Crescenta Valley Water District

Weekly News Articles

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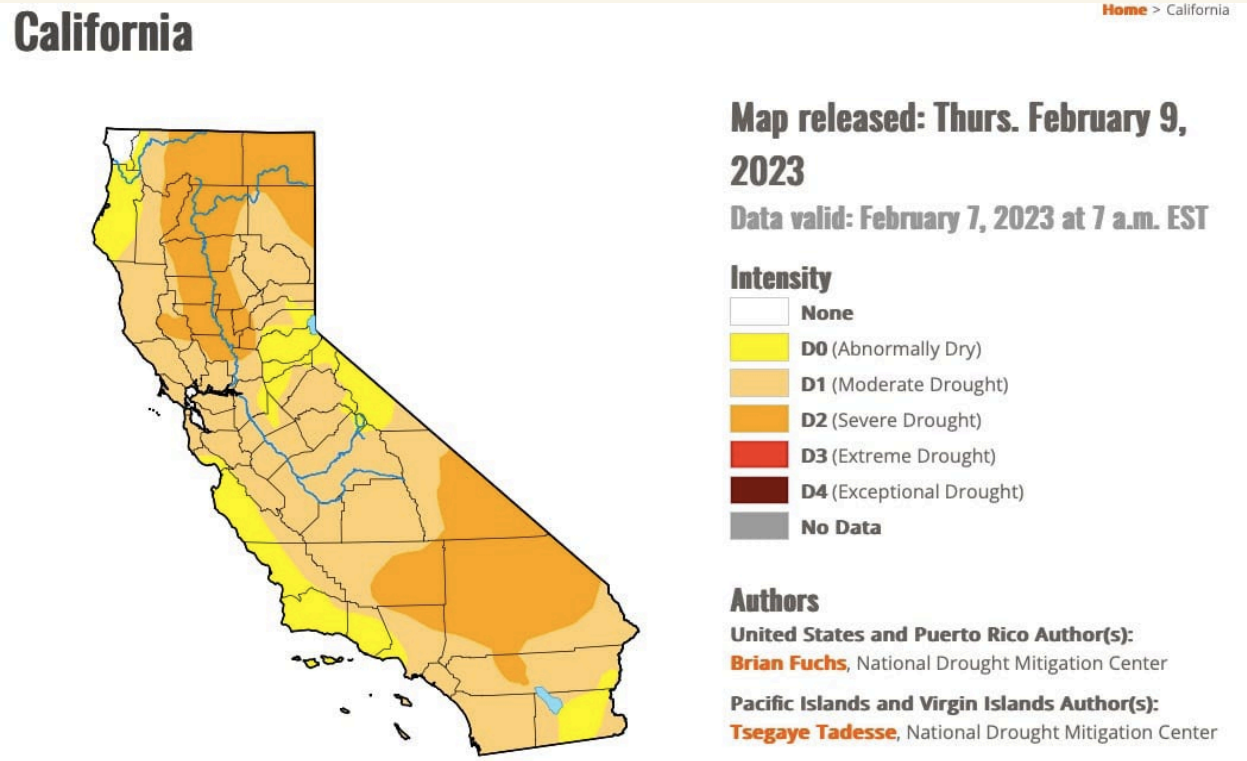
Courthouse News

February 13, 2023

Newsom signs executive order to increase statewide stormwater capture

California must take aggressive measures to preserve precious water supplies even as scientists assess how much recent rainfall will alleviate drought conditions.



The latest drought tracker map for California as of Feb. 9. (US Drought Monitor / Courthouse News)

SACRAMENTO, Calif. (CN) — California is under new orders as of Monday to aggressively work to protect all water supplies from weather extremes brought on by climate change.

Governor Gavin Newsom signed an executive order to expand statewide storm runoff capture capacity, noting how years of prolonged drought finally paused after three weeks of atmospheric river storms slammed

the Golden State at the beginning of the year. Those storms have been followed by a mostly dry February, and the governor warned the state could see a return to warm and dry conditions during the remaining weeks of the rain season.

