock instead of a more aesthetically pleasing chipped bark for his property because his home off Kanan Road sits in a fire zone.

"If a mediator or a judge told me that what I did was a violation, I'd have crews out here the next day removing it," DeProspero said.

NOTICE OF BOARD VACANCY

NOTICE IS HEREBY GIVEN that the Triunfo Sanitation District Board of Directors plans on appointing a member of the public to fill the vacancy created by Director Michael McReynolds. Director McReynolds resigned from the Board on December 18, 2016.

In order to be eligible to serve on the Board, a person must be registered to vote and must reside within the boundaries of the Triunfo Sanitation District. Duties include attendance at regular TSD Board meetings held on the fourth Monday of the month at 5:15 p.m. and the Joint Powers Authority held on the first Monday of the month at 5:00 p.m. The person appointed will serve until November 2018 at which time he/she will have to stand for election.

All persons interested in serving on the Board of Directors should make their interest known by completing the Application for Appointment available at the District's website www.trunfosanitation.com or by contacting the District office at (805) 658-4642. The deadline for submission of an application is by 5:00 p.m. on January 13, 2017. Appointment may be made as soon as January 23, 2017.

Triunfo Sanitation District serves more than 30,000 residents of southeastern Ventura County, including Bell Canyon, Lake Sherwood, Oak Park, and the Westlake Village and North Ranch Portions of Thousand Oaks. Services include wastewater collection and treatment, and supplying potable and recycled water in selected areas. The wastewater is treated in partnership with Las Virgenes Municipal Water District.

Lisa McKinley, Acting Clerk of the Board

01A10I

Californians saved less water in November than previous year, water board report says



Workers on a turf removal and replacement job install artificial grass at a Pacific Palisades home. (Luis Sinco / Los Angeles Times)

Joseph Serna Contact Reporter
LA TIMES 1/05/2016

California water conservation took a slight step backward in November, officials announced Wednesday, possibly due in part to an unusually wet fall and months of successful conservation efforts.

Californians used 18.8% less water this past November compared with November 2013, the benchmark year for state conservation measurements. In November 2015, residents statewide cut back usage 20.2% compared with 2013.

“The increase over the water savings achieved in November 2015 could be due to wet conditions ... and turning off outdoor irrigation, which is both appropriate and required by the regulations,” the State Water Resources Control Board wrote.

Though meteorologists note that rainfall across wide swaths of the state was below average in November, it was preceded by the wettest October in 30 years in Northern California, dulling the impact of the reduced precipitation.

The state also experienced an exceptionally rainy and snowy December, leading state water officials and climatologists to suggest that California could be [turning a corner](#) in its multiyear drought.

Even more rain and snow are on the way across the state this weekend.

November's conservation was a small drop off from the [previous month](#), when Californians used 19.6% less water compared to October 2013. More importantly, conservation levels remained strong in communities that had their state-imposed conservation targets lifted last summer, officials said.

"Californians are continuing to conserve, which is the way it should be, given that we can't know what the future will bring, but we know that we can't take water for granted anymore," state water board Chair Felicia Marcus said in a statement. "With climate change already creating water supply challenges that will only get worse and [the] state population projected to exceed 40 million by 2020, we all need to become more efficient with our limited water supplies year in and year out."

Between June 2015 when conservation was first mandated and this past November, Californians have saved 764.8 billion gallons of water, or enough to provide a quarter of state residents with water for a year, compared with 2013.

About 44% of the state's water suppliers saved more than 20% compared to 2013, the water board said. The board highlighted suppliers that saved more this past November than in 2015, including in Lemoore, Whittier, Goleta and Sonoma.

But others, like the Los Angeles County Public Works Waterworks District 29 in Malibu, had sharp reductions in conservation, the board noted. In November 2015, Malibu cut its water usage by 12% compared with 2013. But last year it saved just 8%, the state reported.

A discussion on extending the state's current regulations or possibly reinstitute mandatory conservation targets if dry conditions return or conservation levels dip significantly will be held Jan. 18, with a more formal proposal after public input due in February.

State's snowpack measures low

Looming storms could improve situation for region suffering from years of drought

RICH PEDRONCELLI AND SCOTT SMITH ASSOCIATED PRESS
Ventura County Star 1/04/2017

PHILLIPS STATION - The first manual survey this year of California's snowpack revealed Tuesday that it holds about half as much water as normal, casting a shadow on the state that's hopshowed to dodge a sixth straight year of drought, officials said.

