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'It's a losing battle': Storms shattered Santa Cruz's iconic promenade. Is it worth fixing?



Kurtis Alexander
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Winter storms destroyed Santa Cruz's promenade. Is it worth fixing? Workers repair the cliffside on West Cliff Drive in Santa Cruz, Calif. on Jan 23.
Clara Mokri/Special to The Chronicle

SANTA CRUZ — Days after last month’s storms blasted the Santa Cruz coast, Debra Szecsei was savoring the now-sunny surroundings at her home on the city’s West Cliff Drive.

The popular oceanfront promenade in front of her house was bustling with the usual walkers, runners and bicyclists. Surfers, sea lions and sailboats basked in the shimmering sea. A warm, salty breeze blew beneath a clear blue sky. It was paradise, Surf City-style.

Still, there was no ignoring the problem here on the west side of Santa Cruz. A large section of bluff just beyond Szecsei's driveway had fallen into the sea. It was among many spots along the roughly 3-mile residential street and recreational corridor to be dramatically beaten down by waves during the parade of storms.

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The stretch of road was now closed to cars, foot traffic was confined by walls of bright orange barricades, and the ocean inched ever closer to the seaside community, all underscoring the uncertain future of this treasured yet vulnerable waterfront. The city is left with the unenviable decision of if and how to mend these damaged headlands.

"This (area) is part of Santa Cruz's identity," Szecsei said, finishing up lunch on the porch of her bluff-top home. "It's a playground everyone loves. People come here from all over and post it on Facebook. ... I hope we can save it."

Coastal communities across California are increasingly having to respond to the loss of shoreline, a result of rising seas and more intense storms driven by climate change. But few places hold the allure of West Cliff Drive.

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The storied strip begins where generations of families have spent summer days on the Santa Cruz Beach Boardwalk, passes Steamer Lane and other world-famous surf spots, and culminates in the coveted neighborhoods of the city's west side.

Erosion here is nothing new. In fact, city leaders have been putting together plans to confront the crumbling cliffs, developing a timeline for action based on the pace of erosion.

The hitch, however, is that the recent storms, in some spots, were so powerful and caused so much wear that they probably initiated measures the city did not envision taking until decades from now. Most of these measures have not been completely worked out, nor have they won regulatory approval. Crews are still assessing the extent of the recent damage.

In the hardest-hit area of West Cliff Drive, near Szecsei's home above Mitchell's Cove, the city's plans, depending on what level of decay is found, call for defending what's left of the bluffs by adding sand to the beach to serve as a buffer, fortifying the cliffs with rocks and walls, or simply allowing the promontory to tumble and with it, eventually the road, paths and perhaps one day houses. The plans don't say exactly when each of these strategies should kick in.

"We were hoping that we would have time to get to these questions," said Tiffany Wise-West, sustainability and climate action manager for the city of Santa Cruz and a civil engineer. The storms, she said, got ahead of the planning, which she attributes to the accelerating impacts of climate change.

Map: John Blanchard / The Chronicle

Fortunately, none of the many homes in the area was immediately threatened. All but one are on the inland side of the road.

Sources: City of Santa Cruz, USGS

The gap in the city planning has opened the door to no shortage of opinions about what to do with West Cliff Drive. The most controversial question will probably be when the city should surrender to the erosion and begin moving infrastructure out of the way, a policy known as "managed retreat."

A group called Save West Cliff, made up of big-wave surfers, local politicians and other city notables, has already formed with a variety of ideas, even as the Santa Cruz leaders are still coming to terms with the situation and what's at stake.

"We are Surf City, and it's a place where people can access nature," said Justin Cummings, a Santa Cruz County supervisor and former city mayor who joined the Save West Cliff group. "I'm just really hoping we can figure out a way to maintain that access.... But trying to stop the ocean from doing its thing is not going to work."

The bluffs along West Cliff Drive, over the past century, have eroded a few inches on average each year, largely the product of waves slowly scouring the coastline but increasingly because of rising seas and more violent storms.

Last month, in a matter of a weeks, some spots lost a dozen feet or more of clifftop. The toll stemmed from an unusual combination of high tides and storm surges, which launched waves as high as 25 feet at the coast. From late December to mid-January, the series of wet fronts brought 18 inches of rain to Santa Cruz.

