



News from the Emergency Management Committee Chair (04/07/23)

4.5 earthquake near Hollister rattles store shelves, even felt across SF Bay Area

[ABC 7 News reports](#) a preliminary magnitude 4.5 earthquake struck San Benito County Tuesday afternoon, according to the [United States Geological Survey](#).

The quake hit two kilometers north of Tres Pinos at 3:23 p.m., USGS said.

The California Geological Survey says the quake occurred near Hollister in the area of the Calaveras Fault Zone. They say the shaking was felt by geologists in the CGS Bay Area office.

Aftershocks can be expected as officials continue monitoring the region.

So far, there are no reports of any major damage or injuries.

In Hollister, the quake was strong enough to topple products on aisle floors at grocery stores.

The owner of Hollister Super, Chang So, said the quake seemed longer than other ones in the past.

"A little bit of a jolt and then it kind of rolled on a little bit but it wasn't really terrible," So said.

Hollister Super manager Elvira Bustillos said it was a little scary. Customers and employees were shaken up. To read the complete story, [click here](#).

First All-Women Led Incident Management Assistance Team Paves the Way in Region 9.

[FEMA has announced](#) during a disaster, FEMA deploys Incident Management Assistance Teams (IMAT). These rapidly deployable teams provide the federal government's initial coordination and response capability prior to – and in the immediate hours following – a serious incident.

[FEMA Region 9](#) IMAT-2, based in Oakland, Calif., is the first all-women led team. Together, they have handled disaster response and recovery operations in Arizona, California, Hawaii and Nevada, all the way to U.S. territories of Guam, American Samoa in the South Pacific and the Commonwealth of the Northern Mariana Islands in the North Pacific.

To read more on this historical team, [click here](#).

These parts of California face flood risk from snowmelt, spring sun and can be very dangerous.

[The Los Angeles Times reports](#) a relentless three months of heavy rain and snow, California is facing yet another environmental threat — sunny skies and balmy weather.

That's right, [after announcing the deepest snowpack in decades](#), state officials are warning that runoff from melting snow will send torrents of water rushing from the peaks of the Sierra Nevada to the foothills and valleys thousands of feet below.

Of particular concern is the Tulare Lake Basin and other areas of the Central Valley that have [already seen storm flooding this year](#) and remain in the path of snow runoff and releases from nearby dams. Major waterways such as the San Joaquin River, and tributaries, will see treacherous conditions as well.

“If you're recreating in rivers and streams, the water is going to be cold and high and fast,” said Karla Nemeth, director of the California Department of Water Resources. “Very, very dangerous.”

Temperatures are forecast to rise into the 80s in the Central Valley in the coming days, which could produce some snowmelt. But experts say the biggest threat will probably not arrive until temperatures reach the 90s for an extended period of time.

“That's when you can expect that those flows are going to start really picking up,” said Jessica Chiari, a meteorologist with the National Weather Service in Hanford. “That's usually not likely in April — it's usually going to be late summer when that starts. Usually June is when we start getting the temperatures up in those mid-90s for extended periods of time.”

As of Tuesday, the National Weather Service's [River Forecast Center](#) shows that the Merced River at Stevinson remains above flood stage, or the point at which water can overtop banks and create hazards for people and properties nearby. The San Joaquin River at Newman, Patterson, Vernalis and Mossdale is above monitor stage, indicating a potential to approach flood conditions.

“We'll keep a close eye on those areas, and we can expect to see these monitoring flood stages kind of fluctuating, but water levels remaining high, for the duration of the next few months,” said Jeremy Arrich, manager of the Division of Flood Management with the California Department of Water Resources.

Yet predicting exactly when “the big melt” will occur is difficult.

“We're into that time of the year where the sun is up in the sky longer during the day, and the more often we have clear sunny skies, the more radiation you're going get on the snowpack,” said Dave Rizzardo, the department's hydrology section manager.

“Unfortunately it's more of a week-to-week weather pattern,” he said.

