

NEWS CLIPS

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**Resource Conservation and Public
Outreach**

Organized by date

Drought retreats from nearly half of Calif. after storms

JOHN ANTCZAK ASSOCIATED PRESS
Ventura County Star 1/27/2017

LOS ANGELES - Drought conditions have retreated from nearly half of California after January's onslaught of storms, the U.S. Drought Monitor said Thursday, and one large water wholesaler urged state regulators to lift restrictions on areas with adequate supplies.

The board of directors of the San Diego County Water Authority voted to declare an end to drought conditions in its region and to call on Gov. Jerry Brown and the State Water Resources Control Board to rescind statewide emergency water-use regulation.

The authority, a regional supplier to 24 agencies serving 3.3 million people, noted that San Diego's official measurement station had recorded 172 percent of average rainfall since the Oct. 1 start of the water year and extremely high snowpack levels in the Sierra Nevada and the upper basin of the Colorado River. It urged the state to focus on communities that still need help.

"Telling the public to continue extraordinary, emergency conservation measures when the drought emergency no longer exists undermines the credibility of state and local water agencies and erodes the effectiveness of communications during actual water supply emergencies," Mark Muir, chairman of the board, said in a statement.

The state's top water regulator indicated earlier this week that she is not ready to lift emergency conservation measures.

"It makes the most sense to continue steady as she goes," State Water Resources Control Board chairwoman Felicia Marcus said.

How a 'rain shadow' left this reservoir parched even after all those storms



Lake Cachuma is currently at 13% of its historical average and 9% of its capacity, the lowest by far of any reservoir in California. (Brian van der Brug / Los Angeles Times) (Brian van der Brug / Los Angeles Times)

Joseph Serna Contact Reporter

LA Times 1/27/2017

It's rained so much across California that the state's biggest reservoirs are filled to levels not seen in years.

At least six of the state's major reservoirs are now holding more than 100% of their historic average, and massive Lake Shasta is so replete with water that dam operators opened spillway channels for the first time in six years this month.

But then there's thirsty Lake Cachuma. The Santa Barbara County reservoir this week was filled to just 13% of its historical average and 9% of its capacity.

How is it possible that Southern California can get walloped by one of the wettest winters on record and still have the lowest reservoir level in the state?

Blame the curious "rain shadow" effect, experts say.

“When a cold front comes in they just slam into the mountain range straight on,” [National Weather Service](#) forecaster Steve Anderson explained. “When that happens the air can’t go through it, it can’t go around it, it has to go up and over. And as the air goes up, it precipitates out a lot of rainfall.”

The storm is “rained out” by the time it crests the hilltops, Anderson said. He pointed to Big Sur as an example. On the coastal side of the mountains there it’s rained more than 23 inches since Oct. 1. On the other side of the mountains, at Salinas Airport, it’s rained only 9 inches, data show.

In the case of Lake Cachuma, the rain shadow cast by the Santa Ynez Mountains is substantial. The area around Lake Cachuma is still considered to be in extreme drought, as are parts of Ventura, Los Angeles and Kern counties, according to the [U.S. Drought Report](#).

Nestled in the Santa Ynez Valley at the western foothills of Los Padres National Forest, the lake is blocked on the north, south and east by mountains. The area as a whole is receiving less rainfall than the rest of California, National Weather Service data show, but even when storms do approach, moisture is wrung out on the mountains’ coastal faces before the storms can make the march over the top and rain into the lake.

Since Oct. 1, Santa Barbara Airport on the south side of the Santa Ynez Mountains along the coast has received more than 13 and a half inches of rain, more than 8 of which have come in just the last three weeks, the National Weather Service said. But 18 miles north, on the other side of the mountains and not far from the lake, Santa Ynez Airport has received fewer than 7 inches of rain since October and fewer than 5 inches of rain since the beginning of the year.

Even Los Prietos campground, on the same side of the lake, but farther inland and higher in the mountains, has collected significantly more rain. Data show it’s rained more than 14 inches there since Oct. 1.

“Sometimes these storms are so big there’s an effect called ‘spillover,’ where it’s big enough and goes over the big mountains and drops it on the other side,” said state climatologist Michael Anderson. “Cachuma stands out because it’s much farther behind.”

The lake is inland from a point on California’s coastline that shifts from a north-south orientation to east and west, putting it in a position to receive rain from storms moving southeast from the ocean through the state. But a storm flowing north will tangle with the Santa Ynez range, which condenses the moisture in the air as it passes over and squeezes out much of the rain before it hits the other side, Anderson said.



Lake Cachuma in Santa Barbara County is the lowest by far of any reservoir in California. (Brian van der Brug / Los Angeles Times)

The lake provides about 85% of the water for a quarter-million Goleta Water District residents and 12,000 acres of cropland along Santa Barbara County's south coast.

The San Gabriel Mountains have a similar effect on the high desert: More than 11 inches of rain have fallen at the Santa Fe Dam in Irwindale since Jan. 1, but only 1.84 inches have fallen on Palmdale on the other side of the mountains.

The same goes for the Sierra Nevada's Crystal range, which is why a tiny airstrip in the hills of Nevada County in California has received more than 27 and a half inches of rain since Oct. 1 but the University of Nevada in Reno has gotten only 9 inches.

But Lake Cachuma would need to overcome more than its geography to see results similar to Folsom and other reservoirs that hide in similar rain shadows, experts say. Despite a strong El Niño last winter, Southern California didn't get the same rainfall that Northern California did and is still struggling to recover from years of drought.

The region would need at least another wet year like this winter to recover from drought, experts say.

"You can think of it as a sponge," said Jayme Laber, a hydrologist with the National Weather Service in Oxnard. "We're finally just soaking it in."

Epic rains and snow help the 'inland sea' of Sacramento roar back to life



GARY CORONADO LOS ANGELES TIMES

RUNOFF FROM heavy rains has filled the vast Yolo Bypass floodplain with water. The bypass, outside Sacramento, is meant to collect water from various rivers and streams from the Sierra Nevada to protect the city from catastrophic flooding, as has happened in the past.

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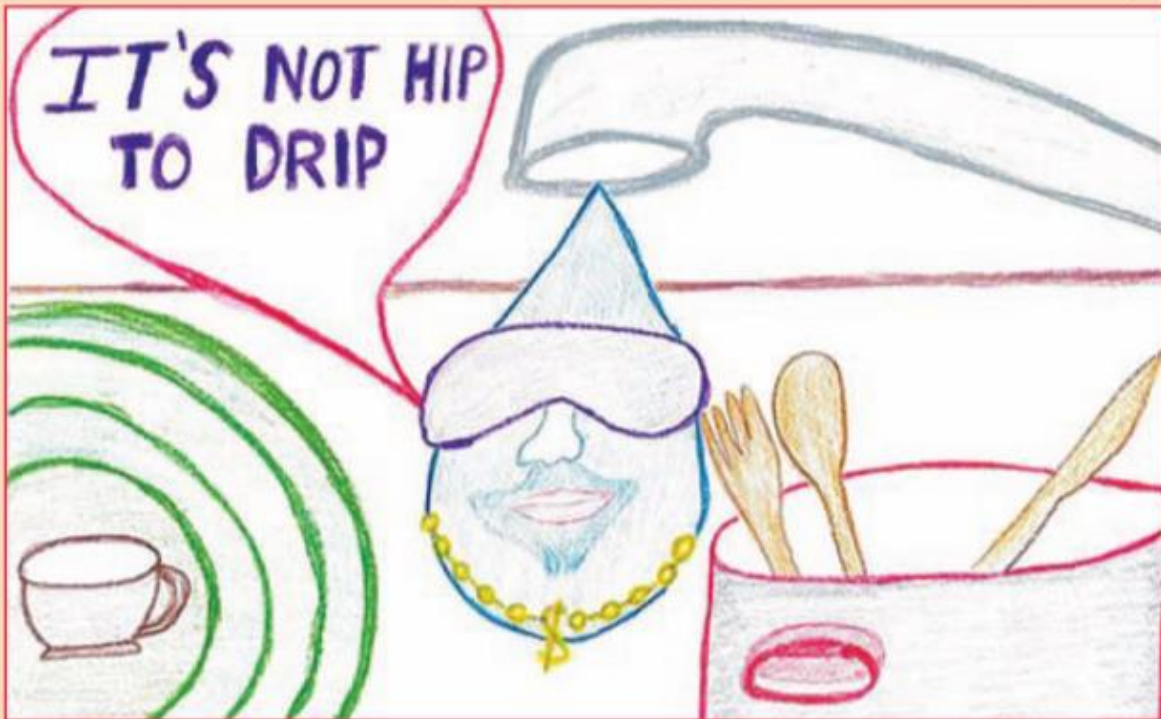
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GARY CORONADO LOS ANGELES TIMES