Current projections indicate that hotter and drier weather conditions could reduce the state's annual water supply by up to 10% by the year 2040. And the state drought tracker, last updated Feb. 9, still shows most of California in moderate to severe drought — particularly in the agricultural hubs of the southern Central Valley and northern Sacramento Valley.

Newsom's order continues conservation measures, and allows the State Water Board to reevaluate requirements for reservoir releases and diversion limitations to maximize water supplies north and south of the Sacramento-San Joaquin River Delta.

Governor Gavin Newsom walks the Deer Creek area to survey flood conditions in California on Jan. 8, 2023. (Office of the Governor/ Courthouse News)

The governor also directed different state agencies to provide recommendations on the state's drought response actions by the end of April. Those directives could include the possibility of terminating emergency provisions that are no longer needed, with greater clarity about the year's hydrologic conditions.

Heavy rains in fall 2021 gave way to the driest January-March in over 100 years, Newsom noted. And while recent rainfall helped increase snowpack to "impressive" levels and replenish reservoirs, drought conditions still threaten vulnerable communities with unstable water supplies.

Groundwater use accounts for 41% of the total water supply, but as much as 58% in a critically dry year, with approximately 85% of public water systems relying on groundwater as their primary supply. Groundwater basins take much longer by months to recharge from heavy storms than surface reservoirs do, state water scientists have noted — which makes it difficult to tell how much recent storms helped California's water bank. The state data exchange center reports that some of the state's key reservoirs are still below historic average levels.

"The frequency of hydrologic extremes that is being experienced in California demonstrates the need to continually adapt to promote resiliency in a changing climate," Newsom said in a statement. "To protect water supply and the environment given this new reality, and until it is clear what the remainder of the wet season will hold, the executive order includes provisions to protect water reserves, and replace and replenish the greater share of rain and snowfall that will be absorbed by thirstier soils, vegetation and the atmosphere."

The governor pointed to more than $8.6 billion already committed in the last two budget cycles to build water resilience. Newsom's proposed 2023-2024 state budget suggests adding an additional $202 million for flood protection and $125 million for drought related actions.

https://www.courthousenews.com/newsom-signs-executive-order-to-increase-statewide-stormwater-capture

Western Water

February 16, 2023

California Water Agencies Hoped A Deluge Would Recharge Their Aquifers. But When It Came, Some Couldn't Use It

The start of 2023 brought a parade of torrential Pacific storms to bone dry California. Snow piled up across the Sierra Nevada at a near-record pace while runoff from the foothills gushed into the Central Valley, swelling rivers over their banks and filling seasonal creeks for the first time in half a decade.

Suddenly, water managers and farmers toiling in one of the state's most groundwater-depleted regions had an opportunity to capture stormwater and bank it underground. Enterprising agencies diverted water from rushing rivers and creeks into manmade recharge basins or intentionally flooded orchards and farmland. Others snagged temporary permits from the state to pull from streams they ordinarily couldn't touch.

Yet not everyone was able to fully capitalize on Mother Nature's gift.

"When it comes, we have to be prepared to capture as much [water] as possible and put it through our recharge facilities."
~Kassy Chauhan, executive director of the North Kings Groundwater Sustainability Agency

Drowning land with floodwater to repay groundwater debts requires agencies to navigate a state permitting system that isn't nimble enough to adapt to sudden changes in weather. Agencies must file complex, costly plans months ahead of California's notoriously fickle rainy season, a guessing game some didn't bother with given the likelihood of another dry La Niña winter. And, in some cases, inadequate infrastructure prevented agencies from spreading water to where it was needed while

other recharge projects just haven't moved along fast enough to gulp the deluge.

The barrage of water was in many ways the first real test of groundwater sustainability agencies' plans to bring their basins into balance, as required by California's landmark Sustainable Groundwater Management Act (SGMA). The run of storms revealed an assortment of bright spots and hurdles the state must overcome to fully take advantage of the bounty brought by the next big atmospheric river storm.

"Groundwater recharge is still happening, but we really are still struggling with managing these large volumes of water when they are occurring," said Helen Dahlke, groundwater hydrologist at the University of California, Davis.