[Warming conditions are expected](#) in Central California between Wednesday and early next week, with high temperatures climbing to about five degrees above normal by Monday afternoon, according to the National Weather Service.

That includes temperatures around 80 degrees in the San Joaquin Valley. Temperatures at higher elevations in the nearby Sierra mountains could climb to the 40s and 50s.

Chiari said some melting is possible at temperatures above freezing, 32 degrees, but the biggest concern will be when temperatures in the valley start climbing consistently into the high 90s — likely around midsummer.

Higher elevations with dense snowpack at [250% of normal or more](#) could hold until late August or early September, she said. The National Oceanic and Atmospheric Administration's [extended outlook](#) for April, May and June shows equal chances of above- or below-normal temperatures in the state.

But reservoir operations can also affect flooding. As water managers release water from dams to make room for incoming flows, it can add pressure to rivers and tributaries downstream, keeping water levels high.

Officials don't foresee many rivers and tributaries that are already at flood stage going down in the near future "because some of those are due to dam releases," Chiari said.

The National Weather Service has issued a [flood advisory](#) along the Kings River in Fresno, Kings and Tulare counties until 9 p.m. Thursday because of floodgate releases from the Pine Flat Dam.

"River or stream flows are elevated," the advisory said, warning of "minor flooding in low-lying and poor drainage areas."

Specific areas that will experience minor flooding include Sanger, Reedley, Kingsburg and the Kings River Golf and Country Club.

A similar flood advisory is in effect in Fresno and Madera counties along the San Joaquin River until 9 p.m. Thursday due to releases from the Friant Dam, with parts of Fresno, Mendota, Biola, Friant and Millerton Lake expected to experience flooding.

Meanwhile, a [flood warning](#) will remain in effect along the Merced River at Stevinson "until the river falls below its flood stage," the National Weather Service said.

For more information, [visit the full article](#).

What a difference a year makes: From nearly no snow to a potentially record-breaking pile-up in California.

[CNN reports](#) after a remarkable series of winter storms, California water officials reported Monday in their April snow survey the Sierra snowpack is among the largest on record, dating back to the 1950s.

The state's Department of Water Resources surveys mountain snowpack once a month through the winter, and the April survey is usually the most consequential. Officials use the measurement to forecast the state's water resources for the rest of the year.

Last year's survey was pitifully low. Water officials had just a small patch of shallow snow to measure after a disappointing winter. The snow depth on April 2 was just 2.5 inches – part of a disastrous multiyear dry spell that triggered water cuts across the state.

Twelve months later, the mountains are now loaded with white gold. South of Lake Tahoe at Phillips Station, as snowflakes fell from the surrounding hills, officials measured a snow depth of 126.5 inches and a snow water equivalent – how much liquid water the snow holds – of 54 inches.

Snowpack in the California Sierra is 221% of normal for this location at this time of year, officials at the Department of Water Resources said. Statewide, snowpack is averaging 237% compared to normal for the date – a significant boost after the back-to-back storms.

Sean de Guzman, snow survey manager for the state Department of Water Resources, said this is the “deepest snowpack” he has personally ever measured, noting that there have only been three other years when California snowpack has been greater than 200% of average in April.

“This year is going to join that list and be another year well above 200% of average,” de Guzman told journalists at a briefing Monday. “We still are waiting for more snow data and snow survey results to come in from our various cooperators and partners. But as of this morning, as of right now, it’s looking like this year, statewide snowpack will most likely be either the first- or second-biggest snowpack on record dating back to 1950.”

Snowpack in the Sierra is critical to the state’s water resources. The snow acts as a natural reservoir – melting into rivers and human-made reservoirs through the spring and summer – and accounts for 30% of California’s freshwater supply in an average year.

The state’s largest reservoirs, which were recently at critically low levels, have been replenished and are running higher than their historical averages.

While the heavy rains caused widespread flash flooding and several feet of snow trapped residents in their homes in the higher elevations, the deluge of snow and rain has largely improved California soil moisture and streamflow levels after being gripped by the drought for so long.