THE YOLO BYPASS, at its top capacity, can handle five times as much water as can the narrow banks of the Sacramento River. "This whole city of Sacramento could not exist as it does without that bypass," said an official with the California Natural Resources Agency.

Award-winning student art on display



EVERY DROP COUNTS—An array of student artworks interpreting the theme “Water is Life” is on display during regular business hours through Jan. 31 at Las Virgenes Municipal Water District headquarters, 4232 Las Virgenes Road, Calabasas. This year’s competition includes artist Chris Lee, a third-grader at Somac Elementary School, and his poster shown here. Each year thousands of young artists create water conservation messages in a contest sponsored by the Metropolitan Water District of Southern California, of which LVMWD is a member agency. Free 2017 wall calendars featuring several pieces of the art will be available to visitors.

A Free Family Adventure!

Take a recycling and watershed tour Saturday, February 4

When you send water down the drain, we go to work, safely returning it to the environment. You'll learn how we fulfill that mission.

On this free bus tour, you'll visit Malibu Creek, a Water Reclamation Plant, a regional Composting Facility and learn more about our precious water resources.



Saturday, February 4, 2017
from 8:45 a.m. to 1:00 p.m.

Tour begins promptly at 8:45 a.m. ending at 1 p.m.

Space is limited, pre-registration is required (walk-ins cannot be accommodated).

A complimentary continental breakfast and light lunch will be provided.

Register online at: www.LVMWD.com/QuarterlyTours

Moderate walking and stairs are part of the tour, close-toed walking shoes are recommended.

Reservation preference is given to customers of Las Virgenes Municipal Water District and Triunfo Sanitation District.

Children under 18 must be accompanied by a responsible adult.



Presented by
Las Virgenes-Triunfo Joint Powers Authority

04413B

Residents upset over Triunfo

By Dawn Megli-Thuna



BARE NECESSITIES—This Jan. 24 photograph shows sections of grass removed from the park. RICHARD GILLARD/Acorn Newspapers

Conejo Recreation and Park District has halted any further grass removal at Westlake's Triunfo Park pending a board vote on how to proceed with the landscaping efforts after residents complained the work had "eviscerated" their neighborhood park.

Nearly two dozen people who live near the park filled the seats at the CRPD's Jan. 19 board of directors meeting to voice their displeasure with the drought-related project, saying the agency's ongoing turf-reduction and water-reclamation effort at the park has replaced flat, usable areas of grass with wood chips while the leaving grass on steeply graded hillsides untouched.

Ten speakers described how the grassy areas of the 23.4-acre park, which were frequently used for birthday parties, family reunions and Boy Scout functions, have become fields of mud following the recent rains.

"Now I call it the Triunfo Dump," one speaker said.

To address the unease, CRPD General manager Jim Friedl met Jan.24 with 30 residents at the park on Aranmoor Avenue.

Those in attendance Tuesday were given stickers to place on a map of the park to identify high priority areas where they would like to see grass restored.

Friedl told *The Acorn* that some stripped areas may be converted back to grass on a limited basis.

CRPD staff is compiling a report to present to the district's board of directors at their Feb. 2 meeting.

Additional turf removal at the park has been stopped until then.

Saving on water

Work began Dec. 13 on a \$600,000 plan to convert the existing irrigation system at the park to allow for the use of reclaimed water, which is cheaper to buy and is safe for plant but not human consumption.

Prior to installing the new system, crews have been removing grass from areas of the park that cannot be legally irrigated with reclaimed water—near picnic tables and playgrounds—as well as those deemed by CRPD to be non-essential, low-traffic areas of a park, in accordance with the district’s mandatory water conservation practices.

More than 5.5 acres of grass have been removed, leaving the park with slightly less than half of the grass it originally had.

The park district has been removing large swaths of grass at its parks since 2014, when it adopted a new policy in response to the drought and to the rising cost of water.

Once grass is removed, the areas are covered with mulch, wood chips or other types of drought-resistant landscaping that do not require water. CRPD’s conservation efforts have been lauded by the Calleguas Municipal Water District as a model for public agencies, but that praise made little difference to the residents who appeared before the board on Jan. 19.

One woman who lives in a nearby apartment complex on Hampshire Road said the green space was a vital resource for her service dog.

“It’s invaluable to me. Living in an apartment, I don’t have a backyard. I need this,” the woman said. Some in the audience called out their disapproval during public comments, aiming remarks of “awful” and “disgusting” toward Friedl and the park district’s five directors.

A repeated complaint among speakers was that there had been a lack of communication between CRPD staff and the community.

“I think the parks department let the community down,” said one speaker, adding she had no idea that grass removal was slated for the park near her house.

Friedl admitted that due to time constraints—CRPD needed to get the work approved in order to qualify for grants—notifications about the first two phases of turf removal were not sent to individual homeowners who live near the park. Instead, CRPD posted public notices on its website and announced the plans in newspaper articles.

Ahead of the final phase of the work— installation of a reclaimed water system—340 notices were mailed to residents who live within 1,000 feet of the park.

“We will work with you and your neighbors and strive to make some modifications; however, please know that wholesale reversal of the turf conversion effort is not realistic—nor fair to other neighborhoods which have also had park turf conversions,” Friedl said in an email to residents.

Friedl said he expects patrons to feel differently about the newly landscaped park when work is completed in February

New water picture emerges

As I type this letter, California is about halfway through the rainy season.

The total water supply in the state reservoir systems is 97 percent of its historic average. Snowpack is on pace to match its best season since 1983. Yet since the early 1980s, the state's population has nearly doubled, while our state water system has barely expanded, certainly not adding needed water storage.

I ask you, the voter, to recognize the political cycle we are in, instead of the climactic cycles emphasized by the "news" media at the behest of government officials. In terms of obvious climate change, it has changed very little since I was a kid in the Conejo Valley in the early '70s. State population has.

State officials and media allege "drought," then urge conservation. Shortly after, water rates are increased. Why? Because suppliers are selling fewer units of water and need revenue to maintain operations.