SGMA Success Hinges On Recharge

California in 2014 became the last state in the West to adopt a framework for regulating the use of groundwater, ending decades of largely uncontrolled pumping that caused wells to go dry and land to sink, particularly in the San Joaquin Valley.

Under SGMA, agencies were required to craft plans detailing how they would prevent the overdrafting of their groundwater savings accounts and bring their basins into balance by 2040 or 2042 (depending on the severity of overdraft). The plans are also supposed to avoid "undesirable results" like degraded water quality, land subsidence, stream depletion and harmful effects on drinking water wells. If deadlines aren't met, the state can intervene and impose an interim management plan for an individual basin.

Floodwater streams through an open canal gate onto a Gemperle Farms' orchard in Stanislaus County. On-farm recharge is a key strategy for replenishing overworked groundwater basins in the San Joaquin Valley. (Source: Sustainable Conservation)The dominant strategy of the sustainability plans, particularly those submitted by agencies with critically overdrafted basins in the San Joaquin Valley, is capturing and depositing stormwater underground during wet winters to use during future dry years. Therefore, the success of many sustainability plans hinges upon capturing the type of rain California saw early in the year, said Kassy Chauhan, executive director of the North Kings Groundwater Sustainability Agency, which covers the city of Fresno and surrounding areas.

“In the post-SGMA world, the importance of [recharge] has become extremely elevated, particularly because you never know when the next wet season is going to come,” said Chauhan. “When it comes, we have to be prepared to capture as much as possible and put it through our recharge facilities.”

The scope of the groundwater problem in the San Joaquin Valley, California's agricultural heartland, is daunting. Experts estimate the region's annual groundwater deficit is about 2 million acre-feet – or enough to fill San Luis Reservoir near Los Banos, a key component of two major state and federal water projects.

'A Wet, Wet Year'

For many basins in the San Joaquin Valley, 2023 has provided the first real dousing since the first batch of sustainability plans was submitted in 2020, allowing agencies to activate their groundwater recharge schemes.

"It's been a wet, wet year. Some creeks are flowing harder than they did in 2017," said Jarrett Martin, who helped craft sustainability plans for the critically overdrafted Delta-Mendota Subbasin on the west side of the San Joaquin Valley. "Most folks are looking for opportunities to capture flood flows and recharge."

Martin said agencies and property owners have been able to steer flood releases from Los Banos Creek Detention Dam into designated prime groundwater recharge areas. Martin's water district and others have constructed a control structure to move floodwater into the Delta-Mendota Canal as part of multi-benefit project that boosts local water supply, reduces flood risk and protects nearby habitat restoration.

Since 2020, Kings Subbasin agencies have dedicated 1,280 acres of land specifically to groundwater recharge. An assortment of recharge basins are scattered throughout the Fresno metropolitan area and resemble small lakes or ponds. By the time the projects and related infrastructure necessary to fill the basins are completed, Fresno Irrigation District anticipates being able to recharge 25,000 acre-feet per month. For context, the California Aqueduct has a maximum capacity of 26,000 acre-feet per day.

The Kings Subbasin's long-range planning is reaping rewards in 2023, said Chauhan, who is also the special projects manager for Fresno Irrigation District.

“Had we not had those additional facilities, we wouldn’t have had any place to park the water and it would have been lost to the region,” she said. “To be able to convert those [sustainability] plans into projects that we were able to benefit from is remarkable because it’s hard and challenging.”

Planning recharge basins is easy on paper but executing them is a major undertaking: Agencies often need to negotiate with private sellers to secure land and apply for state grants or other funding to help pay for the project. Recharge basins carry a hefty price tag – the total cost of Fresno Irrigation District’s ponds was approximately $140,000 per acre – and are often tough to sell to ratepayers and board members as they sit dry more often than they are wet.

Fortunately for the district, rising water levels on local creeks and rivers provided ample water for the district’s recharge basins in early 2023. Chauhan said the district has been able to divert flood releases from nearby Friant Dam under a deal with the city of Fresno and bank water that otherwise would have flowed north into the Sacramento-San Joaquin Delta. It has also made excess water from Pine Flat Dam on the Kings River available for free to growers interested in on-farm aquifer recharge.

