



CALIFORNIA DAILY HERALD

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All about power

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Rain floods California

Governor declares state of emergency

Two weeks of continuous rain has left areas of California reeling from floods and mudslides. The hills around Los Angeles have seen rain falling at the rate of 2 inches an hour, for several hours. The resulting flash floods have washed away at least 300 homes, and damaged bridges and roads.

Across California thousands of structures have been damaged and approximately 10,000 have been evacuated from potential slide areas. The coast road in Malibu has been closed along with the 5 through Santa Clarita and several other major roads.

In the north 10 people were killed and at least 20 injured when a large slide into Lake Berryessa occurred north of Spanish Flat. The resulting tidal wave swamped the community of Spanish Flat and a nearby resort. Areas around Napa Valley have seen over 10 different smaller-scale slides, with 3 houses lost and 2 roads closed.

Rain along the eastern edge of the Sierras has brought flooding to the inland empire, filling reservoirs to overflowing and causing LADWP to divert water into underground storage. Throughout the Central Valley all of the water management districts are reporting that their Sierra reservoirs are full.

The governor has declared a major disaster for the entire state, the Mayor of Los Angeles has also issued an emergency declaration authorizing DWP to take extraordinary measures to divert water from the city. Other cities, such as Sacramento have followed suit. The President has responded to the Governor's declaration by declaring a national flood emergency for all of California.

At the combined State and Federal Emergency Operations Center in downtown LA officials are drawing up plans to evacuate up to 1.5 million people at risk from flooding. The number could increase if the forecast rains continue to fall.

A major evacuation is already underway in the Natomas district of Sacramento. A levee breach along the Sacramento river is pouring

floodwaters into the area around Sacramento airport. Emergency management officials predict that water levels in areas of northern Sacramento could reach four or five feet deep in some areas. Approximately 50,000 are being evacuated from threatened areas in Sacramento.

FEMA has not yet discussed where it will put the displaced, but they are contacting facilities as far away as Arizona as potential receiving sites for flood victims.

In LA the Wilshire and West Adams areas



have been the hardest hit so far, with water beginning to stand in the streets. Throughout the city it is not uncommon to see water coming up from manholes, which has resulted in loss of power in several areas due to safety concerns. Even areas with little standing water can be affected by the flooding, as underground and buried infrastructure gets flooded below ground.

In addition to power, telecommunications, including phone, cable, and Internet services have all be affected by the flooding. Verizon has lost at least one major switching center in West Los Angeles to flooding, resulting in phone and Internet outages in Northeast Los Angeles and most of eastern Los Angeles County.

Rain flowing down hills and mountains has resulted in mudslides throughout the state. In LA City the areas around Brentwood and Pacific Heights, Hollywood, and Sherman Oaks have been particularly hard hit. Three major slides have occurred, burying 20 homes and killing 3. Another 300 homes have been evac-

uated in these areas due to the increased risks for slides.

Almost all of the passes over the mountains have seen increased risk of slides and flooding. A major slide along the 5 north to Santa Clarita has closed the 5 and damaged power lines running between northern California and Los Angeles. The slide has also affected several major Internet cables, with AT&T, Zayo and Level 3 all reporting major cuts in their cables due to the Santa Clarita slide. All of the providers said they are currently able to work around the cuts, however researchers report a 50% slowdown in Internet speeds in the Los Angeles area.

With Internet long-haul and distribution cables running all through California, slides and flooding have been causing numerous disruptions and slow downs. A major Internet hub in west Sacramento is threatened by floodwaters and is being shut down, while a major cable crossing across the Sacramento River may be threatened due to erosion. In some of the more remote communities the loss of one critical cable can mean

the total loss of telecommunications.

Jim Sherman, the town manager of South Lake Tahoe reports that a slide near the small town of Twin Bridges cut CA Route 50 in and out of town, but also cut the main fiber optic line providing telecommunications to South Lake Tahoe. "We are currently using a satellite backup system but that only gives us a low bandwidth voice capability. We can still make local calls but it can take a while to get something outside of the area. Internet is down, and with many businesses and utilities relying on the Internet to control their systems an interact with customers this has also created a lot of problems in identifying people in need or areas at risk of flooding or slides."

In addition to the Sierras, Sacramento and the Inland Empire, the areas around San Francisco and the LA basin have also been hard hit. Pleasant Valley, Grant Lake, and Tinemaha reservoirs along the Los Angeles aqueduct are all nearing capacity. The Owens River is at flood

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stage and additional water flowing into the watershed will need to be diverted. LADWP is already diverting water into underground storage, but the diversion rate is insufficient to keep up with the flows.

