

'Atmospheric river' drenches drought-stricken California

October 26 2021, by Olga R. Rodriguez



The North Fork of the Kaweah River, which flows from Sequoia National Park, is seen swollen with frothy, black water, Monday, Oct. 25, 2021, in Three Rivers, Calif. Credit: AP Photo/Brian Melley

A powerful atmospheric river storm that swept through California set rainfall records and helped douse wildfires. But it remained to be seen how much of a dent it made in the state's drought.

The weather system weakened as it moved south but still dropped enough rain Monday evening to cause mudslides that closed roads in the San Bernardino Mountains northeast of Los Angeles.

The atmospheric river storm, a long and wide plume of moisture pulled in from the Pacific, came ashore in Northern California over the weekend.

Drenching rains caused widespread flooding and rock slides. Strong winds knocked down trees and toppled two big trucks on the Richmond-San Rafael Bridge near San Francisco. Pacific Gas & Electric reported that 646,000 homes and businesses lost power, though most had it back by Monday.

By early Tuesday, light rain and snow was still falling in northern parts of California and the lone remaining flood warning was in Sonoma County north of San Francisco, where stream levels were slow to fall.

Despite the problems, the rain and mountain snow were welcome in Northern California, which is so dry that nearly all of it is classified as either experiencing extreme or exceptional drought.

The wet weather also greatly reduces the chances of additional wildfires in a region that has borne the brunt of another devastating year of blazes in the state.



In this photo provided by Mammoth Mountain Ski Area, falling snow collects on cars in a parking lot at Mammoth Mountain, Monday, Oct. 25, 2021, in Mammoth Lakes, Calif. Credit: Christian Pondella/Mammoth Mountain Ski Area via AP

The National Weather Service called preliminary rainfall totals from the storm "staggering." Four inches (10 centimeters) fell Sunday in downtown San Francisco, making it the fourth-wettest day on record for the city.

"It's been a memorable past 24 hours for the Bay Area as the long talked-about atmospheric river rolled through the region," the local weather office said Monday. "We literally have gone from fire/drought conditions to flooding in one storm cycle."

Northeast of San Francisco, 5.44 inches (13.82 centimeters) fell on downtown Sacramento, shattering the one-day record for rainfall that had stood since 1880.

Along the state's central coast, nearly 5.4 inches (13.72 centimeters) of rain was recorded at California Polytechnic State University in San Luis Obispo County. In Southern California, 1.1 inches (2.79 centimeters) fell in Beverly Hills.



In this photo provided by Mammoth Mountain Ski Area, snow falls on Mammoth Mountain, Monday, Oct. 25, 2021, in Mammoth Lakes, Calif. Credit: Christian Pondella/Mammoth Mountain Ski Area via AP

Interstate 80, the major highway through the Sierra Nevada Mountains to Reno, Nevada, was closed by heavy snow early Monday. In California's Colusa and Yolo counties, state highways 16 and 20 were shut for several miles because of mudslides, the state Department of Transportation said.

The same storm system also slammed Oregon and Washington state, causing power outages affecting tens of thousands of people. Two people were killed when a tree fell on a vehicle in the greater Seattle area.

Water levels at Lake Oroville, a major Northern California reservoir, rose 20 feet (6.10 meters) over the past week, according to the state's Department of Water Resource. Most of the increase came between Saturday and Monday during the height of the storm, [KHSL-TV](#) reported.

Justin Mankin, a geography professor at Dartmouth College and co-lead of the Drought Task Force at the National Oceanic and Atmospheric Administration, said the cycle of going from years-long drought to record-breaking downpours is expected to continue because of climate change.



The North Fork of the Kaweah River, which flows from Sequoia National Park, is swollen with frothy, black water, Monday, Oct. 25, 2021, in Three Rivers, Calif. Credit: AP Photo/Brian Melley

"While this rain is welcome, it comes with these hazards, and it won't necessarily end the drought," Mankin said. "California still needs more precipitation, and it really needs it in high elevations and spread out over a longer time so it's not hazardous."

Christy Brigham, chief of resource management and science at Sequoia and Kings Canyon National Parks, said the rain was a big relief after the KNP Complex fire torched an unknown number of the giant trees in the

park, along with thousands of pines and cedars.

"This amount of rainfall is what we call a season-ending event," Brigham said. "It should end fire season, and it should end our need—to a large degree—to fight this fire."

Over the weekend, the California Highway Patrol closed a stretch of State Route 70 in Butte and Plumas counties because of multiple landslides within the massive Dixie Fire burn scar.