California Gov. Gavin Newsom last month also announced the removal of some drought restrictions, while the Department of Water Resources said it will increase the amount of water deliveries to 75% of requested water supplies this year – up from the initial plan of only 5% last year.

“Even though we have this extraordinary snowpack, we know that the droughts are getting deeper and more frequent, and that means we have to use water efficiently no matter what are hydrologic conditions,” Department of Water Resources Director Karla Nemeth said. “And the governor has emphasized that as the path forward for California, and to make sure that we are resilient as an economy and for our environment that we all continue to use water wisely in the state.”

To find out just how much snow the Sierra Nevada were buried under this winter, [Airborne Snow Observatories Inc.](#), which provides its data to California’s Department of Water Resources, flies over the range to gauge what’s fallen.

“We measure snowpack wall-to-wall over mountains from aircraft using lasers and spectrometers,” said Tom Painter, the company’s CEO. “From that information, we can then know the full distribution of how much water there is in a mountain snowpack and also how fast it’s going to melt. That’s allowed us then to change forecast errors from being pretty large to very small and really dramatically changed water management in the west.”

The planes fly for about six hours at a time, collecting different kinds of data through open portals in the belly of their planes, which they process and deliver within about 72 hours to help municipalities allocate water resources, generate hydroelectricity and meet environmental metrics.

“The scanning LIDAR is a fancy laser pointer, essentially, that sprays out laser pulses – about 500,000 pulses per second – flying along at 23,000 feet, and measures how long it takes for the laser pulse to go out, hit the surface and come back,” Painter said. “And we can use that information to then know the surface of the snow. Every square foot of mountain snow is touched by our lasers.”

The scientists then compare this data to when they’ve flown over the same area when there wasn’t any snow.

“The difference between those two is snow depth,” Painter explained. “Depth times density is equal to what’s called snow water equivalent, which is the most important water metric out there that allows civilization to exist in the Western US. It really is the mountain snowpack that drives all of this civilization.”

The year-to-year difference couldn’t be starker, Painter said, adding that this year, there will be snow in the Sierra into the summer.

Last year, the company ended its flyover season in late May; this year, they expect to be flying until August.

For the Tuolumne River Basin around Yosemite National Park – which supplies water to San Francisco and other Bay Area municipalities – imagery from last year this time is mostly dark blue: barely any snow. This year, the same area is swathed in orange, yellow and white, indicating snow depths of 10 to 20 feet.

On Mammoth Mountain in the eastern Sierra, about 60 feet of snow has fallen this year, breaking the old record set in 2010. And snow depths have reached more than 100 feet in some areas around Mammoth. The amount of snow is so profound that the resort has already announced that the ski season will last [through the end of July this year](#).

“It’s fascinating to look at how the cliffs up on the upper mountain have really gotten buried and the gullies between them are filling in to where they just are kind of disappearing,” Painter noted, adding that he’s never seen Mammoth Mountain this covered.

For more information, [visit the full article](#).

Watch the rebirth of California’s ‘phantom’ Tulare Lake in striking before-and-after images

[The Los Angeles Times reports](#) a once-mighty body of water is rising again in Central California.

[Tulare Lake](#) was once the largest freshwater lake west of the Mississippi River and was last full in 1878. It was mostly drained in the late 19th and early 20th centuries as its tributaries were dammed and diverted for agriculture.

In recent weeks, [after relentless storms](#), once-depleted rivers are roaring from the Sierra Nevada into the valley, spilling from canals and broken levees into fields as the phantom lake reemerges.

These satellite images from NASA show the farmland west of Corcoran, a town of around 22,000, before and after flooding.

NASA's MODIS satellite imaging system shows where floodwaters refilled parts of the once-dry Tulare Lake in California over recent weeks. The false-color images show water in deep blue and vegetation in bright green.