Surveyors, however, took the reading at 6,000 feet near Lake Tahoe in the Sierra Nevada as major cold and windy storms were expected to dump four to five feet of snow through Thursday in areas above 4,500 feet in Northern and Central California, while mountain areas below that could get two to three feet, forecasters said.

The storms should boost the snowpack that provides roughly a third of California's water in normal years for drinking, farming and wildlife when it melts in warm, dry months.

What surveyors find between now and April 1 will guide state water officials in managing the water supply of the nation's most populous, agriculture-rich state.

Electronic monitors at elevations throughout the Sierra in late December the overall snowpack had a water content of 72 percent.

At Tuesday's reading at Phillips Station, the water content measured at 53 percent of normal, said Frank Gehrke, chief snow surveyor at the state Department of Water Resources.

Gehrke said the level "seems a little gloomy" as the state tries to avoid another year of drought. But he also called it a good start because higher elevations were showing a deeper snowpack.

Gehrke also pointed out that the survey was taken at an elevation below the snowline for December's storms.

A year ago, the snowpack was slightly above normal levels, but Gehrke recalled that the rain and snow essentially stopped in February and March, leaving the state at a nearly average year for precipitation on April 1.

Elsewhere, rain was falling Tuesday in the San Francisco Bay Area. Winter storm advisories will go into effect from 4 a.m. Wednesday until 4 a.m. Thursday, said Bob Benjamin, a National Weather Service forecaster. Avalanche alerts were issued for high elevations and flooding was possible in the foothills. A second, stronger storm system was expected to hit the region over the weekend, bringing the possibility of as much as five additional feet of snow in the Sierra Nevada.

Southern California, which has remained relatively dry in recent months, was expected to see light showers this week, forecasters said.

At the height of the drought in 2015, snowpack surveyors stood on a dirt patch for the April 1 measurement at Phillips Station, finding the least snow recorded since records had started being taken in more than 50 years. Gov. Jerry Brown responded by ordering residents statewide to use 25 percent less water, letting lawns turn brown — or tearing them out — and flushing toilets less often.

The drought eased last year and so did regulations.

In February, the state water board will again consider the conditions and decide whether the state needs to take a stronger stand on conservation.

Nation & World Watch

From Gannett and wire reports

Ventura County Star 1/04/2017

Fresno, Calif.:

Snowpack starts at half of normal

Surveyors plunged a pole into the Sierra Nevada snowpack Tuesday and took the first measurement of the season, finding the water content was about half of normal as California flirts with a possible sixth year of drought.

Surveyors took the reading near Lake Tahoe as major storms were expected to dump 4 to 5 feet of snow through Thursday in areas above 4,500 feet in Northern and Central California forecasters said. The storms were expected to boost the snowpack, which provides roughly a third of California's water.

What surveyors find between now and April 1 will guide state water officials in managing the water supply of the nation's most populous, agriculture-rich state.

With snow piling up in the Sierra, what will it take to end California's drought?

Melted snow provides 30% of the state's water as it flows into streams, rivers and reservoirs over the spring and summer.

Joseph Serna and Paige St. John Contact Reporters
LA Times 1/04/2017

The resort town of Phillips high in the Sierra Nevada has long been a barometer of California's drought.

Snow measuring station 3 in the El Dorado County town was where Gov. Jerry Brown came in April 2015 to announce major drought restrictions, using the dry, snow-less landscape as a stark backdrop.

On Tuesday, Frank Gehrke of the California Department of Water Resources performed the manual measurement at the same spot, this time covered in three feet of snow.

It measured just 53% of the seasonal average, but officials took that as further proof California's six-year drought was easing.

While that seems perhaps a little gloomy, keep in mind that we had pretty much bare ground here about a week ago," Gehrke said.

The measurement came as the latest in a series of storms dumped heavy rain and snow across Northern California. The region had its wettest October in 30 years in 2016, followed by above-average precipitation December. More than 20 inches of snow dropped across the northern Sierra Nevada last weekend and another set of storms could provide an additional four feet by early next week, said Zach Tolby of the [National Weather Service](#).



Another blizzard swept Mammoth MountainAnother blizzard swept Mammoth Mountain on Wednesday, the precursor to a string of storms expected to bring up to 20 feet of fresh snow in the next 10 days, the resort says.

Since Tuesday, 26 to 48 inches of fresh snow had fallen, with the deepest totals at the summit. Plows were working furiously... (Chris Erskine)

Melted snow provides 30% of the state's water as it flows into streams, rivers and reservoirs over the spring and summer.

