



# Protect Texas's Coastal Ecosystems from Brine Pollution



As the Texas coast turns to desalination, we must protect the future of  
our coastal ecosystems

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## The Problem

- Droughts are persistent throughout most of Texas, and can last years. The effects of drought are disastrous for our economy, health, and environment, including making our coastal ecosystems too briny.
- Desalination plants, industrial facilities that remove salt from saltwater to make freshwater for industrial use, also contribute to brine pollution in our coastal ecosystems..
- If the State of Texas were in a drought of record, we would have a shortage of 3.1 million acre-feet of water. This more than doubles, to a shortage of 6.9 million acre-feet, by 2070 primarily because of expected population growth.
- The American Sportfishing Association estimates that recreational fishing contributes \$7.2 billion to the Texas economy, while Sea Grant Texas estimates that the Texas commercial shrimping industry brings in over \$300 million. Both of these industries would be significantly harmed by brine pollution.
- TCEQ claims to have been conducting long-term studies of Texas coastal salinity but there have been no changes in the Surface Water Quality Standards despite evidence of saline sensitive species loss.
- The State of Texas does not know the extent of the damage done, or the potential for more damage, to coastal ecosystems because TCEQ has **no** numeric criteria to protect coastal salinity gradients, even after 25 years of Clean Water Act authority. The existing narrative criteria are insufficiently protective of aquatic life in the long term, as evidenced by changes in coastal wildlife. This also creates regulatory uncertainty at TCEQ, making permitting these projects more difficult and risking increased likelihood of contested case hearings and lawsuits.
- Desalination projects are likely to become more common along the Texas coast, producing highly saline brine, which must be disposed of.

## The Solution

- Require **TCEQ** to report on the status of its long-term studies on coastal salinity. This would show the changes over the last 25 years, and paint a clearer picture as to what needs to be done to restore Texas's coastal salinity. Any report should also be coordinated with

the Texas Parks and Wildlife Department for sufficiency of aquatic life uses and in partnership with Texas A&M University Corpus Christi.

- Require **TCEQ** to come up with a plan to implement numeric criteria in order to rehabilitate Texas's coastal salinity gradients. In the next triennial review of the Surface Water Quality Standards, TCEQ should be prepared to implement numeric salinity standards for Texas Bays and Estuaries in a way that actually supports aquatic life as it existed 25 years ago.

### **Constituent Support**

- More than 500 Texans wrote to the TCEQ in 2022 urging commissioners to strengthen the Surface Water Quality Standards.
- Many environmental organizations and outdoor recreation associations and businesses recognize the need to protect coastal ecosystems from becoming too briny.

### **Related Bills**

- SB 837 (Perry)/HB 2483 (T. King) establishes the "Water for Texas Fund" at the Texas Water Development Board. This fund would focus on much-needed investment in Texas's water infrastructure in addition to addressing water loss as a strategy for bolstering our state's water supply. However, Sierra Club has specific concerns about the fund's priority for "new sources of water" including desalination, produced water treatment, and importing of water from out of state. There is substantial work the state still needs to do prior to the widespread use of seawater desalination. Specifically the state needs to prioritize the welfare of coastal communities and economies by ensuring protection of our bays and estuaries prior to additional desalination capacity.