Excess Water in Demand

There could be additional recharge opportunities for the Fresno agencies in the near future considering a late-January aerial survey measured 2.3 million acre-feet of snow-water equivalent holding in the mountains above Friant Dam, which can impound a maximum of 520,000 acre-feet of water.

Along with massive recharge ponds, water managers southeast of Fresno in the Kaweah Subbasin are enlisting individual farmers and property owners to expand groundwater recharge on their own land.

Aaron Fukuda, general manager of the Tulare Irrigation District, said local farmers lined up in droves during the last deluge to bring in floodwater from the Kaweah River and the Friant-Kern Canal.

Aaron Fukuda, general manager of the Tulare Irrigation District. (Source: Tulare Irrigation District) He credited the district's emergency drought program, which allows farmers to gain credits for intentionally flooding their land, with creating demand for the excess water. In previous wet winters, Fukuda said, there was little interest in flooding farmland, but this time around the water is seen as precious and necessary to comply with SGMA.

"We've always done recharge but now we're eking out an extra 15-20 percent," said Fukuda, who is also general manager of the Mid-Kaweah Groundwater Sustainability Agency. "It's a one-on-one relationship we now have with our growers...now all of a sudden we have 200 recharge agents."

Stabilizing the water supply for disadvantaged communities is another objective for Tulare Irrigation District. Fukuda said the district has helped communities locate the best areas for recharge as outlined in its sustainability plans.

In coordination with Self-Help Enterprises, a non-profit based in the San Joaquin Valley, Tulare Irrigation District is planning a 20-acre recharge basin that will improve the drinking water supply for the community of Okieville. Residents of the rural town, located in western Tulare County, saw their drinking water wells go dry during the 2012-2016 drought and ultimately received emergency bottled water supplies from the state and Self-Help Enterprises.

“Instead of doing recharge out in the middle of nowhere, we try and focus it around disadvantaged communities,” said Fukuda. “We take some of the excess agriculture supply that we didn’t have a home for and put it beneath the communities.”

A clearer picture of just how much water soaked into the ground from the nine atmospheric rivers that hit California in January won’t be known until the California Department of Water Resources (DWR) issues its spring groundwater level update. The report tracks data that groundwater sustainability agencies are required to submit each spring and fall and helps gauge how much recharge occurred during each rainy season.

Permitting & Planning Hurdles

There was certainly enough water to go around in early January but some willing takers missed out on the floodwaters that raced out of rivers, streams and dams due to red tape.

Most managed or intentional groundwater recharge activities are conducted by parties that already hold existing water rights to a water source. But under California water law, agencies must get permits from the State Water Resources Control Board to capture and later use floodwater from a stream they don’t hold rights to.

These permits allow the agency to maintain control of the diverted floodwater, including the ability to later sell or transfer it; diversions solely for flood control purposes do not require a permit.

“It’s almost like we need a different [permit] application for recharge that is just considered for flood events.”
~Sarah Woolf, farmer and president of Water Wise, a Fresno-area water consulting firm.

But the state’s permitting system isn’t easy to navigate nor is it cheap or timely, critics argue.

“This is exactly the [weather] scenario that most of the [sustainability] plans demonstrate as to how they are going to fix the bulk of the problems,” said Sarah Woolf, farmer and president of Water Wise, a Fresno-area water consulting firm. “Unfortunately, the permitting process is not happening in a streamlined way.”

Woolf, who has helped agencies in Madera and Fresno counties obtain temporary floodwater permits, said farmers or water districts typically hire engineers or lawyers to develop their plans and help conduct environmental studies. They also have to cover application fees that can cost tens of thousands of dollars. Parties that do receive permits then can be required to do things like install fish screens or stream gauges and submit other data to the State Water Board.

There’s also a time element to the process as it can take the State Water Board multiple months to issue a permit because of mandatory public comment periods and consultation meetings. Therefore, agencies must submit their plans well before the rainy season begins. The maze of requirements and uncertainty as to whether floodwaters will even come available often deter agencies from applying to the State Water Board, added Woolf.

“For a small, low-financed water district, it would be very cumbersome,” said Woolf. “It’s almost like we need a different application for recharge that is just considered for flood events.”