The conditions haven't added up to a drought-buster quite yet. But officials said that if the wet conditions extend into the spring, 2017 could prove a turning point for the epic dry spell.

"Generally speaking, to get out of [the drought](#) California would need to establish a trend of above-average snow-water content, above-average storage in reservoirs and above-average precipitation," said Doug Carlson, a spokesman for the Department of Water Resources. "We're on a great trend. We'd like to see it all year."

The statewide snowpack measurement was 70% of the seasonal average Tuesday. The current water content in the northern Sierra Nevada is 68% of average for this time of year; the central Sierra clocked in at 65% and the southern Sierra at 73%, according to the Department of Water Resources.

The reservoirs are closer to normal levels. According to Tuesday's data, Lake Shasta reservoir was at 118% of its historical average, while Lake Oroville, the biggest contributor to the State Water Project, was 91% of its historical average.

Water officials stressed that other parts of the state remain mired in serious drought.

In Tulare County, residents still receive rationed water. Southern California remains significantly dryer than in the north, despite a month of healthy rain in December.

Moreover, warmer temperatures across the state are causing the snow to melt quick, and making the water more difficult to capture for use in cities and farmlands.

But in the Sierra, signs of drought conditions are getting harder to find.

Interstate 80 travelers trapped in Truckee below the infamous Donner Pass overnight Monday were able to leave Tuesday during a brief break in the snow storm.

After the break, said Marilyn Colquhoun at the California Welcome Center in Truckee as she read the week's weather forecast aloud, "it is snow, snow, snow showers, rain — that's not good — then snow, snow, snow."

Following three years of drought with minimal Sierra snowpack, Colquhoun was enthusiastic about the squall.

"It will be a mess," she said. "It's a great storm!"

Transportation was already snarled again by early Tuesday afternoon, and requirements to install snow chains had created delays on Interstate 80 heading over the mountain passes. Colquhoun said Greyhound and Amtrak buses were delayed, "but still expected."

The nonprofit Avalanche Warning Center posted warnings Tuesday for increased danger in popular backcountry ski areas, elevating the warnings by the evening from "considerable" to "high," the greatest warning.

Drifting snow on high ridges and slopes already showed signs of wind slabs that could come crashing down. The combination of new heavy snow and a deep ice crust laid down by rain two weeks ago will increase the hazards. Avalanches triggered by people were reported Monday in Carson Pass and at Castle Peak at Donner Summit, where the state operates a popular Interstate 80 snow park.

"I would suggest people stay out of backcountry until it settles," said Mickey Kaiserman, president of the El Dorado Nordic Ski Patrol. The volunteer group maintains backcountry ski trail markers in the El Dorado National Forest south of Lake Tahoe and helps rescue sojourners who run into trouble.

"The backcountry use is increasing exponentially, and people get caught unprepared. It's dangerous out there," Kaiserman said.

Phone lines to the Sierra Club's Clair Tappaan Lodge in Norden were jammed with expected guests calling ahead to find out if they could still reach the 1930s mountain getaway. Others already there were planning on staying put and riding out the storm at 7,000 feet atop Donner Summit.

"I don't think we've seen a storm system like this for six years," said operations manager Brandon Smith, who was banking on the week of supplies brought in ahead of time.

Smith hadn't heard yet from anyone staying in one of the four backcountry huts the Sierra Club rents, reachable only by a half-day or so trek on foot. One group headed to a hut Monday sought to rent avalanche beacons for their trip, he said, "but I don't know if they found any."

He looked through the window outside.

"It is beautiful out there," Smith said. "Overall, it's a wonderful thing."

A battle is brewing over a proposal for a new source of water in the South Bay



Like a crashing wave, the fight over desalination has finally arrived in Los Angeles County.

By Matt Stevens

JANUARY 3, 2017, 3:00 AM

On a picturesque summer afternoon, West Basin Municipal Water District officials chose to woo regulators with a stroll by the beach in El Segundo, stopping to admire an unadulterated strip of California coastline.

"It is beautiful," said Diane Gatza, West Basin's water resources engineer.

A few hours later, environmental advocates held a town hall two miles away in Manhattan Beach.

"The reason we're here is West Basin Municipal Water District is proposing a ... desal plant," said Bruce Reznik, head of Los Angeles Waterkeeper. "Unfortunately, it seems a little bit like a done deal. We're trying to stand up here and say that there are better alternatives."

