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# When Sea Level Rise Becomes Personal

By [Craig Smith](#)

March 13, 2025

It was a few days before Christmas when I received one of those phone calls that parents hate. It was my son, calling from France at 3 AM his time. His first words to me were, “Dad, there has been a disaster.” You can imagine the thoughts that flashed in my mind, with half my family vacationing in France. “What happened; are you okay?” “Yes,” he said, “It’s my boat and dock in Ventura. A big wave came in and ripped it all away. Fortunately, the harbor patrol happened to be nearby and was able to snag my boat, with the dock attached, and tow it to a safe slip. I was extremely fortunate that the Harbor Patrol was nearby, because the damage would’ve been extensive as my boat, dock attached, slammed its way down the narrow channel, crashing into other boats. As it was, there was no damage except the fact that my dock is gone. Replacing it will be a 2-year, \$50,000 project.”

As it turned out, this wasn’t the first time that big waves had come into Ventura Harbor and caused damage.

At this time, the California coast was being wracked by large waves. On the day following the Ventura incident, huge waves crashed into Monterey Bay in Northern California. They were driven by hurricanes hundreds of miles away. Wave heights were estimated as 40 feet in Monterey and 18 feet in Ventura. The effect was compounded by the fact that it coincided with a period of high tide and rising sea levels. In Monterey Bay, the city of Santa Cruz public wharf was heavily damaged and a large portion of it was broken off. A public bathroom that once stood on the end of wharf could be seen floating away. Three people were tossed into the water; two were rescued but one died. News reports indicated that [in 2024, 18 California piers were closed](#) for at least part of the year or are currently damaged.

A [recent white paper from Moody’s](#) reveals that 2.7 billion people — more than one-third of the global population — live in areas vulnerable to inland or coastal flooding. For example, Pacific islanders are abandoning their homes and moving to high ground in Fiji and elsewhere. Coastal structures everywhere face a growing risk from rising seas and more frequent storms. In the [Outer Banks area of Rodanthe, Hatteras Island, NC](#), homes keep falling into the sea—a total of 11 so far—as a result of higher tides and storms.

Why is this happening? For the last 20 months, the average global temperature has increased every month. Global warming has two effects: warmer water and runoff from melting water. For example, the Gulf of Mexico [reached a new maximum](#) on August 22, 2024, making it the hottest it has been in the modern record. This poses a double threat: the first is that warm water will power hurricanes, making stronger hurricanes that grow faster; secondly, warm water expands, raising the sea level.

Some surprising developments occurred in Antarctica this summer (Antarctica’s winter). A [record-breaking heat wave](#) raised winter temperatures 10°C (18°F) above the normal winter values, typically between minus 58°F and minus 76°F. The danger of this, of course, is that it

magnifies the threat of possible ice melts that would raise the sea level by feet rather than inches.

[Already, glaciers are melting](#) everywhere. [Sea ice is retreating](#) in the Arctic and the Antarctic. For example, [the Thwaites glacier](#)—which spans an area equal to the island of Great Britain—continues to shrink. Over the last 20 years the volume of ice flowing from the glacier and its neighbors has more than doubled and the rate is accelerating. Much of the 2,000 m thick glacier could be lost by the 23rd century. This is a truly frightening prospect for much of the global communities located in coastal areas.

Rising sea levels magnify the impact of storms and highways on port facilities. The potential costs to international trade can easily be in the \$trillions, as an estimated 80% of international trade is carried by sea transport.

Major oil ports are a special case. By their very nature, oil ports are located in coastal areas where large tankers have close access to oil refining and storage facilities. A [recent study finds that 13 ports](#) with highest supertanker traffic will be seriously damaged by just 1 meter (3.3 feet) of sea level rise. The list includes terminals in Saudi Arabia, Houston, Galveston, United Arab Emirates, Singapore and the Netherlands.

After experiencing hurricane Ike (2008), when storm waves rose 20 feet above normal sea levels, destroying homes, displacing a million people, and battering port facilities in Houston and Galveston, Texas decided to take action. It is now designing a \$34 billion project with 36 sea gates to protect Galveston Bay. However, unless global warming is stopped, sea level rise will continue, and it is only a matter of time before the [system will be inadequate](#). The Catch-22 in this plan is that sea level rise is accelerated by global warming, which in turn is increased by combustion of the very oil that is being shipped from the ports.

Globally, sea level rise has averaged about 1.5 mm per year since 1900, and has now risen by 200 millimeters (mm) (10 inches) on average. In the Southeast U.S., the pace has quickened, increasing from about 1.7 mm/year at the turn of the 20th century, to at least 8.4 mm/yr by 2021, [according to a 2023 study](#), based on tidal gauge records from throughout the region. In Pensacola, the rate soared even more, to roughly 11mm/yr by the end of 2021. These rates are among the most extreme on earth at the present time. The situation is aggravated by the fact that coastal communities in the south and Florida are only 3 feet above mean sea level. In many areas, they have been and will be in the future subjected to [massive flooding and destruction](#) by more frequent hurricanes.

The irony of this is that Florida's governor, Ron DeSantis, signed a law in May forbidding the use of the term "climate change" in any state laws or programs. The new law also stops programs designed to encourage renewable energy use and conservation. The [governor explained](#), "This bill will keep windmills off our beaches, and gas in our tanks." Insurance companies in Florida have a different outlook; they're no longer writing policies that cover flood damage.

*Craig Smith is co-author of [The Global Climate Crisis: What To Do About It?](#)*