(National Aeronautics and Space Administration)

In 1983, a record-setting year of rain, Tulare Lake reached its most recent high point, flooding some 82,000 acres of farmland.

“Every 15 years or so, in the wake of a record winter storm or heavy spring snowmelt, the dams and ditches cannot contain the rivers,” Mark Arax wrote in *The Times* that year. “When that happens, the great inland sea, at least a hint of it anyway, rouses from its slumber.”

In this interactive slider, the image on the left shows farmland in October 2021 on what was previously Tulare Lake. The image on the right, from March 24, 2023, shows murky water overtaking vast swaths of the land.

Some 10,000 acres of farmland have already flooded, and more inundation is likely as [California's record-setting snowpack](#) melts off.

With temperatures on the rise, communities are bracing for that next environmental threat [from the snowmelt](#).

These false-color images from NASA use a deep blue to show water and a bright green to show vegetation. The image on the left, from March 2022, shows a dry lake bed and relatively arid farmland. On the right, water has overtaken a large area and vegetation has expanded considerably.

In addition to ruining crops, the reemergence of Tulare Lake has brought [fears of contamination by Los Angeles County's sewage sludge](#).

If a sewage plant in the area were to flood, the surrounding farmland would no longer be suitable for growing human food. Nearby levees will be put to the test.

“I think what we're all hoping for at this point is that it melts gradually,” Antoinette Serrato, a meteorologist with the National Weather Service in Hanford, said of the snowpack. “If it melts gradually, then most of the levees are designed to be able to hold that.”

Before white settlers arrived [in the Central Valley in the 1800s](#), Tulare Lake was the center of life for the Native Yokut people who lived by its shores and along the rivers.

Then farmers began diverting water and claiming land in the lake bottom.

The lake's rise is “just a very small reminder of what was once here,” Leo Sisco, the tribe's chairman, said in an interview with *The Times* last month. Before and After images and article is [here](#).

Riverside County Feels Effects Of Paramedic, EMT Shortage

[The LAist reports](#) shortage of emergency medical technicians and trained paramedics continues nationwide. In Southern California, the shortage has affected response rates and is causing the Riverside County Board of Supervisors to [reconsider](#) its longtime partnership with provider American Medical Response.

Why now: A little over three years after the COVID-19 pandemic began in the United States, a shortage of emergency medical technicians and paramedics still remains. Emergency workers in Riverside County have [given accounts](#) of insufficient paramedic staffing on vehicles operated by American Medical Response, the county's emergency ambulance provider. As a result, Riverside County Fire paramedics have had to pick up the slack.

The backstory: American Medical Response and other EMS agencies have laid blame for the shortage on [pressures and dangers](#) brought on by the pandemic. Last Tuesday, at the Riverside County Board of Supervisors meeting, officials denied a one-year extension of their current contract with AMR, which is scheduled to end in June 2026.

What's next: Regional AMR director Jeremy Shumaker said the company is working on making advanced paramedic certification training more appealing via "sign-on bonuses, automatic pay raises, and educational benefits," but that growth from those changes is slow. The county is also amending its emergency services model so that calls not in need of immediate medical attention are re-routed to a different dispatch system.

Funding Opportunities

FY22 Homeland Security Grant Program (HSGP) for Federally-Recognized Tribes in California RFP

[The Governor's Office of Emergency Services](#) has created this program to support building or sustaining security enhancement projects that fall within the parameters of the Cal OES HSGP. Funds awarded under HSGP must be used to support statewide preparedness activities. The enhancement project must address high-priority preparedness gaps, and contribute to the tribe's capability to prevent, protect, mitigate against, respond to, or recover from acts of terrorism.

The purpose of Fiscal Year 2022 HSGP Tribal RFP, for Federally-Recognized Tribes in California, is to support building or sustaining security enhancement projects that fall within the parameters of the Cal OES HSGP. Funds awarded under HSGP must be used to support statewide preparedness activities. The enhancement project must address high-priority preparedness gaps, and contribute to the tribe's capability to prevent, protect, mitigate against, respond to, or recover from acts of terrorism.