Like a crashing wave, the fight over desalination has finally arrived in Los Angeles County.

As Southern California grapples with declining imported supplies and climate change that could make droughts more severe, agencies such as West Basin are working to develop new local sources, including water recycling and stormwater capture.

Some suppliers also want to tap the ocean. More than a dozen desalination projects — including West Basin’s proposal — are under consideration along the California coast.

In 2015, the largest coastal desalter in the country started operation in Carlsbad, where it produces 50 million gallons a day of drinking water for San Diego County. Poseidon Water, which built that facility, is pursuing permits for a similarly sized desalination plant in Orange County. If developed to full capacity, the South Bay project would be even bigger.

But as water agencies rush to pour millions of ratepayer dollars into such projects, some experts remain skeptical. A 2016 Stanford study concluded that although desalination may prove crucial for some coastal communities, it is plagued by problems that make it “unlikely to be a major part of California’s water supply portfolio.”

“Every area is a little bit different,” said Joshua Haggmark, water resources manager for Santa Barbara, which is spending at least \$64 million to reactivate its decades-old desalination plant by spring. “It’s human nature to start second-guessing yourself.”

Haggmark would know.

Santa Barbara hastily built the state’s first large municipal desalination plant during the drought of the late 1980s and early 1990s. The drought ended just as the facility was nearing completion, and the plant was never used beyond the testing phase.

A decade later, Australia found itself stuck in the “millennium drought” and commissioned six large coastal desalting plants, only to idle four of them after rains returned.

Since then, a handful of tiny plants popped up along the California coast, many of which were for industrial use.

Soon after the Carlsbad plant opened, the San Diego County Water Authority was assailed for agreeing to buy Poseidon’s water, only to wind up with a 500-million-gallon surplus because drought-related conservation had driven down regional demand.

Officials there say the situation was an anomaly.

“San Diego is living proof of the fact that desalination provides ... a drought-proof supply of new water,” said Bob Yamada, the agency’s director of water resources.

The battleground has since shifted north to Huntington Beach, where Poseidon seeks to build another 50-million-gallon-per-day plant and sell the water to a local distributor. The company would have to ensure that its plant complied with strict new state desalination standards in order to win approvals from a regional water board and the California Coastal Commission.

How Poseidon navigates the regulatory process could chart a path for West Basin, though the environmental community is certain to bend decision makers' ears along the way.

Critics note that the cost of desalinated water is still about double that of imported water because it remains so energy intensive to produce, and that the process leaves a significant carbon footprint that contributes to climate change.

The extent of desalination's impact on the ocean is less clear. The process involves taking water into the plant, stripping the water of its salt, and then discharging the salty brine that remains back into the ocean. The new state rules deal with both the intake and discharge methods, which can harm marine life.

Desalination "is not the worst environmental crime in the world, but it certainly has an impact," said Heal the Bay's Steven Johnson.

After years of research, West Basin is expected to release an environmental impact report for its proposed project this winter.

The plant will produce either 20 million gallons of desalinated water a day or 60 million, depending on whether West Basin can find a business partner. If a 60-million-gallon-per-day facility opened today, it would become the largest in North and South America, according to data provided by

the International Desalination Assn. and DesalData.com.

Agency officials say the plant would cost either \$400 or \$900 million to construct, depending on its size, and would not open until 2023. At that point, officials project that their 1 million customers would see bills increase between \$3 and \$5 a month.

West Basin, a public agency that provides wholesale drinking and recycled water to much of southwest Los Angeles County, would prefer to build the plant on the industrially zoned site its

officials toured that summer afternoon — a power plant in El Segundo that abuts a popular surf spot and Manhattan Beach.

Three miles away, the Hyperion Water Reclamation Plant discharges as much as 250 million gallons of treated wastewater into the ocean each day. Environmentalists cringe when they envision all that reusable water getting dumped into the sea, only to have it sucked back up and desalted.

Johnson and Reznik say that water agencies such as West Basin should maximize water recycling, stormwater capture and conservation before turning to desalination as

a last resort. If West Basin's environmental impact report fails to analyze water recycling as an alternative to desalination, "we're going to sue," Reznik said.

West Basin General Manager Rich Nagel said he believes those avenues have largely been exhausted. The district already recycles up to 40 million gallons of Hyperion's wastewater each day for use on golf courses, in cooling towers and in refineries. But under current state rules, customers can't drink recycled water until it is filtered through the ground or diluted in reservoirs, so Nagel says desalination is necessary to boost the agency's drinkable supply.

