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New flood warning system to be installed on Pilarcitos Creek

By Ashton J. Hacke
Jul 16, 2025



Pilarcitos Creek, which passes through Half Moon Bay, can swell during storms. Coastside News file photo

The San Mateo County Flood and Sea Level Rise Resilience District—also known as OneShoreline—will install new gauges and other equipment along Pilarcitos Creek in the coming months to establish an early warning system for flooding in Half Moon Bay before the upcoming rainy season.

“We want to give people an early warning of flooding and not just tell them as it’s happening that they’re flooding,” said OneShoreline CEO Len Materman.

A U.S. Geological Survey gauge currently tracks water levels along Pilarcitos Creek near Highway 1, between Dad’s Luncheonette and Fisherman’s Taverna. But because the gauge sits so far downstream, it provides little help in predicting flooding, Materman said. Crews will install a new rain and volume gauge upstream, where the creek passes under Highway 92, to alert officials earlier if water levels are expected to exceed the creek’s capacity.

“The early warning system would notify us and city emergency responders ... when we believe about 75% of the channel’s downstream capacity is being filled,” Materman said. “The gauge doesn’t just tell us how much water is at its location; the important part is whether that amount of water will exceed the downstream channel’s capacity and cause flooding. When the gauge shows we’ve reached about 75% of that capacity, it will trigger an alert to put us on flood watch. And if the upstream gauge shows 100% of downstream capacity is being exceeded, that will trigger a flood warning.”

Materman said the goal is for the city or county to be able to issue an alert to give residents enough time to move belongings off the ground and relocate vehicles. This would allow city officials to close roads and warn the wastewater treatment plant of incoming floodwaters.

OneShoreline has already begun the first phase of the project, installing the foundation for a radio repeater that will relay data from the new gauges. Crews will install the gauges within the next three months. The gauges will transmit information to the repeater and then to OneShoreline’s main communications center in Redwood City.

The Bay Area, including Half Moon Bay, has experienced atmospheric rivers in recent years that have flooded homes, businesses, and even the electrical facilities at the Coastside wastewater treatment plant. The flooding has also forced the closure of key access routes, including Highways 92 and 1.

“OneShoreline’s Flood Early Warning System has demonstrated the benefits of coordinating flood alerts,” said Half Moon Bay City Councilmember Debbie Ruddock, who serves as chair of OneShoreline’s Board of Directors. “Given what we’ve seen in Texas this past week and throughout our county in recent years, it makes perfect sense to expand the capacity of this system to notify our emergency response personnel and the public during major storms, especially in Coastside communities.”

The new system will also feed into an online flood-warning dashboard, giving Half Moon Bay residents near real-time updates. The technology is already in use in Atherton, Belmont, San Bruno and Colma.

Materman said that while the first phase began just last month, the full installation process will take time. The city and OneShoreline are still working to secure land rights for the upstream gauges, but expect the system to be in place before the rainy season begins. The California Department of Water Resources, San Mateo County, and OneShoreline provide funding to build, operate, maintain and expand the system.