

# An Ancient Law Could Shape the Modern Future of America’s Beaches. Here’s How.

The growing battle over how to manage sea level rise turns partly on a legal principle set down in Roman times.

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**By Cornelia Dean**  
Cornelia Dean is a science writer and former science editor of The New York Times. She reported from Matunuck, R.I.  
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If you go to a beach this summer, you might end up sunbathing in disputed territory. That’s partly because of climate change and partly because of a legal principle from the Roman Empire.

Most beaches have a natural defense against rising seas: The sandy area simply moves landward. But when property owners install sea walls or other barriers to protect beachfront homes and other buildings, the beach has nowhere to go. So it vanishes underwater.

Geologists call it coastal squeeze. It’s not a new problem, but it’s been accelerating recently as climate change causes sea levels to rise. And that’s prompting urgent questions about how coastal landscapes should be managed.

Richard K. Norton, a professor at the University of Michigan School of Law, described the situation with a question: “Are you going to save the beach house, or do you want to save the beach?” he said at a recent conference in New York City organized by Columbia University. “Because you cannot save them both.”

At issue is a legal concept from the sixth century A.D., when Emperor Justinian ordered the codification of Roman laws. The resulting code declared that features of nature like the air, running water, the sea and “the shores of the sea” must be held in trust for the use of the public. That idea passed into English common law, and then to the United States.

Today, most states define the beach below the high-tide line as public trust property, meaning members of the public have free access.

As a result, environmentalists, regulators, surfers and others say that landowners must not install sea walls or other coastal armor that will inevitably doom public beaches to disappear. On the other hand, owners of beachfront houses, hotels and other properties argue that if rules against coastal armor cause their private property to vanish beneath the waves, then they must be compensated for their losses.

The result is an impasse playing out from Hawaii to South Carolina.

When it comes to beaches, “there tends to be a lot of agreement that people would like to preserve these properties,” said Jeremy Talcott, an attorney at the Pacific Legal Foundation, which has represented property owners in disputes over armor. But there is “a much lower desire to actually pay for it.”

The dynamics of coastal geology are complex, but there’s little doubt that armor causes what’s known as passive erosion, which occurs when rising waters meet an unmoving barrier. It is also clear that when one portion of beach is armored, water can find its way around the barriers to chew at the beach next door. This can be devastating to neighboring properties, which means that once one owner puts up a sea wall, neighbors often follow suit.





A sea wall in front of a home in Newport, R.I. Researchers estimate that about a third of the world's sandy coastlines have already been armored. Kayana Szymczak for The New York Times

The precise extent of coastal armor is hard to quantify, said Erika Lentz, a geologist with the U.S. Geological Survey's coastal research center in Woods Hole, Mass., because the effects can be masked, for example, by projects to replenish eroded beaches with pumped-in sand.

But in research published last year in the journal *Nature Communications*, scientists from the Netherlands and elsewhere calculated that about a third of the world's sandy coastlines have already been armored. Most are "likely to face severe beach loss" by 2100, the authors said.

Researchers in Hawaii and California, among other places, have made similar findings.

"There is a lot of armoring going on," Dr. Lentz said. "And if there is no place for the beach to migrate landward, there is going to be a lot of squeezing going on."

Many communities whose economies depend on beach-related tourism have sought to preserve beaches by banning beach armor and limiting how close a building can be to the shoreline. But enforcing such setback rules can be difficult, especially when a structure that was initially in compliance is threatened by erosion. The rules sometimes fall to legal challenges from property owners.

In Justinian's time, global sea levels had been generally stable for at least 2,000 years. They remained that way until the 20th century, when humans started changing the planet's climate. Today, most coastal geologists predict at least three feet of sea level rise in this century. Many consider that estimate optimistic.

Though rules vary, most U.S. states follow the principle that land below the high-tide line is public property. In Rhode Island, for example, members of the public may walk, fish, gather seaweed and "leave the shore to swim in the sea" on these beaches. These rights are set out in the State Constitution.





A passenger train passing through San Clemente. An environmental group is contesting proposals to armor the coast in the area. Mario Tama/Getty Images

Until recently, most court cases about public trust beaches involved property owners who posted no-trespassing signs, erected fences or hired guards to keep people out. Now, the very existence of these beaches is often the issue.

One such case in Columbia, S.C., involves setback rules first adopted in 1988.

This spring in South Carolina Administrative Law Court, Rom and Renee Reddy challenged the state Department of Environmental Services, which had fined them \$289,000 for building what officials called an “unpermitted” sea wall at their house on Isle of Palms.

In a social media post, Mr. Reddy said allowing the state to prevail would lead to “the greatest confiscation of private property in South Carolina history.”

“This isn’t a fight we started,” he wrote, “but it is one we intend to finish.”

A decision by Judge Ralph K. Anderson III is pending.

Legal fights are also expected in California as homeowners try to rebuild from the January wildfires. Because of shifting coastlines, some of the homes destroyed in places like Malibu had been standing on public trust beach. Other properties suffered damage to sea walls and other armor erected years ago, but that today would violate state regulations.

After the fires, Gov. Gavin Newsom issued a broad executive order suspending the state’s environmental review process for homeowners and businesses whose property was damaged or destroyed. Environmental groups quickly objected.

“State trustees have a continuing duty to protect public trust resources, even under new circumstances,” said Staley Prom, a lawyer with the Surfrider Foundation, an environmental group based in San Clemente, Calif., that regularly initiates or intervenes in litigation on coastal issues. “Even with respect to armoring that may have been permitted, there are no vested rights to harm public trust resources,” Ms. Prom said.



Surfrider is contesting proposals to armor the rail line that runs along the beaches in San Clemente, particularly at Trestles Beach. The site has been designated for surfing competitions at the 2028 Olympics in Los Angeles, Ms. Prom said, and surfers fear the armor will damage it.

There are plenty of small armor projects around the country, too, and they add up.



The pedestrian ramp leading to East Matunuck State State Beach in Rhode Island. Cornelia Dean

For example, in the village of Matunuck, on Rhode Island’s south coast, workers have been building a wall and installing boulders to protect Matunuck Beach Road.

“The town paid a lot of money to put in hardening that goes down into the sand,” said Bev Hodgson, who, with her husband, has owned a house nearby since 1984. “What they are protecting is the road and the water main.”

Back then, there was a beach across the street, along with a wide ramp that led to an adjacent state beach. Today, the beach across the street is gone. The ramp has been replaced by a footpath built over a wall of boulders. And the state beach is squeezed between a parking lot and the sea.

Ms. Hodgson has many happy memories of those beaches. But she’s resigned to the changes. “It was fun while it lasted,” she said.

**Cornelia Dean** is a science writer and the former science editor of The Times. She is the author of “Making Sense of Science.”