In this photo provided by Mammoth Mountain Ski Area, snow falls on Mammoth Mountain, Monday, Oct. 25, 2021, in Mammoth Lakes, Calif. Credit: Christian Pondella/Mammoth Mountain Ski Area via AP



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Matthew Landry wrings out a mop as he dries out his garage on C Street in San Rafael, Calif., on Monday, Oct. 25, 2021. Landry says shoes were floating in his garage when his street flooded during Saturday's storm. Credit: Alan Dep/Marin Independent Journal via AP



Water flows at the inflow to Lake Kaweah, a large reservoir in Three Rivers, Calif., Monday, Oct. 25, 2021. Credit: AP Photo/Brian Melley



A flooded sign remains after water had receded on C Street in San Rafael, Calif., on Monday, Oct. 25, 2021. Credit: Alan Dep/Marin Independent Journal via AP



A wind surfer surfs in the rain in Long Beach, Calif., on Monday, Oct. 25, 2021.
Credit: Brittany Murray/The Orange County Register via AP



Wet weather is no barrier for joggers along the bike path in Long Beach, Calif., on Monday, Oct 25, 2021. Credit: Brittany Murray/The Orange County Register via AP



Robert Schmidt cleans up after Saturday's storm in front of his home on C Street in San Rafael, Calif., on Monday, Oct. 25, 2021. During the storm, the street was under water, with several inches of water entering Schmidt's garage. Credit: Alan Dep/Marin Independent Journal via AP



A wind surfer surfs in the rain in Long Beach, Calif., on Monday, Oct. 25, 2021.
Credit: Brittany Murray/The Orange County Register via AP



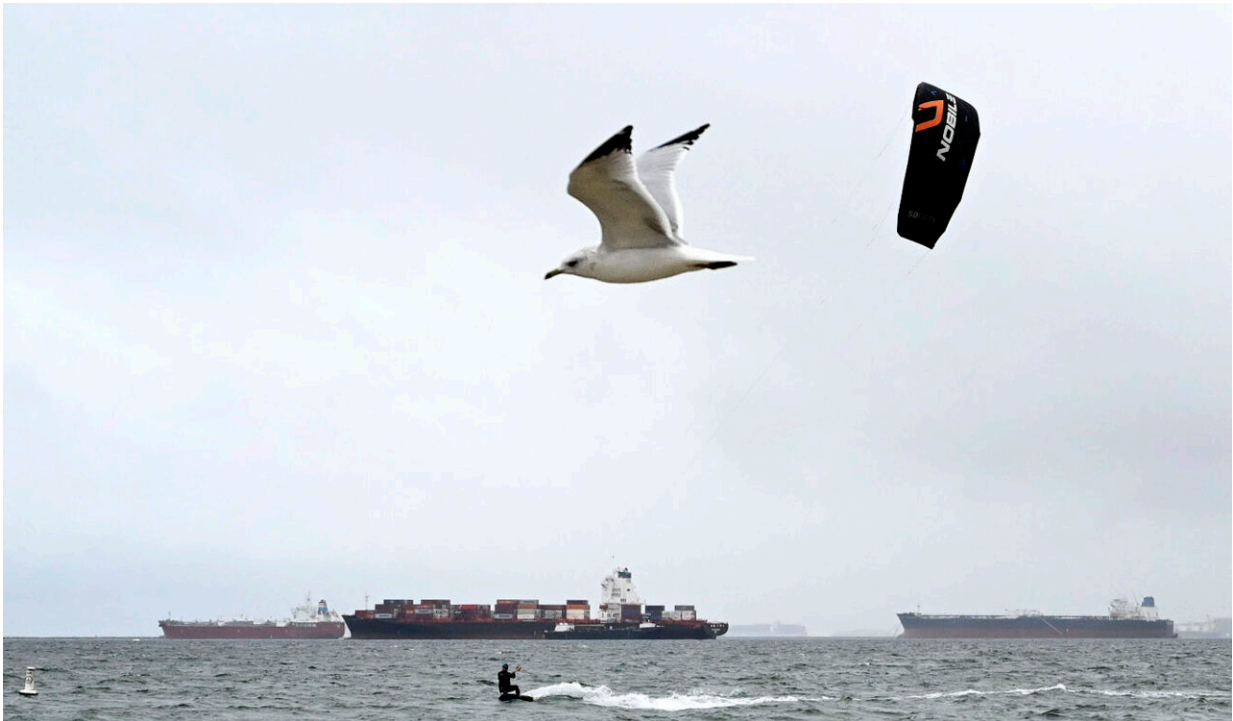
Rain continues to fall in Long Beach, Calif., Monday, Oct. 25, 2021. Credit: Brittany Murray/The Orange County Register via AP



A man attempts to stay dry while riding along Colorado Boulevard in Pasadena, Calif., during a rainstorm, Monday, Oct. 25, 2021. Credit: Sarah Reingewirtz/The Orange County Register via AP



Wet weather is no barrier for joggers along the bike path in Long Beach, Calif., Monday, Oct. 25, 2021. Credit: Brittany Murray/The Orange County Register via AP



A wind surfer surfs as a bird flies by in the rain, Monday, Oct. 25, 2021, in Long Beach, Calif. Credit: Brittany Murray/The Orange County Register via AP



MoShawn Moore attempts to stay dry using a borrowed umbrella while walking to a bus stop on Colorado Boulevard in Pasadena, Calif., during a rainstorm, Monday, Oct. 25, 2021. Credit: Sarah Reingewirtz/The Orange County Register via AP

Cal Fire, the state firefighting agency, did not declare the wildfire season over or cut staffing to lower winter levels.

"We'd like to see some more rain coming our way before we look at reducing staffing," spokesman Isaac Sanchez said.

The long-term weather forecast for California suggests drier-than-normal conditions, Mankin said.

"To end different aspects of the drought, you are going to need a situation where parts of California get precipitation over the next three months that's about 200% of normal," he said, adding that "despite this really, really insane rainfall, the winter is probably going to be drier than average."

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