Woolf said one of her agricultural water supplier clients currently has a permit to divert floodwater from the Chowchilla Bypass but can't meet the stringent permit conditions. While some farmers in the Triangle T Water District are taking water out of the bypass, which protects towns in Madera and Merced counties from flooding, they aren't receiving recharge credits toward their sustainability plans.

"We will not be able to operate under that permit," she said, adding that only five property owners within the district are diverting floodwater from the bypass under their pre-existing water rights and not the temporary permit.

Pathway to Permits

Amanda Montgomery, permitting program manager for the State Water Board's Division of Water Rights, countered that the state has made a concerted effort in recent years to streamline the permitting process as well as help fund recharge projects. Since 2015, the state has issued 22 temporary permits, primarily in the San Joaquin River watershed. Of that total, since December 2022 the regulator has issued six temporary permits authorizing more than 174,000-acre feet of diverted floodwater during winter and spring 2023.

Montgomery highlighted two recent temporary floodwater permits that were fast-tracked, including a 180-day permit issued Jan. 6 that allows the Merced Irrigation District and DWR to divert and store water from a local creek. The permit was the first issued through a new state pilot program and authorizes Merced Irrigation District, which co-manages one of California's 21 critically overdrafted groundwater basins, to take up to 10,000 acre-feet of high-water flows.

Montgomery added that the State Water Board and DWR are seeking to jumpstart similar projects that are focused on taking peak stream flows when there is low risk to fisheries and existing water right holders, like during flooding events.

"It's important to focus on the fact that there is this pathway out there," said Montgomery.

Along with on-farm recharge, Tulare Irrigation District stores floodwater underground by diverting it to strategically located basins or ponds. (Source: Aaron Fukuda/Tulare Irrigation District)Deciding whether to grant a temporary permit becomes more complicated on streams where most or all of the water is already appropriated to senior water right holders or reserved to meet environmental laws, such as the Tulare Lake Basin. She said the State Water Board worked for years with the Association of California Water Agencies and others on determining how high the flows need to be before issuing permits on an individual river or stream.

“The flows on our streams, a lot of that water is spoken for by senior right holders,” said Montgomery. “The hard part is determining the diversion criteria.”

While UC Davis’ Dahlke credited the State Water Board for trying to improve the permitting process, she said it would be better if it could decouple temporary floodwater permits intended for recharge from traditional surface water rights. She argued the current system is causing missed recharge opportunities and that the processing time for applications needs to be drastically reduced.

“What happened this year is that everyone predicted a dry winter and then all of a sudden we see all of this excess water,” said Dahlke. “So now people are submitting applications that likely won’t get approved until the end of March. By that time, the window might be closing.”

Under SGMA, agencies are required to consider how their sustainability plans will affect groundwater-dependent ecosystems, so many agencies have committed to restoring wetlands or creating recharge basins specifically intended to benefit plants and animals that depend on groundwater for their water needs. Similar to recharge basins designed primarily to boost water supplies, like the ones in the Fresno area, these wildlife-friendly basins require broad-based planning.

Many of these projects are still in the early planning stages and weren’t in position to fully catch water this winter, said Abigail Hart, project director for The Nature Conservancy’s California Water Program.

“A lot of those projects haven’t been developed yet, there hasn’t been enough time,” said Hart, who is helping water agencies in the Tule Subbasin on their sustainability plans.

Hart said there is plenty of enthusiasm for these types of habitat restoration projects in the San Joaquin Valley but that a number of hurdles remain, including land acquisition, permitting and funding.

State’s Recharge Push

To prepare for the types of rain bursts experienced in early 2023 and bolster California’s underground water savings account, Gov. Gavin Newsom has set a goal of expanding groundwater recharge capabilities by 500,000 acre-feet in potential capacity. The State Water Board, DWR and the California Department of Fish and Wildlife are working to reduce red tape and fund the 340 recharge projects proposed under the assortment of sustainability plans.

