

## Scientist: Desal not right for Harbor Island

[portasouthjetty.com/articles/scientist-desal-not-right-for-harbor-island/](https://portasouthjetty.com/articles/scientist-desal-not-right-for-harbor-island/)

By Port Aransas South Jetty Staff | on August 08, 2018

August 8, 2018



A green sea turtle in the Corpus Christi Ship Channel surfaces for a gulp of air on a recent afternoon. It was swimming near the bulkhead at Roberts Point Park. The green sea turtle is classified as a threatened species by the federal government. A scientific study said sea turtles are among creatures that potentially could be harmed by a desalination plant's seawater intake equipment. Staff photo by Dan Parker

Scientists researched possible Coastal Bend desalination plant sites in 2015, and though Harbor Island was not one of the studied areas, one of the researchers believes it could be dangerous to the environment to put one there.

"A desalination plant on Harbor Island would not be recommended," said Greg Stunz, a Port Aransas resident, marine biology professor and endowed chair for fisheries and ocean health at Texas A&M University Corpus Christi's Harte Research Institute (HRI).

Stunz said he couldn't recommend the area surrounding Harbor Island because intake and brine discharge would create "a big problem for fisheries."

Intake would potentially suck up many microscopic fish, he said.

"These areas are critically sensitive nursery areas," Stunz added.

Along with Paul Montagna, endowed chair for ecosystems and modeling at HRI, Stunz was contracted by a consulting firm to conduct the research for the City of Corpus Christi, he said. Montagna formerly worked at the University of Texas Marine Science Institute in Port Aransas.



Anglers try their luck off Harbor Island on a recent day. They were fishing near a part of the island where the Port of Corpus Christi Authority is planning to establish a crude oil shipping terminal. The port also has applied to the state for a permit to discharge brine into the Corpus Christi Ship Channel from a desalination plant that the port envisions for Harbor Island. On environmental grounds, some in Port Aransas have expressed concern about the shipping terminal idea and proposals for a desalination plant's brine discharge and water intake. Staff photo by Dan Parker

The study was done to identify and characterize potential environmental impacts related to intake and discharge facilities of seawater desalination plants, according to the document.

Stunz and Montagna identified potential environmental impacts of specific intake structures at two locations near the La Quinta Channel Extension, one offshore in the Gulf of Mexico, one in the Viola Turning Basin in the Inner Harbor, plus two locations near the Inner Harbor, according to the study.

Sarah Garza, the port's director of environmental planning and compliance, said at a Port Aransas City Council meeting on July 19 that no decision had been made on intake system location, and intakes aren't part of the application for wastewater discharge that the port sent to the Texas Commission on Environmental Quality (TCEQ). However, there is "advanced" technology for dealing with the intake matter, she told the council.

If intake systems are constructed, 43 species of fish or crustaceans could possibly be adversely impacted, according to the study. Among notable species that the researchers listed were black drum, flounder, redfish, spotted sea trout and tarpon. Shrimp and crab also could be at risk, they said.

The two major factors that would have the most impact are impingement and entrainment. Impingement occurs when organisms are trapped by force of flowing source water because they are too large. Entrainment is when marine organisms enter a desalination plant intake, or they are drawn into a system passing through to a treatment facility, according to the Environmental Protection Agency.

"Impingement of larger fish, marine mammals and sea turtles can reduce the spawning stock biomass due to an increased mortality rate," the study said. "In addition, entrainment of smaller ichthyoplankton and eggs can reduce recruitment. Despite the known ecological impacts that construction of a desalinization plant creates, directed sampling pre- and post-construction would need to be conducted in order to measure the actual environmental impacts to the selected site."



Greg Stunz

The Port of Corpus Christi Authority applied to the TCEQ for a Texas Pollution Discharge Elimination System permit. The permit would be to discharge brine associated with a desalination plant that is proposed to be built on Harbor Island.

Though the port is working on obtaining the permit, it will not be the operator, according to Charlie Zahn, chairman of the port commission and a Port Aransas resident. The Port of Corpus Christi wants the permit so a third party can build and operate it.

The permit that the port is seeking would allow for a daily flow of up to 95,600,000 gallons of brine each day.

The port is trying to help provide a reliable water supply for port industries. Industries have described it as a critical need, Zahn said.

The City of Corpus Christi, which supplies water to port industries, relies on water sources that are sapped by periodic droughts.

Stunz acknowledged that the Coastal Bend does face critical fresh water supply problems, and that something does, in fact, need to be done. But, he suggested that there needs to be a way to build a desalination plant without major impact on the environment and fishing economy in Port Aransas.

"The right way to do it is to take it offshore through filtration galleries, so small animals can't get trapped," Stunz said. "If we are going to do, do it right. ... with minimal impact. Harbor Island would have great impacts."

Sean Strawbridge, CEO of the port, said the port wouldn't put a facility on Harbor Island if they thought it would hurt the ecology. He made the remarks at the July 19 council meeting.

Concerned citizens fear salinity levels would be too high from discharge, but Strawbridge said even if discharged in the channel, the brine would be dispersed so well that salinity levels would be within "acceptable" limits.

Garza said that brine wouldn't be discharged in one location, but spread out by a "diffuser."

Stunz said a better site to possibly discharge brine could be near the Inner Harbor around downtown Corpus Christi. He said this location already is extremely salty, and young fish are not nearly as sensitive to the salinity in that area.

At least two other scientists have spoken out publicly with concerns about the Harbor Island desalination plant proposal: Joan Holt, retired director of the Fisheries and Mariculture Laboratory in Port Aransas and current member of the Port Aransas City Council; and her husband, Scott Holt, a retired fisheries biologist.

## More From Front Page Go To The Front Page Section

---

[South Jetty publishes Hurricane Harvey special edition](#)[Leaving Harvey behind](#)[In our heads](#)