When water becomes abundant, as it always has every few years, the higher rates you pay remain fixed. Does that extra money you pay get spent on expanding state water production and storage systems? No. Instead, you get told during every dry period that you must solve the problem on your end by letting your lawns die and replacing them with rocks or plastic.

Blaming farmers or homeowners, government and media act together using the term "drought" as a political weapon, causing us to cringe or even get upset when we see a neighbor washing a car, or a broken sprinkler unnoticed while they are at work. We become tempted to act like busybodies and tattletales.

This is what happens when government and media collude to give the illusion that it's "your fault." We fight over the scraps and pay more to enable the cycle to continue.

It is reasonable to demand state laws requiring mandatory rate adjustments back down to normal levels since this money is not going towards solutions.

Assemblywoman Jacqui Irwin, please author and sponsor this legislation. Voters, please demand this from local government.

Timothy Bond
Thousand Oaks

Judge: Ojai FLOW owes \$23,000

Group must pay part of utility's legal fees

CLAUDIA BOYD-BARRETT SPECIAL TO THE STAR

Ventura County Star 1/26/2017

A group of Ojai citizens that fought to expel utility company Golden State Water from the city has been ordered to pay more than \$23,000 in legal fees.

Ventura County Superior Court Judge Vincent O'Neill has ordered Ojai Friends of Locally Owned Water, or Ojai FLOW, and five of its board members to pay \$23,209 to Golden State Water for attorney costs. The judge made his ruling Tuesday afternoon, just hours after hearing arguments on whether Ojai FLOW should pay \$50,000 in legal fees.

The fees stem from a failed class-action lawsuit that Ojai FLOW brought against the water company last year on behalf of city ratepayers. The group had sought damages for what it alleged was a deliberate attempt by Golden State Water to delay a public takeover of the company's Ojai franchise by the Casitas Municipal Water District. Ojai FLOW said the delay had forced city residents to continue paying water rates to the company that were higher than Casitas' rates.

After the lawsuit failed, Golden State sought payment of as much as \$60,000 from Ojai FLOW and board members Pat McPherson, Dale Hanson, Richard Hajas, Bob Daddi and Stan Greene.

In his ruling, O'Neill reduced that amount by more than half, stating that the company's legal work for the case overlapped with another case involving Casitas Municipal Water District.

However, the judge rejected arguments by the defendants' attorneys that, because Ojai FLOW was suing on behalf of the Ojai public, it should not have to pay legal fees.

"Golden State is entitled to reasonable fees and costs," the judge stated in the written ruling.

Ryan Blatz, an attorney for Ojai FLOW, said he was disappointed with the judge's decision not to exempt the group from paying fees. He said the organization could appeal the judge's ruling, but hadn't come to a decision yet.

The group is also appealing the rejection of the class-action suit, he added. "We're keeping all our options open," Blatz said. "We're going to digest the court's decision and figure out what the appropriate next step is."

McPherson, Ojai FLOW's chairman, said he was glad the fees had been reduced, but he was concerned about the amount still to be paid.

"I'm disappointed that it wasn't made zero," he said.

"We were working on behalf of all the citizens. I don't see why we would be penalized for doing that. We don't have that kind of money in our reserves."

Golden State Water attorney David Moran had not returned a call requesting comment as of Wednesday afternoon.

Meanwhile, Casitas' efforts to take over Golden State Water's Ojai interest by eminent domain are moving ahead, Blatz said. The ruling "has no negative effect on what our main purpose and goal has been through this entire process: to have Casitas acquire Golden State Water to alleviate the excessive water costs on the community," he said.

Ventura to look at water options

ARLENE MARTINEZ
Ventura County Star 1/25/2017



The drought has dried up areas of the Ventura River that used to flow. STAR FILE PHOTO

Since 1971, the city of Ventura has been paying to help maintain the state system that delivers imported water.

On Monday night, Ventura took a step toward obtaining some of the end product when the City Council voted 7-0 to authorize a comprehensive study that considers design, water flow, the environmental impacts and cost.

The cost of the study, up to \$653,000, is being partially offset by payments from the Calleguas Municipal Water District and the United Water Conservation District, which along with the Casitas Municipal Water District hope to be part of the regional effort. Casitas could help down the line with design and construction costs or pay for water, a staff report notes.

United is putting in \$177,900 and Calleguas is initially giving \$44,100. Calleguas will put in an additional \$133,800 if the study shows the connection can provide it at least 5 cubic feet of water per second in the event of a one-month supply outage from the Metropolitan Water District. Calleguas gets state water from Metropolitan.

All of the agencies are hoping for increased reliability and the ability to transfer water between districts in times of trouble.

Ventura has an allocation of 10,000 acre-feet of water, but that's not how much it would get. On average over the past 10 years, an agency has received 55 percent of its allocation, although the amount has been as low as 5 percent, Ventura Water General Manager Shana Epstein said.

The goal is to store water during rainy years so there's some in the bank during drought or dry years.

"It's really managing resources," Epstein said.

All of Ventura's water has to this point been from local resources: the Ventura River, groundwater and Lake Casitas.

The drought has strained that supply. The lake is less than 37 percent full and lawsuits have the potential to reduce the amount of water the city can pump from the river. Ventura plans to start using more recycled water, but regulatory agencies want the city to have a backup in place, Epstein said.

About 75 percent of Ventura County's population gets imported water through Calleguas, which buys it from Metropolitan. Epstein said Metropolitan would treat the water, then send it to Calleguas, which has its own pipes to carry water from Chatsworth to just west of Somis and about seven miles shy of Ventura. That's where Ventura would add the connection, Epstein said.

The study will also look at how much the project could add to a Ventura water bill. Imported water is expected to be two or three times more expensive than the existing supply.

The report could be done by fall, Epstein said.

Ventura has paid to keep its connection to state water for more than 35 years. In the most current budget, the city budgeted \$1.5 million for that, she said.

Water utility seeking \$60,000 from Ojai citizens group

CLAUDIA BOYD-BARRETT SPECIAL TO THE STAR
Ventura County Star 1/25/2017

An Ojai citizens group that led a campaign to oust utility company Golden State Water from the city is fighting a request by the firm that the citizens group pay as much as \$60,000 in legal fees.

Representatives for Ojai Friends of Locally Owned Water, or Ojai FLOW, appeared Tuesday before Judge Vincent O'Neill at Ventura County Superior Court to protest Golden State Water's fee request, calling it "unacceptable" and "unconscionable."

The claim, which targets five members of Ojai FLOW's board, stems from an unsuccessful class-action lawsuit filed by the organization against Golden State last year.

In that claim, the citizens group sought damages on behalf of Ojai ratepayers for what it alleges was a deliberate attempt by Golden State Water to delay a voter-approved public takeover of Ojai's water distribution system by dragging the process through the courts.

O'Neill ruled against Ojai FLOW in October. Golden State Water now is seeking to recover legal costs associated with the case.

"We're entitled to our fees," Golden State Water attorney David Moran told the judge during the approximately one-hour hearing Tuesday.

Attorneys for Ojai FLOW countered that the fees requested were excessive and that they did not correspond to the amount of legal work likely required for the case.

"There seems to be some overreaching here," Ojai FLOW attorney Joseph Jones said.

Moran objected to that argument.

Ryan Blatz, also representing the citizens group, argued that the organization and its members shouldn't have to pay any legal fees to Golden State Water because they were acting on behalf of the Ojai public and did the work as volunteers.

Almost 90 percent of Ojai voters approved a plan in 2013 for the Casitas Municipal Water District to take over Golden State's water interests in the city. The takeover process has moved forward slowly, partly because of a court battle in which Golden State objected unsuccessfully to the financing mechanism proposed for the takeover.