Eligible applicants include tribal governments.

The deadline to apply for this funding is **Monday, April 17, 2023**. Total estimated funding available is \$650k. To view the full grant guidelines, [click here](#).

CAL FIRE Forest Health Research Program (FY 2022-23)

[The Department of Forestry and Fire](#) has created the Forest Health Research Program is to fund scientific research that expands our knowledge in topics related to forest health

and wildland fire. The outcomes of these projects will support agencies, organizations, landowners, and policy makers, while furthering the goals of the California Forest and Wildfire Resilience Action Plan and California Climate Investments.

The application will consist of a concept proposal followed by review and selection. Selected applicants will be invited to submit a full proposal followed by a second review and selection period.

Concept proposals are due by 3 p.m. (PDT), April 27, 2023.

Full invited proposals are due by 3 p.m. (PDT), July 13, 2023.

The Forest Health Research Program (hereafter “Research Program”) was established as part of CAL FIRE’s plan for implementing the California Forest Carbon Plan. It is one of several CAL FIRE programs funded through the California Climate Investments (CCI) program, Greenhouse Gas Reduction Fund.

The mission of the Research Program is:

1. To identify and prioritize research topics in forest health and fire science critical to the State of California
2. To fund sound scientific studies that support forest landowners, resource agencies, and fire management organizations within the state.
3. To ensure scientific information generated from the program is made available to support decision making and policy
4. To further the goals of the Wildfire and Forest Resilience Action Plan, California Forest Carbon Plan, the California Natural and Working Lands Implementation Plan, CCI, and AB 32 Global Warming Solutions Act.

The program, procedures and requirements apply only to “stand-alone research” projects, where research-related activities are the only activities proposed. Research activities are no longer eligible as a component of larger management-oriented Forest Health projects.

The following topics have been identified as priorities for study for the Research Program for FY 2022-23. Topics are numbered for reference, but not ranked in terms of priority. Research proposed under this solicitation must address one or more of these priority topics. Research projects should be focused on and relevant to California ecosystems and their management.

1. Disturbance, recovery, and strategies for various types of landowners to increase forest resilience in an altered future climate.
2. Implementation, effectiveness, impacts, and tradeoffs of current and alternative management strategies to reduce unwanted wildfire impacts, increase carbon storage, sustain and promote biodiversity, improve water and air quality, and provide regional economic benefits.
3. Contemporary range of variation and trends in fire regimes, forest conditions and distributions in California ecosystems (particularly those less well studied) in relation to historical or pre-European settlement conditions or processes.

4. Forest products and utilization of forest residues related to fuel reduction and forest health treatments.
5. Human dimensions, socio-economic considerations, and environmental justice issues related to forest health and wildfire management.
6. Improved prediction of wildland fire spread, behavior, severity, patch size, and potential impacts, particularly under extreme weather conditions and/or within the wildland-urban interface. In addition, the following special topics have been identified as priorities for the Research Program for FY 2022-23:
7. Leveraging U.S. Forest Service Forest Inventory and Analysis (FIA) data to inform future forest management.

Eligible applicants include individuals, nonprofits, public agencies, and tribal governments.

CAL FIRE will grant funds from the Research Program to public and other nonprofit universities and affiliated academic institutions, local agencies (e.g. counties and special districts), state agencies, federal agencies, Native American tribes; private forest landowners; and non-profit 501(c)(3) organizations (e.g. fire safe councils, and land trusts).

Projects must be focused on and relevant to California forests and other ecosystems and their management. A significant portion of the geographic area proposed for study must be contained within California and may include adjacent lands contiguous and representative of California sites. Any sites external to California and discontinuous to study areas within the state require justification. Study areas may not be located outside the United States.

The deadline to apply for this funding is **Thursday, April 27, 2023**. Total estimated funding available is \$5.5 million. To view the full grant guidelines, [click here](#). To view the online application, [click here](#).