

# Endless winter: The storm that defined California surfing

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Surfer Dale Dobson catches a big wave in La Jolla, California in 1969. Outsized waves defined winter surfing that year. Credit: Glenn Fye

Starting in December 1969, a series of El Nino storms barreled up from southern Baja California, bucketing rain, flooding homes and battering hillsides into mud slicks across the Southland. Federal disaster areas

were declared in 35 counties, and \$900 million in damages were reported.

The storms also, as legend has it, brought the best [surfing](#) ever experienced in California.

That winter, the waves were so big and so frequent that they quickly gained mythical status.

"These waves are pretty good, but you should have been here in '69' became a common refrain across beaches afterwards," says Peter Westwick, adjunct professor (research) of history at the USC Dornsife College of Letters, Arts and Sciences and co-author of *The World in the Curl: An Unconventional History of Surfing*. "There have been epic winters and El Nino storms since, but the winter of 1969 is still the yardstick against which all other storms are measured."

## **A surfer's paradise**

El Ninos occur when robust oceanic trade winds in the Pacific, which thrust [warm water](#) westward during the winter, grow still. Without a blustery push, the water settles along Chile and Peru where it alters our usual weather patterns. Warmer surface temperatures lead to increased evaporation of ocean water into the atmosphere, which generates strong winds, heightened waves and torrential downpours.

When a big storm collides with the California coast, it lands in an area already well arranged for surfing.

"California is angled out into the Pacific, so the coastline can catch swells from both the north and south. It also has a deep continental shelf," says Phyllis Grifman, associate director of the [USC Sea Grant Program](#), explains. As waves arrive, they hit the shelf at their knees,

which thrusts the top of the wave forward while the bottom trails behind. This forms the beloved "curl" that envelopes surfers for the ultimate ride.

The arrival of unseasonably warm water during an El Nino makes California's already great surfing transcendent.

"Warm water is bulkier than cold, which means the sea level is higher and waves are bigger," says Grifman. The larger the wave the more substantial the curl, and the taller the wave the more thrilling the ride. All these factors combined meant that in December 1969, places like Rincon Beach just south of Santa Barbara became ground zero for surfers looking for massive, career-defining waves.

## **Perfect storms**

Those that surfed the winter of 1969 hold unique bragging rights in the surfer community. Other storms, like the El Ninos of 1953 and 1983, may have crashed ashore with equal drama, but none come with quite the same mythos. This is because 1969 was also a "perfect storm" for surfing culture, says Westwick.

"Surfing had taken off in the '60s. The Beach Boys, Beach Blanket Bingo and Endless Summer had reached wide circulation," he said. "There were more surfers out in the water and more surfers talking, writing and sharing pictures about it."

New magazines on the sport were popping up all over the state, like the classic Surfer founded in 1960. American International Pictures released seven "beach party films" in five years, starring a scantily clad cast cavorting in the waves on long boards. The surfing documentary Endless Summer, released in 1964 and reaching mainstream markets by '66, sold surfing as hip, romantic and wild to a new generation of wave riders.

When the El Nino storms hit in winter of '69, they landed at the epicenter of the sport's popularity.

Technology also played a role in 1969's enduring mythical standing.

"Big wave surfing with the equipment they had back then was legendary. They had no leash, only one fin and these big, heavy boards that were difficult to steer. It was like taking an F150 to an indie car race," says Ian Culbertson, a lecturer in the Department of Physical Education at USC Dornsife who teaches a surfing course.

Without a leash connecting you to your board, you might surf a big wave and then have to dive into the churning water after, hoping to reunite with an intact board back on the beach. Big wave surfers now often wear life vests that they can inflate when needed. Surfers of '69 had no such equipment, relying instead on excellent swimming skills to keep them afloat in a stormy ocean.

In 2019, a professional surfer looking for a big wave can get pulled into a swell by a jet ski, avoiding the exhausting paddling needed to get yourself to where the wave breaks. Those who tore down the 20-foot waves at Rincon in '69 got there by paddling through an obstacle course of swells, each of which could rip them from their boards and force them beneath churning waters.

"Back then people looked at big wave surfing as defying death," says Culbertson.

## Waves of 2069

Fifty years on, the [storm](#) of '69 still hasn't faded from the minds of California surfers. But what will surfers dwell on 50 years in the future? Grifman believes that [climate change](#) might be the defining moment for

surfers of this century, who could soon notice their sport significantly altered by a warming planet.

"Shore breaks will be different because of the higher sea levels. Waves might break much closer to shore as the shorelines change, and they'll be interfered with by infrastructure like piers," she says.

"Sea level is not just a rise, but an angular change. If the predominant direction of swell shifts, the wave regime might be different." Surfers are accustomed to waves arriving from a certain direction, which determines how they interact with the continental shelf. If waves hit the shelf at a different angle due to changing oceans, the shape and consistency of the waves will alter.

Culbertson agrees.

"We're worried about erosion of the coastline and beaches disappearing," he said. Warmer waters could mean great swell for surfers, but would also likely alter the force of the storms that bring the swells. "Climate change could affect how often we get big swells and how large they are."

Both Grifman and Culbertson point to 2014's Hurricane Marie, the Pacific's seventh most intense hurricane ever recorded and which caused \$20 million in damage to California's coastal areas, as a potential sign of things to come.

Experts estimate that by the end of this century, the [sea levels in California could rise by 9 feet](#). This may mean little beach left for future surfers looking to best their compatriots of '69.

USC's Sea Grant program is tackling these challenges through projects like [Regional AdaptLA](#), focused on planning for sea-level rise, and

[Marshes on the Margin](#), which is developing ways to mitigate damage to coastal estuaries. With research and proactive measures, surfers just might be able to ride the waves for many winters to come.

Culbertson demonstrates the eternal optimism of [surfers](#). "I'm looking forward to seeing what those [waves](#) look like, and to surfing them," he says.

Provided by University of Southern California

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