Blatz said Ojai ratepayers are paying about \$100 a month more for their water on average under Golden State than they would if they received water through Casitas.

Ojai FLOW board members "are good people who took on the task of fighting this (problem) when no one else would," Blatz said before turning to address those seated

in the audience. "Thank you for your courage. Whatever happens today, thank you for all the work you guys put in."

O'Neill said he would take the arguments into consideration and issue a written ruling on the matter, although he did not give a timeline.

About 30 Ojai FLOW supporters attended the hearing, including Ojai Mayor Johnny Johnston.

Pat McPherson, who chairs Ojai FLOW, said he hoped the judge would reduce the legal fees to \$1.

He said he and the other four board members targeted in Golden State's request are all retired seniors.

"This is unfair," he said. "This whole thing was done for the benefit of the public, and the fact that we would end up having to pay their legal fees is unbelievable."

Board member Stan Greene said he, too, hoped the judge would reduce the fees to a minimum or to nothing at all.

"It may be legal, but it's not justice, and he has the ability to put justice out there and use that as the basis for his decision," he said.

Community briefs

Community council to meet tonight

VENTURA - Sewer line replacement around Loma Vista Road, development and a public safety update will be discussed at a meeting of the College Area Community Council.

The meeting will begin at 7 p.m. Wednesday in the Wright Event Center, 57 Day Road on the Ventura College campus. Call 644-8695 for more information.

Ventura County Star 1/25/2017

Record snow in Mammoth

The ski resort area has received over 20 feet in January, the most ever for the month.



A BLIZZARD earlier this month in Mammoth Lakes forces a Reno-bound truck driver to take another route after Caltrans closed highways. The area's ski resorts have recorded 246 inches of snow since Jan. 1. (Brian van der Brug Los Angeles Times)

By Joseph Serna
LA Times 1/25/2017

A set of atmospheric rivers that brought heavy rains and floods to California also dumped a record amount of snow on Mammoth Mountain in January — 20 ½ feet, the most in the resort town's history, local tourist officials announced.

“What a time it is to be at Mammoth,” the announcement said on MammothMountain.com, which represents area resorts. “Conditions are all-time, get out there and have the ‘best pow day of your life.’ ”

The mountain has received 246 inches of snow since Jan. 1, blasting through the old monthly record of 209 inches. The resort town has received more than 29 feet of snow since the ski season began last year.

The news underlines what has been a remarkable start to California's water year , which runs from Oct. 1 to Sept. 30.

October rains were four times the monthly average in many parts of the state, followed by a strong December and an even better January.

The Sierra Nevada snowpack, which provides a third of the state's water when it melts in the spring and summer, is now at nearly 200% of its average for this time of year.

Many of the state's biggest reservoirs are full, and much of the northern half of the state is considered to be out of drought conditions.

More storms are on the way, state climatologists said. For skiers in Mammoth and the rest of California, the wintry wonderland may continue.

A WELCOME SIGN

Storms bring much-needed water to parched region

JOHN SCHEIBE
Ventura County Star 1/24/2017

Despite traffic accidents and road closures caused by a series of storms over the weekend, many across Ventura County were thankful for the rain.

'It's fabulous, absolutely fabulous,' Link Leavens, general manager of Leavens Ranches, said Monday morning. Leavens' family grows avocados and lemons and produces wine grapes.

Sheets of heavy rain cascaded across Ventura County on Monday morning, the remnants of the third storm since Friday to bring much-needed water to a region parched by five years of drought.

Some areas of Ventura County received 5 or more inches of rain in the 72-hour period ending at 9 a.m. Monday, according to the Ventura County Watershed Protection District. They include Oak View, south of Ojai. The town has gotten 15.45 inches of rain since Oct. 1. More than a third of this rain — 5.34 inches — fell there from 9 a.m. Friday to 9 a.m. Monday, according to data supplied by the watershed protection district.

Drier weather was expected for the area, starting late Monday afternoon, according to the National Weather Service.

In the meantime, the rains have not only started to replenish depleted aquifers, they've also purged salt that has built up in area soils since the drought started, Leavens said. The rains are magic for tree crops such as citrus and avocados, he said.



Water surges from the Santa Clara River flow over the Freeman Diversion dam after a weekend of heavy rain in Ventura County. The water leads to a series of channels operated by United Water Conservation District on its way to a number of settling basins. In the basins, the water will be used to recharge aquifers below the Oxnard Plains. ANTHONY PLASCENCIA/THE STAR

Many areas of the county have received more than twice the amount of rain than they would during a normal rain year. This includes Camarillo, where 204 percent of normal rain had fallen as of Oct. 1 compared to what would fall during an average year. Oxnard has received 209 percent of its normal rainfall, while Piru has gotten 199 percent.

Ron Merckling, public affairs manager for the Casitas Municipal Water District, said on Monday that the lake had risen by about 2 feet as of mid-morning. While Merckling couldn't say precisely how much water had settled into the lake, he did say it appeared 'this will be the greatest amount of water diverted since 2011.'

About 17,800 acre-feet of water was diverted into Lake Casitas in 2011, a little bit more than in an average rain year.

The lake was at 36.5 percent of capacity on Monday, Merckling said. An acrefoot of water measures how much water a family of four uses on average in a given year.

Any rain helps, but Ventura County — and much of the southern half of California — would need three years or more of excess rainfall to make up for the lack of rain since the drought began in 2012, said Mauricio Guardado, general manager of United

Water Conservation District, which supplies water to area farms as well as homes and businesses in parts of Oxnard and Port Hueneme.

This year's series of big storms has enabled more water to flow into creeks and rivers 'that comprise the region's watersheds,' Guardado said, as dry soil has become saturated with water.

Cleaning up, looking ahead

The intense rain Sunday did have its downside as rains carried debris to nearby storm drains, clogging them and causing flooding. The storms brought down trees and power lines during the heaviest bouts.

They also forced the closure of Pepperdine University in Malibu on Monday because of rock and mud slides along nearby roads, including Malibu Canyon Road. University officials could not say on Monday when the campus would reopen.

Meanwhile, rains damaged three rowing boats at Lake Casitas on Sunday, said Wendy Gillett, a program coordinator and coach with Lake Casitas Rowing Association, which offers rowing lessons and has numerous rowing teams. Gillett and her husband, Eric, were told on Sunday that water was gushing through the group's lakeside boatyard.

'The water was 2- or 3-feet high in some places,' Gillett said, as she recalled rushing to the boatyard where some 25 rows boats are stored.

The water was so strong that it took out part of a chain link fence that encloses the boatyard down, she said. Some of the racks on which the boats are stored were also damaged, she said.

Wendy Gillett said she's seen some heavy rains since the Lake Casitas Rowing Association was founded nine years ago. 'But what happened on Sunday was something else. It was pretty intense,' she said.

Fortunately, the area will dry out over the next few days.

Forecasters were expecting the rest of the week to bring clear skies to the area, Stuart Seto, a weather specialist with the National Weather Service in Oxnard, said on Monday.

'There could be some residual showers late Monday and early Tuesday, but then we should start seeing conditions improve,' Seto said.

Daytime highs were forecast to be in the mid-50s on Tuesday with overnight lows in the low 40s to high 30s.

Warmer weather should arrive by the weekend, Seto said, with offshore winds coming off the mountains expected on Saturday.