“The state is capturing more water supply by accelerating groundwater recharge permitting and projects that mitigate the impacts of prolonged drought and support long-term sustainable groundwater management,” said DWR Director Karla Nemeth in a statement. “Projects that capture

available precipitation, stormwater, or floodwaters to recharge depleted groundwater basins need to be ready to capture high flows when they are available during each wet season, typically October through April in California."

DWR is also planning to expand Flood-Managed Aquifer Recharge (Flood-MAR), a strategy that involves capturing floodwater and conveying it to floodplains, farmland and wildlife refuges. Since 2021, DWR has been conducting airborne electromagnetic surveys across individual basins to determine areas most compatible with Flood-MAR and other recharge projects. The surveys now cover the entire Central Valley. Newsom has additionally directed DWR to fast-track Flood-MAR-related proposals, as it did with Merced Irrigation District's recently launched project on Mariposa Creek.

Hicham ElTal, deputy general manager of the Merced Irrigation District, said he hopes the Flood-MAR project will inspire other agencies to take advantage of new state resources that are now available for groundwater recharge efforts.

"The goal is that this effort paves the way for acquiring temporary permits to divert flood flows by groundwater sustainability agencies throughout the state to help groundwater basins reach sustainability," said ElTal in a statement.

Lessons Learned

The parade of atmospheric river storms that began the new year offered valuable insight into how far California has to go to be able to fully corral bursts of snow and rain.

In addition to a more efficient permitting process for floodwater, UC Davis' Dahlke said the state should incorporate more nature-based solutions to increase recharge. Strategically pushing back levees and allowing rivers to spread across floodplains can benefit the environment, groundwater tables and reduce flood damage, she said.

Dahlke said the state's outdated water infrastructure also hinders recharge efforts, noting that most canals were designed to slowly deliver

water during the growing season, not distribute floodwater in a managed fashion. Building out conveyance systems to better connect floodwaters to prime recharge areas – the cornerstone of Flood-MAR – will be costly but important.

“Infrastructure is definitely a bottleneck,” said Dahlke.

Martin, who is also general manager of the expansive Central California Irrigation District, which serves water across more than 143,000 acres in western Stanislaus, Merced and Fresno counties, said planning and gaining support for recharge projects is vital during drought years. He hopes the recent storms will serve as a reminder of how flooding farmland can also improve soil quality by flushing salts.

“We need to think 20, 30 or 40 years down the road so we don’t look back and say ‘man, all of our soils are salty and we can’t really grow anything’,” said Martin.

“You can’t do these projects overnight. You need foresight to buy the property, construct the basins, secure the funding and be ready for the next storm. That process can take one to three years, depending on funding,” said Chauhan.

Montgomery, with the State Water Board, encouraged water agencies to use the state’s resources and submit for temporary floodwater permits well ahead of winter. She added that in addition to the 180-day permit, there is also a five-year option for floodwater recharge now available under a 2020 law that ensures agencies are better situated for future extreme weather events.

The State Water Board issued the first five-year temporary permit on Jan. 11, allowing the Omochumne-Hartnell Water District to divert 2,400 acre-feet from the Cosumnes River in Sacramento County and spread it on dormant vineyards within its service area. As a condition, the district must install fish screens at the two approved diversion sites and paid nearly $10,000 in permit fees. It received 180-day permits in 2021 and 2022 but diverted just 68 acre-feet of floodwater due to low river flows amid the drought.

Restoring groundwater levels is critical to California's future water supply and there is plenty of space to spread water and let it percolate below ground. The Public Policy Institute of California estimates the state's 515 groundwater basins collectively can hold at least three times more additional water than California's existing dams.

Groundwater recharge, whether done naturally or manually, provides a flood of benefits: Farmers get to bank water and flush salts out of their soils, community wells gain a much-needed boost and wetlands fill up to the delight of birds traveling the Pacific Flyway and the benefit of groundwater-dependent ecosystems.

If it wasn't already clear to California, the recent spate of heavy rain and snow solidified that groundwater recharge is a water supply strategy worth banking on ahead of the next big storm. The San Joaquin Valley's groundwater agencies are striving to be ready.