Like their counterparts in Los Angeles, West Basin officials want to cut their imported water purchases in half, and getting 10% to 15% of their water from a desalination plant would boost that effort.

"It's drought security; it's drought resiliency," Nagel said. "If we don't do projects like this and do nothing, by the year 2035, we're going to have to ration water eight out of every 10 years. That's unacceptable for our society."

Avalanche warnings as Sierra hit by major snowstorm; 4-5 feet expected this week

Angel JenningsContact Reporter
LA Times 1/03/2017

Higher elevations of Northern California were hit by heavy snowfall overnight, prompting avalanche warnings, as the region braced for a week of intense weather.

The [National Weather Service](#) said it expected 4 to 5 feet of snow in some Sierra areas and encouraged drivers to avoid mountain roads. One location, Kingsvale, got 23 inches of snow in just the last 24 hours.

The Sierra Avalanche Center on Monday issued a warning for some areas hit by heavy snow. “Human [triggered wind slab avalanches](#) occurred yesterday in a variety of locations. The ongoing combination of new snow and wind will keep this problem ongoing today,” the group said.

The northern half of the state has already seen impressive rains this fall and winter, filling reservoirs and replenishing the Sierra snowpack, a key source of water for California cities and farmlands.

A storm system is expected to bring rain and snow throughout the week in Northern California, and a foot of snow is expected Tuesday in the Sierra Nevada with an additional foot or two predicted for Wednesday, said Johnnie Powell, a weather forecaster with the National Weather Service.

“This is what we’re supposed to be getting,” Powell said. “After six years of a drought, I love saying that. This is normal rain and snow that we’re supposed to be getting in December and January.”

That same system might bring much-needed moisture to Southern California by the middle of the week. But that’s just a precursor to a bigger storm, NWS meteorologist Joe Sirard said.

The main event, a stronger storm system, is expected to move into the Los Angeles County area late Saturday and continue until Monday.

“There is the potential that if the main moisture feed into Southern California lines up over Ventura and L.A. counties, we could be under the gun for many inches of rain,” Sirard said.

Steady rain since the fall has pulled 15% of the state — all of it up north — out of [drought conditions](#), according to the [National Weather Service](#) and the U.S. Drought Report.

But while Northern California has begun to rebound from the drought, Southern California remains dry.

Los Angeles marked a sober milestone last year, when the NWS announced that the last five years were the driest ever documented in downtown L.A. since official record-keeping began almost 140 years ago. Precipitation during that period totaled just 38.79 inches — roughly half the normal amount.

But December turned out to be a boon for Southern California, with a series of storms dumping decent amounts of rain and snow. It ended up being the wettest December since 2010.

State officials have said it's far too early to declare the six-year drought over, though they acknowledge the improvements in Northern California.

In late December, officials said the Sierra Nevada snowpack was at 72% of normal. They expect that number to increase in the coming weeks.

Northern California's improving fortunes help Southern California's drought picture — but only to a point. Though Southern California still gets some water from the Sierra, about 50% of its supply comes from local sources such as groundwater and reservoirs.

December's conditions and cold temperatures across the state have provided a winter wonderland view in both Southern California and the Bay Area, with mountain peaks getting strong dustings of snow.

The Grapevine was closed for periods in recent weeks because of heavy snowfall, and some motorists were temporarily stranded on mountain roads.

Earthweek: Diary of a Changing World

The Year 2016 in Review

Ventura County Star 1/01/2017

La Niña Oscillation

Forecasters jogged back and forth on the chances of a return of La Niña as Pacific Ocean temperatures cooled early in the year. But despite some La Niña-like weather developing in California and Australia, meteorologists now say the chances of it really setting in soon are low

'Blockbuster' storm could be brewing

MEGAN DISKIN

Ventura County Star 1/01/2016



Due to people taking the holiday week off, traffic is light on Highway 57 freeway near the Highway 91 interchange Friday. KEN STEINHARDT/AP

A New Year's Eve storm pushed December rainfall totals above normal levels, but a much stronger system could be brewing for 2017.

About a tenth of an inch of rain fell Saturday afternoon, and more was possible into the night, according to Joe Sirard, a meteorologist with the National Weather Service in Oxnard.

At higher elevations, 2 to 4 inches of snow was possible as low as 3,000 or 4,000 feet. A winter weather advisory is in effect for mountain areas of Ventura County until 9 a.m. New Year's Day.