Staff writer Cheri Carlson contributed to this report.



Murray McEachron, a hydrologist with United Water Conservation District, watches on Monday as water from the Santa Clara River flows through a series of channels operated by the district and heads to a number of settling basins. In the basins, the water will be used to recharge aquifers below the Oxnard Plains.

PHOTOS BY ANTHONY PLASCENCIA/THE STAR



Water from the Santa Clara River meanders on Monday through a series of channels operated by United Water Conservation District heading to a number of settling basins after a series of recent storms brought rain to Ventura County. In the basins, the water will be used to recharge aquifers below the Oxnard Plains.

NY governor seeks \$2B to fix some of the oldest pipes

DAVID KLEPPER ASSOCIATED PRESS
Ventura County Star 1/24/2017



New York Gov. Andrew Cuomo is requesting \$2 billion to address water contamination and the state's aging, leaky pipes as well as fund efforts to clean up toxic contaminants like the industrial chemical PFOA tainting the tap water of Hoosick Falls, N.Y. MIKE GROLL/AP FILE

ALBANY, N.Y. - New York Gov. Andrew Cuomo wants \$2 billion to address some of the nation's oldest water and sewer systems — and while that sounds like a lot of money, it's a drop in the bucket of what the state's experts say is truly required.

They say it would actually cost \$80 billion in the coming years to replace crumbling water mains, modernize sewer systems and remove lead pipes.

Many of the state's water systems began wearing out long ago. The Erie County Water Authority had 1,453 water main breaks in 2015.

There were nearly 400 the same year in Syracuse, where local officials calculated last year that they'll need \$726 million to fix 550 miles of pipe. In New York City, an estimated 20 percent of the treated water that enters municipal pipes leaks out before it makes it to a faucet.

"It's becoming more and more of a problem," Cuomo said when he announced the \$2 billion proposal. "The time to address it is now."

One of the reasons why the state's pipes have gotten so bad is many people don't think about the need for maintenance until a pipe bursts, a river is contaminated by sewage or a toxin is found in tap water. And funding for water systems has repeatedly lost out to other pressing needs like rising education and health care costs.

This past year, however, water quality became front-page news when the industrial chemical PFOA was found to have tainted the tap water of the upstate village of Hoosick Falls.

Across the nation, the Environmental Protection Agency pegs the total cost of maintaining, replacing, upgrading and expanding the nation's sewer and drinking water systems at \$1 trillion over 20 years.

"This is often not considered a hotbutton issue. We simply just expect that our water is there and clean when we turn on the faucet," said Sen. Todd Kaminsky, a Long Island Democrat.

Long Island is the site of one of the state's most challenging water quality problems, caused by chemicals used in aviation manufacturing that seeped into the groundwater. A recent state report determined it could cost up to \$587 million and take up to 100 years to fully clean up the problem, which affects the drinking water used by 250,000 people.

Environmental advocates praised Cuomo, a Democrat, for including the \$2 billion in the budget proposal he unveiled Tuesday.

Adrienne Esposito, executive director for the Citizens Campaign for the Environment, said the money, if approved by lawmakers, would be a "game changer."

"With sewage overflows fouling our waterways and toxic chemicals making drinking water supplies unsafe to drink, the time has come to make a significant investment," she said.

The \$2 billion would be spent over five years. It would come on top of \$200 million for water projects approved by lawmakers last year. Hearings on Cuomo's budget proposal are planned with a vote expected before April 1.

How L.A. went from bone-dry to sopping wet



WITH THE thoroughfare closed, Paul Doolin uses a skateboard for his transportation as he zooms past a fallen boulder on Topanga Canyon Road in Malibu. (Genaro Molina Los Angeles Times)

By Rong-Gong Lin II and Matt Stevens
LA Times 1/24/2017

At the end of June, Los Angeles had recorded its driest five-year period since record-keeping began almost 140 years ago.

The announcement seemed like an ominous milestone, especially after an El Niño-fueled weather pattern that was supposed to drench the region had failed to materialize.

But just six months later, L.A. has seen a major turnaround.

Los Angeles is experiencing its wettest winter in years, with 14.33 inches of rain since October — more than 200% of average. That's nearly as much rain as the city gets in a typical year.

So how did Southern California go from high and dry to wet and wild so quickly?

One answer could be that lingering energy from last year's strong El Niño, combined with not-quite La Niña conditions — which typically foreshadow dry weather in California — helped set the stage for a comeback season, state climatologist Michael Anderson said.

Also a factor is the famous mass of drought-causing high pressure that once shooed winter storms away from California and was called the Ridiculously Resilient Ridge. This year, that mass of high pressure has been much more transient, shuttling between Hawaii, Baja California and California. When it has gone traveling, that's opened up a path for wet storms to reach California, Anderson said.

"It's just the right set of circumstances that everything lined up for California," Anderson said. "If things line up just right, it sets up for conditions for a very wet California."

That has meant the arrival of both cold storms from the north Pacific Ocean and warmer, subtropical moisture plumes targeting California, a perfect combination that has dumped astonishing levels of snow in the Sierra Nevada — as much as 20 to 30 feet — and dropped impressive rain in Southern California that flooded freeways and triggered mudslides.

In fact, the last rainstorm was a hybrid of both types, UCLA climate scientist Daniel Swain said. The cold, strong storm from the Gulf of Alaska combined with warmer, moister, subtropical air over L.A., which caused hail around the region and heavy, intense rain on the south L.A. County coast. On Sunday, 3.87 inches fell at Long Beach Airport, setting an all-time record for the area.

"It's not common to see a full day of soaking rain in this part of the world," Swain said.

What California is actually seeing this winter was what experts had expected last year, as a massive El Niño — a warming of ocean temperatures in the Pacific Ocean — developed.

"We have these very strong west-to-east winds — we call them zonal winds — at the jet stream level in the atmosphere that has sort of propelled this prolonged series of storms toward California ... and actually allowed these storms to strengthen," Swain said. The presence of this strong jet stream is key, Swain said, as California lies in a region in which storms often weaken as they approach the state.

Last year, the strong west-to-east winds over the Pacific Ocean did develop, but instead of being aimed at Southern California, it benefited areas to the north, especially Oregon and Washington. "This year, it really is headed right at us," Swain said.

With three storms hitting Southern California in five days, there hasn't been time to dry out between them. "We've seen water flowing now in most all of the different streams

and larger rivers in Southern California, which is the first in about six years,” National Weather Service meteorologist Eric Boldt said.

Late Monday, Gov. Jerry Brown issued emergency declarations for 50 counties, including Los Angeles, Orange, Ventura, San Bernardino and San Diego. The declarations will help counties speed up applications for state and federal disaster relief funding.

In the past, when there has been no El Niño or La Niña — neither a warming nor a cooling of the Pacific Ocean at the equator — significant rainfall for California can occur. Such “La Nada” conditions were present in the winter of 2004-05, which produced the second-wettest rainy season in downtown L.A. history. Those rains preceded devastating landslides in La Conchita in Ventura County and Bluebird Canyon of Laguna Beach.

“With a La Nada — no El Niño, no La Niña — anything can happen,” said Bill Patzert, climatologist at the Jet Propulsion Laboratory in La Cañada Flintridge. He also noted that the atmospheric river storms are coming from an area of the ocean that has warmer temperatures. “That’s a hangover from El Niño.”

The atmospheric river storms have arrived in a number and size not seen in years, said Marty Ralph, director of the Center for Western Weather and Water Extremes at the UC San Diego Scripps Institution of Oceanography.

