

HEALTH & ENVIRONMENT ([HTTPS://TODAY.TAMU.EDU/CATEGORY/HEALTH-ENVIRONMENT/](https://today.tamu.edu/category/health-environment/))

Texas A&M Expert: Storms Worsening State's Beach Erosion Problem

Recent numerous storms and hurricanes have eaten away much of the state's 367-mile coastline

By Keith Randall, Texas A&M University Division of Marketing & Communications • OCTOBER 27, 2020

SHARE



**TEXAS A&M
TODAY**<https://today.tamu.edu>SCIENCE & TECH
([HTTPS://TODAY.TAMU.EDU
/CATEGORY/SCIENCE-
TECHNOLOGY/](https://today.tamu.edu/category/science-technology/))BUSINESS & GOVERNMENT
([HTTPS://TODAY.TAMU.EDU
/CATEGORY/BUSINESS-
GOVERNMENT/](https://today.tamu.edu/category/business-government/))ARTS & HUMANITIES
([HTTPS://TODAY.TAMU.EDU
/CATEGORY/ARTS-
HUMANITIES/](https://today.tamu.edu/category/arts-humanities/))**Subscribe**(<https://today.tamu.edu/subscribe/>)**Press Room**(<https://today.tamu.edu/press-room/>)

Numerous tropical storms and hurricanes have damaged the Texas coast in recent months, and these storms have very likely contributed to beach erosion, according to a Texas A&M University at Galveston expert.

[Jens Figlus](https://engineering.tamu.edu/ocean/profiles/figlus-jens.html) (<https://engineering.tamu.edu/ocean/profiles/figlus-jens.html>), professor in the Department of Ocean Engineering at Texas A&M-Galveston, said Texas has some locations with relatively high beach erosion rates, and the problem has been occurring for hundreds of years.

While data is still coming in from this summer's storms, there's little doubt that the issue has worsened in several areas of the Texas coast.

Any erosion would be bad. According to the [Texas General Land Office](https://www.glo.texas.gov/coast/coastal-management/coastal-erosion/index.html) (<https://www.glo.texas.gov/coast/coastal-management/coastal-erosion/index.html>), which governs Texas coastal issues, the average erosion rate along Texas' 367-mile coastline is 4.1 feet per year. But 64 percent of the Texas coast is eroding at an average rate of six feet per year, and some locations are losing 30 feet a year.

From 2000-2019, some of the areas hit hardest by beach erosion include those just west of Sabine Pass along the Texas Point and McFaddin National Wildlife Refuges, parts of Follet's Island, the area around the Brazos River mouth, the thin barrier island lining the San Bernard National Wildlife Refuge and East Matagorda Bay, as well as parts of the Matagorda Peninsula, and Padre and South Padre Islands, surveys by the Bureau of Economic Geology show.

**TEXAS A&M
TODAY**<https://today.tamu.edu>SCIENCE & TECH
([HTTPS://TODAY.TAMU.EDU
/CATEGORY/SCIENCE-
TECHNOLOGY/](https://today.tamu.edu/category/science-technology/))BUSINESS & GOVERNMENT
([HTTPS://TODAY.TAMU.EDU
/CATEGORY/BUSINESS-
GOVERNMENT/](https://today.tamu.edu/category/business-government/))ARTS & HUMANITIES
([HTTPS://TODAY.TAMU.EDU
/CATEGORY/ARTS-
HUMANITIES/](https://today.tamu.edu/category/arts-humanities/))**Subscribe**(<https://today.tamu.edu/subscribe/>)**Press Room**(<https://today.tamu.edu/press-room/>)

Figlus said that rising sea levels could be of particular future concern.

"Even a one-foot rise over the next 80 years — which is a relatively low estimate — would already be detrimental to Galveston beaches considering the fact that they have nowhere to retreat to at the seawall," Figlus said. "A very crude estimate of shoreline retreat would mean that a one-foot increase in sea level could cause a 200-foot retreat in shoreline."

Beach erosion rates can be difficult to measure, he said, because where sediment is lost in one area, it is almost always re-deposited somewhere else.

"Nourishment remains our best weapon to fight erosion," Figlus said. "But there are many innovative ideas out there that will have to be implemented in addition to help reduce the coasts' susceptibility to erosion. These include proper vegetation strategies since plant roots are capable of binding sand grains and providing increased stability against erosion. Other ideas should be further developed and tested as well. For example, we are now testing ways how naturally occurring microbes can strengthen and stabilize Texas beach sands to help reduce the impact of erosion in some areas."

SHARE

**TEXAS A&M
TODAY**

<https://today.tamu.edu>

SCIENCE & TECH [\(HTTPS://TODAY.TAMU.EDU
/CATEGORY/SCIENCE-
TECHNOLOGY/\)](https://today.tamu.edu/category/science-technology/)

BUSINESS & GOVERNMENT [\(HTTPS://TODAY.TAMU.EDU
/CATEGORY/BUSINESS-
GOVERNMENT/\)](https://today.tamu.edu/category/business-government/)

ARTS & HUMANITIES [\(HTTPS://TODAY.TAMU.EDU
/CATEGORY/ARTS-
HUMANITIES/\)](https://today.tamu.edu/category/arts-humanities/)

Subscribe<https://today.tamu.edu/subscribe/>

Press Room<https://today.tamu.edu/press-room/>



SUBSCRIBE

Subscribe to the Texas A&M Today newsletter for the latest news and stories every week.

EMAIL

SUBSCRIBE