"It's like I was on a ship," said Szecsei, recalling one of the worst nights of the storms when she thought an earthquake had struck. "I was traumatized. I've never seen the ocean so angry for so long."

From her front window, she watched the public pathway across the road drop into the sea, then part of the street: "You see that," she said, "and you say, 'Oh, my God!'"

The erosion of West Cliff Drive and its infrastructure comes in spite of decades of efforts to engineer more stable bluffs. The coastline has been widely armed with stacks of rocks, known as riprap, or concrete retaining walls. The recent storms, however, unraveled much of this work, with the city estimating 4,000 tons of riprap knocked out of place.

Scientists and engineers familiar with the area say maintaining these headlands will only become a more difficult and costly endeavor going forward.

“Over geologic time, it’s a losing battle,” said Jonathan Warrick, a research geologist for the U.S. Geological Survey who lives and works in Santa Cruz. “Sea level is going up. We’re going to continue to have these big storms, and probably more frequently in the future.”

Many experts say maintaining the bluffs may not be the right approach at all and the city, like other communities, needs to begin preparing for their inevitable retreat.

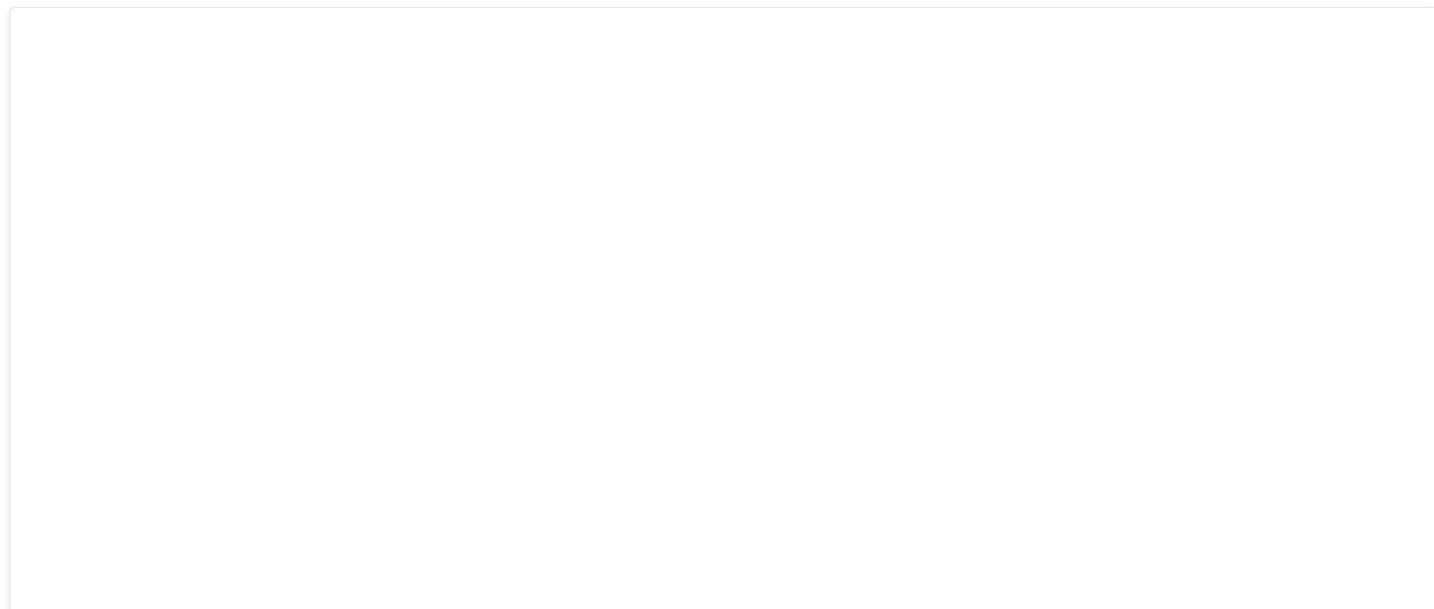
“Yes, engineers can build back pathways, and maybe there are bridges (that can support sidewalks and roads) instead of being supported by stable land,” said Lesley Ewing, an engineer who has worked for decades on erosion and recently retired from the California Coastal Commission. “But do you want to turn West Cliff Drive into a causeway with pilings? Are people going to want that to be part of their coastline? Is it even economically feasible?”