Thanks to a series of storms, December "was wetter than normal across the area," Sirard said. The totals for the month were much higher than those reported in December 2015, he said.

"I'm optimistic that this is a preview of coming attractions for January, February and March," said Bill Patzert, a climatologist with NASA's Jet Propulsion Laboratory in Pasadena.

According to the Ventura County Watershed Protection District, most areas of the county reported 0.3 to 0.5 inch more than normal for December, while other sites such as Camarillo, Moorpark and Lake Sherwood saw rainfall that was above normal by an inch or more.

However, Scott Holder, a hydrologist with the Watershed Protection District, said the above-normal rainfall hasn't been a drought-buster. Vegetation has gotten some moisture, but the county needs a lot more rain in order to get out of the drought, he said.

Sirard said 2014 also had a wet December, but the season was dry overall.

“One wet month does not create a wet winter,” Sirard said. “Two years ago was a tease in December.”

But there’s potential for a significant storm in early January that could bring inches of rain over a continuous 48-hour period. That possibility has many in Sirard’s office cautiously optimistic. Unfortunately, it could also mean the potential for flash floods and debris flows in areas where wildfires have stripped vegetation, Sirard said.

Sirard said the potential “blockbuster” storm is not the work of El Niño but an “atmospheric river” with a lot of subtropical and tropical moisture.

The system is still far enough away that there’s uncertainty, but longterm computer models keep hinting at the possibility, Sirard said.

El Niño hammered Northern California in 2016 but left the southern parts of the state parched.

Often, a big El Niño is followed by La Niña, a pattern that typically means a dry winter and continued drought. But so far, La Niña hasn’t materialized.

Patzert said the lack of La Niña — “more like a La Nada, I call it,” he said — opens the door for storms both from the north and the south. So far, Southern California has gotten a little of both. If the atmospheric river does arrive, the entire state, not just the county, would be in “pretty good shape” for a wet winter, Sirard said. It would mean hefty snow packs, replenished groundwater and relief for farmers, Sirard said.

“But the jury is still out on it,” he said.

Staff writer Cheri Carlson contributed to this report.

Second storm ready to bring more rain to county

CHRISTIAN MARTINEZ
Ventura County Star 12/31/2016

Rain fell intermittently throughout the day Friday, and a second storm is due on the afternoon of New Year's Eve, according to the National Weather Service.

According to the Ventura County Watershed Protection District, most areas of the county received a quarter-inch to a half-inch of rain on Friday, as meteorologists predicted, but some cities got more.

As of 6 p.m. Friday, the Camarillo area had received between 0.68 and 0.71 inch, with Camarillo Springs getting the most precipitation, the district reported. In Thousand Oaks, 0.58 inch of rain was reported.

"It's about what we expected, so far," said Dave Sweet, a meteorologist with the National Weather Service in Oxnard.

Meanwhile, the Ventura County Environmental Health Division issued an alert on Friday, saying rainfall can carry disease-causing bacteria into the ocean. Stormwater runoff can also carry tree limbs and logs into the ocean and pose a threat to surfers and others who go into the water.

The public should avoid ocean water for at least 72 hours after a storm, officials said. Environmental health officials later released tests results on Friday showing Ormond Beach and Faria County Park Beach failed to meet state standards for bacteria. Authorities said warnings signs have been posted there stating that ocean water should be avoided for a minimum of 50 yards on either side. The signs will remain posted until water quality meets state standards, officials said.

The system due to arrive Saturday afternoon is expected to produce rain totals similar to Friday's, although temperatures will be considerably lower.

"Saturday, highs will be in the mid-50s," Sweet said.

Overnight low temperatures Saturday are expected be in the 30s inland to around 40 at the coast.

Between slick roads and New Year's Eve festivities, law enforcement officials are wary of driving conditions.

It's not just impaired drivers that travelers must consider, "it's the conditions, too," said Capt. Garo Kuredjian, of the Ventura County Sheriff's Office. "It could make things a little more treacherous."

However, the weather will not affect law enforcement efforts to crack down on driving under the influence over the holiday weekend.

California Highway Patrol officer Rolando Tejeda said a "maximum enforcement period" was planned for 6 p.m. Friday until mid-Monday.

The rain slows things down, Tejeda said, but it doesn't change officers' approach.

Kuredjian advised travelers to take advantage of ride-share opportunities such as Lyft and Uber.