Atmospheric rivers are long plumes of concentrated water vapor that are an important feature of the global water cycle. Strong ones can transport as much vapor as equivalent to 20 times the liquid water discharged by the Mississippi River at any given moment. Atmospheric rivers are responsible for 40% to 50% of California’s annual precipitation, Ralph said.

“When have a lot of them, sometimes we get into flooding. When we don’t have enough of them, we get into drought,” Ralph said.

The storms have benefited some Southern California reservoirs, with Castaic Lake at about 71% of capacity Monday. Northern California’s windfall has allowed water to flow into Diamond Valley Lake, a critical reserve for Southern California. The reservoir is now at 72% of capacity, up from 37% from about a year ago.

But there is still a long way to go before any victory can be declared. Lake Perris is filled to only half of its normal level. Lake Cachuma in Santa Barbara County is still only 13% of its historical average for this time of year.

“While the rain was pretty impressive and welcomed here by everyone watching the skies, it was certainly not enough to end the drought or to fill up the lake significantly,” said David Matson, assistant general manager of the Goleta Water District.

The groundwater supply is also far from recovered. Southern California has been drawing down groundwater reserves during the drought. Parched soils have absorbed much of the water, limiting runoff. And many of the region’s groundwater basins remain severely overdrawn.

“Don’t be mistaken — they are depleted ... severely depleted,” said Mark Pestrella, acting director of the L.A. County Department of Public Works. “We are not out of severe drought here in Southern California. We will need three identical years of this type of year to come out of this drought cycle.”

For instance, the Key Well level at the Main San Gabriel Groundwater Basin in Los Angeles County dropped to a historic low of 172.2 feet in October. The historic high was more than 295 feet, achieved in 1983 after one of the wettest winters in recorded California history.

The U.S. Drought Monitor recently revised its map to show no signs of drought conditions in Northern California because of recent rains. The map has been criticized by some experts for oversimplifying the situation in California who say weekly changes in weather patterns don’t mean the drought is over.

“People are still relying on bottled water in some parts of Tulare County. And some surface reservoirs are remarkably low. These are impacts that can’t be ignored when you’re assessing whether you’re still in a drought,” said Doug Carlson, spokesman for the California Department of Water Resources.



ENRIQUE NICANOR carries plywood on an improvised bridge over a creek that damaged the driveway to his house in Santa Clarita. MICHAEL OWEN BAKER FOR THE TIMES

A Laird Hamilton profile/surfing doc and water-rights film

Splashy docs put California water in focus



“WATER & POWER: A California Heist” is the compelling new documentary on state’s water politics from Marina Zenovich. (Bryan Harvey / Tim Gould Fresh Water Films)

KENNETH TURAN FILM CRITIC

LA Times 1/24/2016

PARK CITY, Utah — Marina Zenovich holds up a glass and looks hard at the clear liquid inside. “Water is right there, we see it every day. It’s something we all need, but we don’t necessarily know where it comes from.”

Rory Kennedy looks out a window at a snowy mountain and talks about seeing Laird Hamilton “surf these avalanches of water. It was really incredible, there is some awe and wonder that I will admit to.”

California may be the Golden State, but given how important water is both to our survival living in a desert and to our image as home to surfer culture, maybe the Aqua State would be a more fitting name.

In one of those only-in-Sundance coincidences, two excellent documentaries dealing with different aspects of that essential liquid are debuting here: Zenovich’s “Water & Power: A California Heist,” a scalding investigation of the politics of water, and Kennedy’s “Take Every Wave: The Life of Laird Hamilton,” a compelling look at the remarkable achievements and unbending personality of a legendary surfing innovator.

In another coincidence, both documentaries are departures from their directors' usual focuses.

Kennedy (“Last Days in Vietnam,” “Ghosts of Abu Ghraib”) smiles and says “most would agree that this is an unusual pairing to say the least” for a filmmaker whose “passion is pretty hard-hitting documentaries about social issues, paying attention to people who don’t have a voice. This was not that.”

Zenovich, best known for “Roman Polanski: Wanted and Desired” and “Richard Pryor: Omit the Logic,” grins as well when she jokes “maybe Rory should have made my movie and I should have made hers.”

Yet not only do both documentaries turn out exceptionally well, both have factors that connect to the filmmakers' life and work in an essential way.

Zenovich for her part says “I make films about difficult men,” which includes the water barons who are at the heart of her investigation into a situation so suspicious that when executive producer Alex Gibney pitched it to her he called it “ ‘Chinatown,’ the Documentary.”

More than that, Zenovich turns out to have a strong connection to both politics and California’s Central Valley, the documentary’s ground zero.

Not only was she born and raised in Fresno, her father, George N. Zenovich, represented the area in both the state’s Assembly and Senate and now has a courthouse in the city named after him.

“As a kid I went to Sacramento every other summer,” she remembers. “I know how the sausage is made.”

Though she “started out knowing nothing” about California water issues, Zenovich quickly got up to speed while investigating why people in places like East Porterville in Tulare County have no water they can drink while wealthy agricultural interests have all they need to grow high-profit, water-intensive crops.

The answer, she found, was in a little-known 1994 agreement called the Monterey Amendments, negotiated under the radar, which resulted in private companies having control over a big chunk of California’s water, a situation that infuriates Zenovich for more than one reason.

“How did it happen that this precious resource, which should have been kept for the people, has been privatized?” she asks. “And it happened behind closed doors; there should have been transparency, and there wasn’t. No one wants to tell you about it, no one is shouting it from the mountaintops.

“I wanted to tell the story of greed and the little guy. ‘Never underestimate the power of greed,’ water attorney Tony Rossman told me. ‘If you’re not a greedy person you don’t really comprehend.’ ”

Like Zenovich, Kennedy did not originate the idea for her documentary; it was the brainchild of producer Paul Speaker.

“Honestly, initially I said no,” she remembers. “With the world falling apart, why would I be doing a film about a surfer?”

But to her surprise, Kennedy found “I couldn’t let go of it. The challenge was to come to terms with the fact that I was making a surf film. I had to give myself permission to do that.” But just as Hamilton is hardly the average surfer, “Take Every Wave” has little in common with the standard surfing movie.

A visionary pioneer in both tow-in, big-wave surfing and hydrofoil boarding, someone who never took part in competitions because he was hungry for pure experience, Hamilton has gone on some spectacular ocean rides, and “Take Every Wave” has the dazzling archival footage to prove it.

But Kennedy has seen to it that the film is first and foremost an exploration of Hamilton’s dynamic, contrarian personality as revealed through conversations with the man himself, his oldest friends (even those he is estranged from) and his wife, world-class volleyball player Gabrielle Reece.

“Laird doesn’t really sit, and I needed 12 hours of sit-down interviews,” Kennedy says. “But the thing about him that is amazing is that when he’s uncomfortable he dives in. Just like in surfing, if he is fearful or scared in a situation, that’s where he goes.”

What Kennedy saw in Hamilton, what she finally felt was of value exploring, was “a person pushing his own limits, what happens in that space.

“Laird is someone who really followed his dream, who made his life what it is today. But there is a cost to being spectacular at what you do. Laird is not easy — he’s a hero but a flawed hero. He’s always kept going because he still had work to do.”

kenneth.turan

@latimes.com

City weighs state water connection

ARLENE MARTINEZ

Ventura County Star 1/23/2017

Ventura could begin actively exploring connecting to state water if the City Council approves setting aside money for a comprehensive study evaluating what it would take.