President Biden visited Santa Cruz County in the aftermath of the storms and pledged disaster aid to help repair the region’s widespread damage. The money, though, is likely to be far short of what’s needed to protect West Cliff Drive, if that’s indeed what the city chooses to do.

So far, city damage estimates have been confined mostly to replacing some armoring and patching up sections of pathway and road, coming in at several millions of dollars. More permanent fixes would probably cost tens, if not hundreds of millions, of dollars.

City work crews are already taking short-term measures to secure the most precarious parts of West Cliff Drive. They don’t want to see further slippage before a more holistic approach to the problem can be established. Recently, 200 tons of rock were dropped by cranes to the base of the bluffs near Szecei’s house.

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The city also has kept the stretch in front of Szecsei's home closed to most vehicles and turned an adjacent section near Lighthouse Field State Beach into a one-lane, one-directional road to relieve pressure on the bluffs.

Limiting traffic is one of the long-term options presented in the city's 2021 adaptation and management plan for West Cliff Drive. While city leaders haven't committed to making the new one-way section permanent, the extent of the erosion could force their hand on this adaptation strategy, making it a reality a lot sooner than ever imagined.

"I'm OK with one-way and having it be more pedestrian-friendly," said West Cliff Drive resident Szecsei, among many expressing willingness to make concessions if most of the corridor can be salvaged.

How much modification is welcome remains to be seen.

Some Santa Cruz residents have recently suggested closing the entire drive to traffic. The section currently closed has provided a glimpse of what a car-free road looks like, and many like what they see. As with similar proposals elsewhere, though, such a change would come with winners and losers and is certain to meet resistance, one of the many battles expected on West Cliff Drive as the need for sacrifice grows.

Because the city's 247-page adaptation plan hasn't yet been approved by the California Coastal Commission, which regulates shoreline activity, and because the city is still drafting its follow-up plans for implementing specific adaptation strategies, there remains no clear path forward.

As a result, every decision will be that much harder to both win consensus for and permit.

“It would have been great if we would have gotten that (planning) adopted two years ago,” city Transportation Planner Claire Gallogly said at a recent meeting of the Santa Cruz Transportation and Public Works Commission. “That’s not where we are.”

City leaders have begun setting up conversations with the Coastal Commission and local residents to try to expedite the planning.

Gary Griggs, a professor of Earth and planetary sciences at UC Santa Cruz and one of the state’s foremost experts on coastal erosion who has worked with the city, says ultimately a combination of tactics will probably be needed to address the damage on West Cliff Drive.

New concrete walls may be most effective at stabilizing the road and blufftop, he explained, but he added that they can come at a high cost and may not last. The city, he warned, should prepare for more loss.

“This storm is a wake-up call. This is probably going to get worse,” he said.

Adding to the difficulty at West Cliff Drive, unlike beaches, bluffs can’t be rebuilt easily. Beaches that wash out to sea during a storm often reconstitute when the sand washes back in. Not so for cliffs.

One of the strategies offered in the city’s adaptation plans is to release large amounts of sand upcoast of the collapsed headlands with the hope that it collects beneath the fallen bluffs to create a buffer for future erosion. The distribution of sand, though, is far from perfect and offers only limited protection.

Surfers at Steamer Lane, who have a stake in the movement of sand as well as the fate of West Cliff Drive, have had several days of good waves lately because the breaks have been fortified with sand from the storms.

Alex Birkhofer, who grew up in Santa Cruz, says he and his fellow paddlers are appreciative of what they have and hope the surf continues to stand out even as the coastline wears down.

“It’s always something with climate change,” he said. “It’s going to happen. We’ve seen changes. You just have to change with it if you want to stay here and keep surfing.”

Kurtis Alexander is a San Francisco Chronicle staff writer. Email: kalexander@sfchronicle.com Twitter: [@kurtisalexander](https://twitter.com/kurtisalexander)

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Written By
Kurtis Alexander

Reach Kurtis on

Kurtis Alexander is an enterprise reporter for The San Francisco Chronicle, with a focus on natural resources and the environment. He frequently writes about water, wildfire, climate and the American West. His recent work has examined the impacts of drought, threats to public lands and wildlife, and the nation’s widening rural-urban divide.

Before joining the Chronicle, Alexander worked as a freelance writer and as a staff reporter for several media organizations, including The Fresno Bee and Bay Area News Group, writing about government, politics and the environment.

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