LADWP is also conducting diversion and other mitigation actions at Owens Lake to prevent erosion and disruption of in place dust mitigation measures as the water rises.

With the Natomas breach in Sacramento, towns all through the Central Valley have sounded the alarm. Stockton has begun executing its "flood fight" shoring up second and third lines of defense against the floodwaters. Low-lying areas, such as the delta in Sacramento County, have already been given up to the floodwaters, and emergency personnel worry it will only get worse.

The State director of emergency services has cautioned that this is only the beginning of the projected rains, and things may get worse as time goes on: "Californians should be prepared to move to higher ground, and keep an eye out for flash flooding in the mountains. This is in no way over yet"

David Johnson was driving north toward Santa Clarita at what he thought was the rainy end to an otherwise normal day. Then he felt the earth move. At first he thought it was an earthquake, the car shook and veered all over the road. Then he saw the brown mass come crashing down across the road in front of him. It looked as if the entire mountain had given way, and it had.

"I could see the ground giving way up on the hills, then suddenly part of the hill that an overpass was on also gave way. Cars, concrete, and mud were sliding everywhere" said Johnson. Johnson was one of the lucky ones, he survived the slide.

The torrential rains we have been experiencing for the past two weeks have resulted in a massive series of landslides in the Gates King and Saddletree open spaces. The Weldon Canyon slide started at the top of the nearby hills but continued on through the 5/14 interchange itself. As the ground buckled and liquefied many of the interchange flyovers came crashing down.

At current count the death toll stands at 50 in the Weldon Canyon slide but crews are still work-

Modesto Irrigation District is usually trying to figure out how to allocate water across Stanislaus County. Now its worried about how to get rid of it all. As rains fall faster than rivers and channels can drain Stanislaus County is a good example of what is happening up and down the Central Valley, and indeed across California.

Water is bubbling up everywhere, coming from storm drains and down the drainage canals that criss-cross the city. In addition to what is falling on the city extra water is flowing down from the mountains.

Both the Don Pedro and the New Melones reservoirs are at record levels. The spillways are operational and engineers are currently monitoring them for erosion. Erosion, combined with the saturation of the ground from recent rains, also means that landslides are a factor in considering dam stability. Engineers believe that continued erosion from the massive flows of water could cause damage to the spillway.

Both the Stanislaus and Tuolumne rivers feed into the San Joaquin, which is itself at

flood stage. Agricultural land around the San Joaquin has already flooded, with flood waters exceeding 2 feet in some places.

In Modesto, flooding is expected in areas around the rivers but downtown will likely be spared the worst of the flooding. Pooling and standing water has caused problems in some places, with neighborhoods along Briggsmore Ave seeing sporadic high water.

The owner of a Japanese restaurant near McHenry and Briggsmore says he has had to close due to high water in his parking lot. "The runoff from the streets and parking lots nearby have collected in my lot, and caused me enormous trouble." The storm drains in the area flow into the Briggsmore Ave canal, which, itself is at flood stage. The city reports that backups like this are becoming common, affecting not only businesses but individual residences and infrastructure.

"We are two weeks into the rain event and the water has to go somewhere. I'd just prefer it not to go into my restaurant" A sentiment reflected by many in Modesto.

On the 5 - rain then terror

ing to bring in heavy equipment to see if even more cars are buried under tons of concrete and mud. The southbound lanes of the 5 are closed, and the entire interchange with the 14 is also closed indefinitely.



Cal Department of Transportation (Caltrans) engineers are reporting that the interchange was designed to withstand earth movements, but when the ground becomes super saturated and liquefies there is not

much that they could do about it. Nor did they anticipate ground liquefaction when they specified the foundation requirements for the interchange.

The loss of the 5/14 interchange means that commuters coming from Santa Clarita and Palmdale are essentially trapped until the are reopens. Roads through the mountains are not much better, slides at Ravenna and Acton have closed Soledad Canyon road in two places. The several ranches along the road have both lost buildings and sustained significant damage due to slides.

In addition to damage to the interstates and roads, several slides deep into the Saddletree public use area have resulted in loss of electrical transmission lines and pylons. This has effectively cut off the Sylmar substation from power from Northern California. Of course flooding along numerous tributaries in the north have also disrupted hydro power production as rivers, streams, and reservoirs begin to overflow their banks.

In central Los Angeles the water has been rising consistently for the past seven days in areas of Compton, Bellflower, and Bell Gardens. This area is prone to flooding from the convergence of the Los Angeles and Rio Hondo rivers. The rising waters have already closed the El Paseo shopping center. The water is only in the parking lot but business owners in the shopping center are already worried that the flooding will reach the stores. "I've got flood insurance but that will only pay for a portion of my lost revenue. And I have to keep paying my employees, at least for now." Said one merchant who was at his store moving merchandise to higher shelves.