The council on Monday will consider spending up to \$653,000 to have an outside consultant prepare a report that looks at the cost, design, capacity, environmental impacts and other issues that go with connecting to state water. The city in 1971 entered into an agreement with the Casitas Municipal Water District and the state Department of Water Resources to get state water, according to the city's staff report.

The city has continued to pay to keep the option for state water but hasn't built the necessary infrastructure for the connection. The city is looking at three locations where such an intertie could happen: at Price Road and East Los Angeles Avenue, at Somis Road and East Los Angeles Avenue and near the Springville Reservoirs.

The city is considering getting water through the Calleguas Municipal Water District and is also negotiating with the Metropolitan Water District, which could pass state water to Calleguas for Ventura, the staff report notes.

The study will look at the potential benefits to Calleguas, Casitas and the United Water Conservation District. Calleguas will give \$44,100 for the study and put in an additional \$133,800 if the study shows the project can provide the agency at least 5 cubic feet of water per second in the event of a one-month Metropolitan supply outage. United is contributing \$177,900 and Casitas later is likely to help with design and construction or pay for water, the report notes.

'This system is considered an important regional project to increase system reliability by diversifying water resources,' the report states.

Also on Monday, the council will discuss the formation of the citizens oversight committee.

The committee will look at spending and make recommendations on how proceeds from a recently passed half-cent sales tax should be spent.

Monday's meeting starts at 6 p.m. at City Hall, 501 Poli St.

When rains make the earth move

Understanding the drought-to-deluge cycle in California

By Rong-Gong Lin II, Rosanna Xia and Raoul Rafoa
 LA Times 1/22/2017

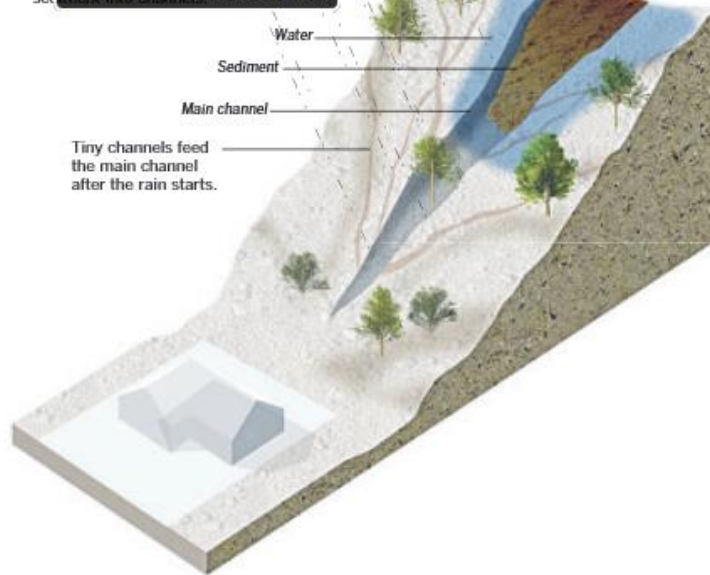
How landslides happen

Landslides can occur in many different ways. A “debris flow” is a big risk during heavy rains and is predictable to a certain degree in areas recently burned by wildfire. A “deep-seated landslide” is difficult to predict and can strike suddenly, even on a dry day.

Debris flow

1 During a storm, rain hits a hill set

When rains make the earth move



2 Water, as it rushes down the channel, can carry so much topsoil that the muddy consistency gets as thick as pancake batter or wet cement.

3 Water rushing down with only mud is called a mudflow. If the water collects rocks, branches — sometimes massive boulders — it's called a debris flow.

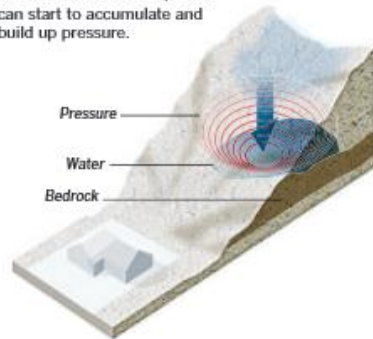


Deep-seated landslide

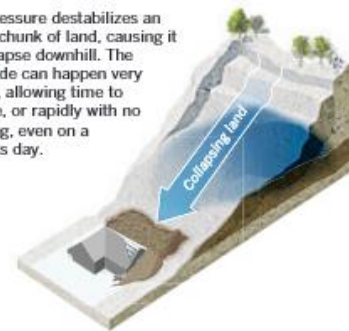
1 During multiple rainstorms, water seeps down into the ground.



2 Deep underground, such as where the soil meets bedrock, water can start to accumulate and build up pressure.



3 The pressure destabilizes an entire chunk of land, causing it to collapse downhill. The landslide can happen very slowly, allowing time to escape, or rapidly with no warning, even on a rainless day.



Sources: Jason Kean, U.S. Geological Survey hydrologist; Michael P. Lamb, Caltech professor of geology; Jim O'Tousa, Ventura County geologist. Graphics reporting by RONG-GONG LIN II, ROSANNA XIA, RAOUL RAFOA LOS ANGELES TIMES

Through five years of severe drought, El Capitan Canyon above the Pacific Ocean near Goleta endured bone-dry conditions that at times seemed like they would never end.

Then, on Friday, the skies opened up. Nearly 2 inches of rain dropped in a single hour in the Santa Ynez Mountains.

So a creek that had once disappeared came roaring alive, full of mud, brush and broken trees pouring from the burned slopes of the Sherpa fire in the summer.

Five cabins were lifted off their foundations and swept down the creek. The muddy torrent claimed 22 vehicles. One of the cabin's remains were found south of the 101 Freeway. Nearly two dozen people had to be rescued, including one trapped in a car, said Santa Barbara County fire Capt. Dave Zaniboni. The remains of five smashed vehicles floated all the way down to the beach.

What happened in a matter of minutes at the campground is emblematic of the drought-to-deluge cycle that has always been at the heart of California's climate. All it can take is an intense amount of rain in a short amount of time to create damaging flows of mud and debris that can kill people and destroy buildings.

The flows are part of nature. But the situation has become more dangerous as humans came to inhabit these paths of destruction.

"There's a competition between the growth of the mountains and the erosion from the rainstorms," U.S. Geological Survey hydrologist Jason Kean said. "They're in this constant battle."

California's dramatic shift in the last few months — from extreme dryness to some of the strongest storms in a decade — has brought mudslides that have closed roads, damaged vehicles and homes and left residents on edge. On Friday night, Highway 17 — the key route between Silicon Valley and Santa Cruz — was closed for hours after sliding mud and a fallen tree blocked all southbound lanes, causing a commuter nightmare.

One Sierra highway alone has endured nearly 20 major slides. And a rare warm winter storm two weeks ago sent rains that deposited 10,000 cubic yards of decomposed granite that shut down all westbound lanes of Interstate 80 west of Lake Tahoe for more than 12 hours.

"It's truly a battle," Caltrans spokeswoman Liza Whitmore said.

The situation is expected to get worse in Southern California on Sunday, when a storm — which could be the most powerful to strike the region since 2010 — moves in. Officials have warned of mudslides and mudflows.

Why do landslides happen during a storm?

In a burned area, a wildfire can make the soils repellent to water, creating a floodlike flow on the ground that picks up rock and debris, Kean said.

In an area that has not burned, soil can become saturated. Pressure builds up underground, and soil starts moving and begins picking up mud and debris as it starts flowing downhill.

