

The cliff under this Seaview Drive house gave way, taking part of the house with it.

Kurt Ellison

## Cliffside Aptos homes on shaky ground

By JENNIFER SASSEEN + STAFF WRITER

The damage the Oct. 17 earthquake caused to the Santa Cruz County coastline will increase if winter brings heavy rains this year — a prospect that has some bluffside residents racing against time to save their homes.

Owners of valuable homes along Via Palo Alto in Rio del Mar, where large chunks of the bluff crumbled in some places and gaping cracks appeared in others, are hoping to obtain emergency permits from the county that would allow them to construct an extensive retaining wall along their properties.

The wall is expected to cost somewhere between \$100,000 and \$300,000 per home, Via Palo Alto resident Sandra Rettner said. It's not certain how secure the homes will be even with the wall, she said, but without it, they're not likely to weather the winter.

"A crevasse is running under our deck at this time," Rettner said. "The concern is when the rains come, because if and when we get a lot of water, it's going to go."

She and her husband built their house seven years ago, Rettner said. It was the second to the last house constructed along Via Palo Alto and was required to be grounded on 10-to 12-foot cement pillars sunk into the bluff.

Most other homes along the street are 12 to 15 years old, with some as old as 20, Rettner said. The older homes did not face such strict building requirements.

Down the street from the

Rettner residence, south of several flights of stairs leading to the beach, sits the 17-year-old Hartzell home. Its ocean-side deck, which once perched above solid ground, now rests on air. The foundation of an adjacent bedroom is even with the edge of the bluff, a large portion of which fell away during the earthquake.

Virginia Hartzell said her neighbors to the south have already evacuated their home on the advice of their insur-

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ance company. At this point, the Hartzells consider their home to be safe, but winter could change that.

"We don't feel uncomfortable now," she said, "but I think if we had heavy rains we wouldn't sleep in the bedroom."

There is also a threat to the rest of the home, particularly the side nearest the ocean, where a crack has appeared in the bluff close to the home's foundation. At the advice of engineers, the Hartzells had two 8-foot-deep piers sunk into the bluff to lend support to the structure, but are hoping to get a retaining wall erected before winter.

The wall would have to be a joint effort among neighbors, Hartzell and Rettner said, but no one is opposing it for the simple reason that they all want to save their homes.

A bit farther to the north, at 440 Seaview Drive, the owner of a home that has already partially fallen into a gully is fighting to save the bluff itself. The house sits on a peninsula high atop bluffs, large portions of which the earthquake caused to slough off into the gully, despite retaining walls encasing its sides.

Jon Ford, a contractor working on a new home across the gully, said the home at 440 Seaview Drive was built some 50 years ago and was used to film scenes for the movie "The Lost Boys." The owner intends to tear it down and lower the building pad 10 or 15 feet or more, Ford said, and then rebuild the home.

Considering that the bluffs could fail again, it seems like a

lot of work and expense to go to. However, the view makes it worth it, Ford said.

Rettner said she and her husband also knew they were taking a risk when they built their home on Via Palo Alto, although Hartzell said she and her husband did not, and probably would have thought twice.

"We were born and raised in California," Hartzell said, "but we did not realize that the cliff was so fragile."

Pete Parkinson, the county's coordinator of environmental planning, said he did not know the extent of coastal erosion precipitated by the quake, since the county's main concern has been to evacuate residents from homes that could pose a threat to life.

However, Gary Griggs, a UC-Santa Cruz geology professor, is doing an erosion study for the state of the entire California coastline, and is also working with a graduate student on a study of the extent of bluff failure the earthquake caused in Santa Cruz County. The bluff failure study should be completed in about a month, Griggs said.

While the coastline erodes at a rate of one foot per year as a general rule, the earthquake caused several feet of bluff to slough off in some areas. Still unknown, Griggs said, is how much more of the bluffs might have been weakened.

The stretch of coastline that encompasses Rio del Mar, from New Brighton Beach to La Selva Beach, was the hardest hit in the earthquake, he said, because of its composition. Bluffs in the Midcounty area are less solid than in other areas, consisting largely of sand and fractured rock — a real common rock in Mid-

county because thousands of years ago that area was under water, Griggs said.

"The whole Midcounty area is what we call an elevated marine terrace," Griggs said.

The failed bluffs threaten both homes built on top of them, which are in danger of sliding downhill, and homes built at the base of cliffs, which could be buried during a bluff failure.

That threat of burial was what prompted the state Parks and Recreation Department, which owns Seacliff Beach, to evacuate six homes Nov. 4 that were built below a bluff on Las Olas Drive in Seacliff, said Bob Culbertson, chief ranger for the Pajaro Coast District.

State parks has been overseeing the removal of trees and loose rocks and earth from that bluff in an attempt to stabilize it, Culbertson said, and residents should be able to return to their homes soon.

About a dozen sites in Seacliff have been identified as potential slide areas, he said, so trees are also being removed elsewhere.

At the end of Mar Vista Drive south of Las Olas Drive, for example, trees have been removed from bluffs where cracks appeared as a result of the earthquake. Residents Bill Walters and Bill Dowd said a large crane had been used to scrape debris off the bluffs.

In that area, homes are still set far enough back from the cliff so they do not appear to be in any immediate danger. Walters, who owns a bluffside home, said he was not concerned at the prospect of the cliffside advancing as a result of erosion.

"I'm not going to live that

long," he said.

Nancy Sensi-Isolani, who also lives in the Mar Vista Drive area and makes a habit of taking early morning walks on the beach, said the earth-quake and the work state parks is doing have wrought severe visual changes in the coastline.

"They are changing completely the look of the cliff," Sensi-Isolani said. "They are making it like a slide."

The barren and cracked bluffs will undoubtedly sustain more damage in winter rains, Griggs said. However, areas in which the bluffs have already sloughed off may be safer than other areas in which bluffs have likely been weakened, he said.

"The biggest problems are probably the areas that didn't fail," he said, "rather than the ones that did."

That's the idea behind state parks' efforts to scrape off bluffs and remove trees, Culbertson said, in areas where they could fall on people's homes, roadways and public areas, like the beach, where people would be expected to congregate.

When work is completed on the bluffs above Las Olas Drive, state parks will move north to San Lorenzo Point, in the Seabright area of Santa Cruz, Culbertson said.

Fissures have appeared in the cliffs there and can be seen running along the sidewalk. Areas have been cordoned off from the public, both on top of the bluff and below it, and state parks intends to scrape off the bluff to bring down weakened portions, Culbertson said.

"What we're dealing with is the obvious hazards to the public," he said.