Said Tulare Irrigation District's Fukuda, "We're stepping it up to the next level."

https://www.watereducation.org/western-water/california-water-agencies-hoped-deluge-would-recharge-their-aquifers-when-it-came-some

LA Times

February 17, 2023

California's frigid February: Beach freeze warnings, record lows, 'very treacherous'

Marco Martinez Morales snaps a photo with his son, Marco Jr., as they frolic on a snowy roadside near Mt. Baldy.
(Robert Gauthier / Los Angeles Times)

After an epic January of rains, California's winter has turned decidedly chilly.

The state has experienced record-low temperatures from Eureka down to San Diego County, with wind chill dropping into the single digits in some Southern California mountain towns and freeze warnings spanning the Northern California coastline.

The cold conditions have kept Southern California's mountain peaks topped with thick, bright layers of snow even without significant precipitation in several weeks.

Officials hope the low temperatures are enough to maintain the essential snowpack in the Sierra, built up during the extremely wet start of the year in the state.

"We're not melting the snow, which is good," said meteorologist Ryan Aylward, with the National Weather Service in Eureka. "We want it to hold on as long as we can."

And maintaining that crucial mountain snowpack is of growing importance amid increasing concerns that climate change, rising temperatures and more frequent wildfires have caused snow to melt faster and earlier in recent years — even in the middle of winter.

A recent study in the journal Geophysical Research Letters found the early melting poses a threat to California's water system, which depends on the melting snowpack for about a third of the state's water supply.

The cold snap was particularly keen along the North Coast, where Aylward said Humboldt, Trinity and Del Norte counties recorded some of the state's only snowfall this week. He said it fell, "in some places, down to a couple hundred feet in elevation."

Snow there typically stays above 1,000 feet.

And California wasn't alone in seeing flurries at low elevations. It even snowed in Las Vegas.

California

Epic California snowpack is now the deepest it's been in decades

Drought-weary California enters February with significant snowpack. But it could still disappear quickly if dry conditions return.

Feb. 1, 2023

"It quickly became very treacherous," Aylward said. Two highways, U.S. 199 in Del Norte County and Route 299 in Humboldt, shut down briefly after issues on the roadways due to the snow early Tuesday. The following day, the Grapevine in Los Angeles County was also was closed briefly for snow — though that interstate sits at a much higher elevation.

But for the rest of the state, February has remained relatively dry — especially in contrast with January. Instead of picking up moisture from the Gulf of Alaska or northern Pacific, the latest cold fronts mostly moved

down from Canada, bringing “near-Arctic” air without precipitation, weather experts said.

But even without rainfall or much snow for most of February, the snowpack remains at high levels, said Mike Wofford, a National Weather Service meteorologist in Oxnard.

“Snowpack in the Sierra is running 200% of normal — it’s twice what it normally is,” Wofford said. “The cold air keeps it around.”

The state’s snowpack models show the mountain range’s water buildup — crucial for providing water to Southern California through the summer and fall — has fallen from its peak in mid-January but not drastically.

Starting next week, forecasts show a new system will bring more precipitation to the state, which should further reinforce the Sierra’s snowpack — and keep temperatures chilly.

California

California's snowpack is melting faster than ever before, leaving less available water

As the state gets drier, and wildfires climb to higher elevations, snow is melting faster and earlier than before — even in the middle of winter.

Feb. 14, 2023

"We do see some rain on the horizon," Wofford said.

February is tracking below average for monthly rainfall in Southern California, he said — though the region is still above average for yearly totals. But the upcoming storm could bring an inch or two of rain by the end of next week, he said.

"That by itself could bring us back up to normal for the month, just with one storm," Wofford said.

In Northern California, Aylward said, the storm could easily bring snow "down to the valley floors again" by midweek.

Most Californians, though, probably won't see snow at sea-level elevations, said Daniel Swain, a UCLA climate scientist, but he predicted there could be "unusually low-elevation" snow at the 1,000- to 1,500-foot level.

He warned the storm "could well be disruptive," especially at those elevations where residents are not used to seeing snow.

This chilly winter, if it persists, could create concerns for water recreation when warmer temperatures arrive, Aylward said.

"People are going to have to be really, really careful if they're going out to rivers this spring," Aylward said. "Rivers can be deceivingly fast flowing," especially when a strong snowpack begins to melt.