Water rushing down with only mud is called a mudflow. If the flow picks up rocks, branches and sometimes massive boulders, that's called a debris flow.

Mud and debris flows are types of shallow landslides, generally defined as less than 15 feet deep.

Another type of shallow landslide involves a saturated hillside that collapses but does not move very far, such as one that buries a roadway with dirt and rocks from a neighboring slope. They can happen up to an hour after a burst of intense rain. "There were widespread shallow landslides as recently as 2005" in Southern California, Kean said.

What's the easiest type
of landslide to predict?

Landslides that strike in recently burned areas are the easiest to predict, as wildfires have burned away roots of trees and vegetation that had kept soils in place.

Sometimes, authorities have accurately predicted when debris flows will occur, based on forecast rainfall rates, and have called for evacuations of homes before the rivers of mud and debris begin flowing.

Can debris flow still
catch people off guard?

Yes. In 2010, the winter after the worst fire in L.A. County history, a debris flow — which one resident described like a "Niagara Falls" — flowed down La Cañada Flintridge's northernmost neighborhood when a 10-ton boulder clogged a critical basin, plugging up the drain like a giant stopper. More than 40 homes were damaged.

It came as a surprise because the storm was supposed to be fast moving, but unexpectedly stalled and dumped rain at an alarming rate. The forecast that authorities had relied on in the days leading up to the three-day storm had called for a light to moderate rains. No evacuations had been ordered.

How much rainfall is needed to trigger mud or debris flow?

In Southern California's unburned areas, 10 inches of rainfall during the winter is needed to nearly saturate the ground. After that point, a burst of rain of just one-quarter of an inch an hour can trigger widespread shallow landslides, including debris flow, Kean said.

Since July 1, downtown Los Angeles has received 11.33 inches of rain as of Friday, which is 178% of average at this point of the winter. Santa Barbara has received 12.03 inches, which is 149% of average.

But for burned areas, mud and debris flows can strike with only intense rainfall, even if the ground is not saturated.

What's the least predictable type of landslide?

The kind that can strike on a dry day.

In areas where the bedrock is very deep, rainwater can seep deep underground during multiple rainstorms. During a series of repeated heavy storms, water can eventually start to accumulate and build up pressure, Kean said.

The pressure can destabilize an entire chunk of land, causing it to collapse downhill. The landslide can happen slowly, and show warning signs like cracking or subtle movements, allowing people time to escape. But they can also strike rapidly with no warning, even on a rainless day months after the end of winter.

This is called a deep-seated landslide, involving landslides greater than 15 feet deep.

Often, deep-seated landslides strike in areas with a history of such events.

The USGS has warned that such landslides can become active many months after a very wet winter.

What's an example of a deep-seated landslide?

An example of where a deep-seated landslide has occurred is Bluebird Canyon of Laguna Beach.

One occurred on a foggy morning in June 2005 after heavy rains fell between the previous December through February. No rainfall occurred during or just before the landslide. Seventeen homes were destroyed and 11 seriously damaged.

There has been a history of devastating landslides in Bluebird Canyon.

The neighborhood suffered a slide in October 1978 that destroyed more than 20 homes. The California Division of Mines and Geology said the heavy rains between December 1977 through April 1978 are believed to have played a role, along with a history of landslides and erosion at the site, and weakness in the rock.

What about the coastal hamlet of La Conchita in Ventura County? Did landslides there come as surprises?

The first landslide, in March 1995, came as no surprise, Ventura County geologist Jim O'Tousa said. The summer before, officials had observed ground cracks and other signs of a pending landslide. A sheriff's official was assigned to patrol the area, and town meetings were held to prepare the community for what was coming.

Then about 24 inches of rain hit the region in January — much more than the average of about 4 inches for that month. The slide hit March 2.

The slopes started sliding at a pace so slow that residents could outrun it. The patrol officer was still knocking on doors as the ground was moving and got everyone down the hill in time, O'Tousa recalled.

"The groundwater finally built up to a high enough level to destabilize the slope," O'Tousa said.

The second landslide in 2005 occurred at the end of an intense 15-day rainy period that saw heavy precipitation throughout Southern California. This slide came with no warning, and buried 10 people, killing them.

The 2005 landslide was actually a "remobilization of part of the 1995 slide," O'Tousa said. The 1995 landslide had fractured and was sitting in the bottom of the canyon, he explained.

Then in 2005, when enough water saturated the bottom of the canyon, the material came flushing out of the canyon — a speed of 20 mph — and flowed into the neighborhood where the fatalities occurred.

Have any bright ideas regarding your water supply?
If so, we want to hear from you!

Please Join Us...



What: Calleguas Municipal Water District is seeking public input on the development of local water supplies that can be used if imported supplies are cut off for an extended period in an emergency, such as a seismic event. Meetings will include a brief overview presentation followed by a brainstorming session about what supplies, conservation measures, or other actions could be taken to meet local needs during an extended outage of imported supplies.

When: Tuesday, January 24th - 6:30 p.m. to 7:30 p.m.

Where: Thousand Oaks Library, 1401 Janss Rd., Thousand Oaks, CA 91320

When: Monday, January 30th - 6:30 p.m. to 7:30 p.m.

Where: Camarillo Library, 4101 E Las Posas Rd., Camarillo, CA 93010

The meetings will be streamed on Facebook Live
More information... info@calleguas.com

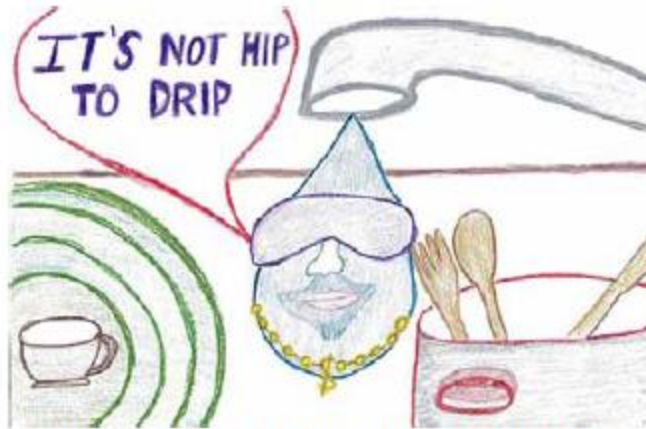
Follow us on  and www.calleguas.com for critical water resource updates.

Sunday, January 22, 2017 The Star

Remember - irrigation off during the rain
and for up-to 48 hours afterwards!



Print this reminder
www.LVMWD.com/Rain-Signs



Chris Lee's poster will be featured in the MWD calendar.

Student Interpretations of “Water is Life” on Display at LVMWD

A dazzling array of student artworks interpreting the theme, “Water is Life” will be displayed at Las Virgenes Municipal Water District (LVMWD) Headquarters, 4232 Las Virgenes Road in Calabasas, from January 24-31 during regular business hours.

Each year thousands of young artists create water conservation messages in a contest sponsored by the Metropolitan Water District of Southern California, of which LVMWD is a member agency. Free 2017 wall calendars featuring several of the artworks will also be available to visitors. This year's edition includes local artist Chris Lee, a third grade student at Somac Elementary School, whose poster was chosen to represent LVMWD in the MWD calendar.

LVMWD General Manager David W. Pedersen said, “These impressive artworks reflect how young people view the importance of water. The messages they share show their concern for protecting our water resources now, and for future generations. We invite the community to view their thought-provoking creations.”