LADWP can only manage the water flow so far before the city drainage systems and the LA aqueduct become overwhelmed. We are quickly reaching that point. With at least another ten days of rain in the forecast we may very well reach that point.

Damage in Vernon

Vernon may be a small town nestled in the heart of Los Angeles but it has a big challenge in keeping hundreds of industries safe and operational. Recent flooding has had little effect on Vernon, thanks to the high embankments of the Los Angeles River which flows through town. However the wind and rains have taken their toll and kept both the public works department and many businesses busy responding to damage.

Wind and water weight have affected several businesses in Vernon. Many of the businesses have been around for years, and their structures were not built to withstand the kind of storm we're seeing. At least two roofs have collapsed due to water weight and leakage, and one has blown off. The debris from the roof damaged some of the towns power infrastructure, sparking a small fire.

The effects of wind and rain on the surrounding area has had a bigger effect on Vernon than what is happening within its city boundaries. The flow of natural gas from the port has been disrupted due to flooding, affecting several industries in Vernon. Its hard to make glass bottles if you cannot fuel the furnace needed to melt the glass.

And all of the problems being visited on SCE are also having effects on towns like Vernon. Towns throughout the Los Angeles area have become just another customer wondering when SCE will fix what is broken.

Flooding reaches downtown Moreno Valley

The town of Moreno Valley sits between what is known as the Badlands, and the rest of Riverside County. Today it sits between a new lake created by runoff from the Badlands, and the overflowing Santa Anna River. The town is responding to a lot of challenges caused by the rain, including the closure of businesses and the loss of power.

Flooding in the new development of Moreno Valley Ranch is certainly new to the residents, many of whom have not seen rain like this before. Cal OES and Moreno Valley Police have issued a mandatory evacuation order for the area around Moreno Valley Ranch due to flooding. Not everyone wants to leave "my house and all my collectibles are here, I've moved to the second floor, but I don't see the need to leave," said one resident. With the local elementary schools and Moreno Valley College closed evacuees that cannot find hotel rooms or friends to say with are staying at the Moreno Valley Conference Center.

Power outages have come with the flooding, with areas of high standing water experiencing outages due to water intrusion into underground facilities. What frustrates some customers is that those who subscribe to Moreno Valley Utilities can see their power restored quickly, while others wait for SCE to show up.

A SCE spokesperson said that "we have a

very large area to cover and we are getting to all our customers as quickly as possible. However we have to prioritize large outages first, and many of those in the Moreno Valley area consist of a small number of customers." For SCE 100 customers can be a small number. This means that, while its neighbors served by MVU have power, the Riverside Medical complex on Cactus Ave is without power because it is supplied by SCE.

Another challenge for emergency responders in Moreno Valley is the loss of the gas compressor station in the Gilman Springs Area. This station effectively cuts a major gas pipeline to the north, reducing gas pressure to hundreds of thousands.

Landslides also present a challenge to responders, with landslides happening in both the Lake Perris Recreation area and the Badlands. A major slide along Route 60, the Morena Valley Freeway, killed 5 drivers who were trapped in the flowing mud and debris. The slide has also closed Rt. 60, with road crews nervous about additional slides in the area. Inspectors for slide areas are in great demand, and Caltrans has road crews on overtime. Rt. 60 won't open again until it is given the all clear by the State, and Caltrans isn't giving a time estimate.

This isn't the big one, yet

In January of 1862 the Civil War was underway, but in the west it had been raining since November in the high elevations of Oregon and the water had begun to make its way into California. Sacramento and San

Capitol was moved to San Francisco to avoid the flood waters. Observers along the coast reported enormous amounts of driftwood being washed down and covering the coasts.

It was the worst disaster in California history, with approximately one-quarter of the real estate in the state destroyed. The state almost had to declare bankruptcy.

Flooding in California, and other western states, is perhaps the least known but biggest danger in terms of property damage and disruption. A 2010 study of a repeat of the Great Flood of 1862 estimated that the property cost of a flood would be nearly 400 billion dollars, with utilities taking weeks or months to restore, and up to 1.5 million people could be displaced. The disruption to business would add another 325 billion to the total losses, meaning that a repeat of the Great Flood could cost us 725 billion today. Nearly 3 times the losses due to an earthquake.

The current flood is no where near the flood of 1862. During that flood the Central Valley turned into a lake. But the current event is still big, big enough to remind everyone that rains can quickly turn California into a disaster zone.



Joaquin were under water. In the city of Sacramento people got around by boats. Dozens of houses were carried away by the flood. The State