The current conditions are welcomed by skiers and snowboarders, who have been hitting the slopes across the state.

“Even when we’re not getting snow, the cold has helped us hold on to it,” said Big Bear Mountain Resort spokesman Justin Kanton, calling the run conditions “phenomenal” this week. He said the snow at the resort had “held up like a champ.”

In February in previous years, conditions had already begun to deteriorate as temperatures warmed and deep winter turned into early spring, Kanton said.

Even residents who haven’t been on skis have been performing a balancing act this month. Those who rely on natural gas to heat their homes have faced sticker shock, with many trying to balance staying warm enough with staving off shockingly high bills.

“These cold snaps in February are not necessarily unusual,” said Bill Patzert, a retired climatologist in the Los Angeles area. “There are a lot of wild fluctuations in the jet streams.

“It’s been frigid and, given soaring natural gas prices, it’s also been costly.”

Times staff writer Christian Martinez contributed to this report.

https://www.latimes.com/california/story/2023-02-17/la-me-cold-february-california

LA Times

February 12, 2023

Dramatic photos show Lake Oroville's rise after epic storms

Lake Oroville, a key component of California's water supply, looks noticeably fuller after a series of January storms.

The atmospheric rivers dumped trillions of gallons of moisture on the state, spurring widespread flooding and destruction but also providing a healthy boost to snowpack and drought-sapped reservoirs.

Lake Oroville, the largest reservoir on the State Water Project, was at 68% of its capacity on Friday — up from 28% just two months prior, according to state data. The State Water Project is a system of reservoirs, canals and dams that supplies water to about 27 million people.

The reservoir had fallen to such perilous lows that in 2021 officials closed Oroville's hydroelectric power plant for the first time since its completion in 1967.

Shocking images that year illustrated the worsening drought conditions, including exposed portions of Oroville's lakebed and a distinct "bathtub ring" indicating just how far the water had receded.

But photos captured by Times photographers this week showed a considerable improvement. Since its lowest point — an elevation of just 628.63 feet on Sept. 30, 2021 — Oroville has risen about 189 feet, reaching an elevation of 817.41 feet as of Friday.

Jeanine Jones, Interstate Resources Manager for the Department of Water Resources, said in a statement the storms "certainly helped reservoir storage in California following the driest three years in the state's recorded history."

However, it's important to continue conserving supplies, she said. Last year, a wet December was followed by the state's driest ever January through March on record.

"Over the next two months, it is important that we still see periodic rain and snowstorms to keep an above-average pace for our precipitation totals," Jones said. " While this has been a strong start, the most important measurement will be April 1 when the snowpack is typically at its highest. Californians should continue to use water wisely so that we can have both a thriving economy, community and environment."

Jones noted that groundwater, or the state's system of underground aquifers, is much slower to recover from depletion and has a long way to go before it can fully be replenished.

What's more, Southern California's other major supply of water, the Colorado River, did not benefit much from the atmospheric river storms and is still dwindling toward perilous lows. Federal officials have ordered California and six other states that rely on that river to drastically cut their use.

The wet start to the year "shouldn't take the momentum away from us continuing to work on building resiliency, recycling water and storing water when we have it," Adel Hagekhalil, general manager of the Metropolitan Water District of Southern California, told The Times last week. "We should conserve as much as we can so we can save water to have it available when we need it."

The state remains under a drought emergency declaration issued by Gov. Gavin Newsom in 2021. MWD also issued a regional drought emergency for all of Southern California in December.

Jones said the rest of the wet season will prove critical for California. The latest seasonal forecast from the National Oceanic and Atmospheric Administration shows equal chances of wetness or dryness in most of the state through April.

"For every day it doesn't rain or snow during our wettest months, we are drying out," she said. "A lot of uncertainty remains about the next two

months and water managers are maintaining reservoirs to hold as much water supply as possible while also managing flood control requirements."

Oroville is indeed capable of getting too full. In 2017, heavy rainfall flooded the area and nearly overtopped the Oroville Dam.

https://www.latimes.com/california/story/2023-02-12/photos-show-lake-oroville-rise-after-epic-storms