

**OVERVIEW SECTION**  
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# OVERVIEW SECTION

Photo by Galveston Bay Foundation

Galveston Bay is resilient, but faces an uncertain future. The Bay’s watershed is home to the fourth- and ninth-largest cities in the U.S., Houston and Dallas. It’s also home to three ports, and remains a hub for the manufacturing and refining of chemicals and petroleum products. But people, industry, and commerce often come with environmental challenges. Galveston Bay’s most significant problems are tied to pollution, declines in habitat acreage, and to the impacts of climate change, like sea level rise.



That Galveston Bay could receive C for overall health despite facing these monumental issues shows how resilient it is. This offers hope that we can change our negative impact on water quality, wetlands, seagrasses, and wildlife. But a healthier Galveston Bay is in everyone’s interest.

(About the grade: The combined GPA for all six categories together is a 2.1, which registers in the low C range. Unfortunately, the combined grade does not include grades for three of our indicators: Toxics in Sediment, Litter and Trash, and Oyster Reef Acreage\* - There was not enough data available on these indicators to include them in the overall grade. We hope you will join us in encouraging local, state, and national leaders to pass legislation, and provide funding, that will improve monitoring and address these issues.

*\* Oyster reef habitat has been monitored and the data is being processed. We hope to be able to include current data in 2016.*

## About the Bay

Galveston Bay is Texas' largest bay, covering about 600 square miles. The Galveston Bay watershed — the area of land that drains into a given body of water — is about 24,000 square miles. It stretches northward from the Houston metropolitan area, up the Trinity River basin, and past the Dallas-Fort Worth area. Half the population of Texas currently lives in the Galveston Bay watershed. The Bay's urbanized, industrialized, and agricultural setting poses unique challenges for water quality, habitat protection, and resource conservation. If you live, work, or go to school in the Galveston Bay Watershed, you can [find your local watershed now](#).



Photo by Irene Amiet

Galveston Bay is, by definition, an estuary – a semi-enclosed coastal body of water that has a free connection with the open sea. Within an estuary, seawater mixes with freshwater from the land. In the case of Galveston Bay, it is where freshwater from the Trinity and San Jacinto rivers and the extensive bayous and creeks of the Houston-Galveston region mix with the saltwater of the Gulf of Mexico.

Estuaries are among the most productive ecosystems in the world. They are home to a huge amount of plant and animal life, and can produce large harvests of recreational and commercial fish and shellfish.

People are drawn to the water – and for good reason. Galveston Bay and the habitats within its watershed provide many benefits to society, including:

- Fisheries/seafood.
- Water quality improvement.
- Erosion, flood, and storm protection.
- Regulation of local climate.
- Aesthetics and recreational opportunities such as swimming, boating, and bird watching.

Ensuring a healthy future for Galveston Bay is ensuring that future generations can enjoy a safe place to not only live, but also swim, boat, and fish.

## About the Project

The Galveston Bay Report Card is a citizen-driven, scientific analysis of the health of Galveston Bay. Supported by a grant from [Houston Endowment](#) and implemented by the [Galveston Bay Foundation](#) and the [Houston Advanced Research Center](#), the report card's goal is to engage community members in meaningful discussion about Bay health topics. The report card is also designed to inspire people to take actions that protect and preserve the Bay. We plan to update the report annually.

Through a series of [surveys](#) and interactive presentations, six topic categories were identified by the Galveston Bay Foundation as health topics of interest to the public in the fall of 2014: Water Quality, Pollution Events & Sources, Wildlife, Habitat, Human Health Risks, and Coastal Change. Scientists from the Houston Advanced Research Center then analyzed data and trends for 19 indicators. What has emerged is a compelling story about Galveston Bay, its challenges, opportunities, and greatest needs.

Each indicator features easy-to-understand grades, similar to the grades you would find in a school report card. These indicators show specific ways you can help the Bay, as well as data-driven infographics, additional resources, and downloadable full reports with expanded content. There is also specific data on each indicator.

## How We Grade

It is not easy to measure how “healthy” a bay system is. Estuaries are extremely dynamic environments that change by the minute. It is not always clear how much stress a particular component of the bay can take before it begins to deteriorate, how fast it may deteriorate, or if recovery after deterioration is even possible. The way an individual defines a “healthy” bay is often related to how we, as humans, value the services that the system provides us, such as seafood harvests, clean water for drinking and playing, and habitat that protects and stabilizes shorelines.

The goal of the federal Clean Water Act of 1972 is to make the nation's waters swimmable and fishable. That goal was our guideline in measuring the indicators for this report card. In this project, the Bay's health is perceived as a question of sustainability and resiliency: Do the indicator trends portray a Bay that will continue to provide recreation, food, clean water, and protection from storms?

Instead of trying to apply a universal grading methodology to such a variety of Bay indicators, some degree of best professional judgment was used to determine overall category grades and indicator grading scales. A detailed explanation outlines how grades were calculated and when grading relied heavily on best professional judgment based on available data. This is disclosed in the downloadable PDFs for each indicator. Letter grades correspond to a 4.0 grade point average scale, and are accompanied by descriptors ranging from “Excellent” to “Critical.”





## CONTACT US

### Working Together For a Healthy Bay

As Texans and residents of the Galveston Bay watershed, we all carry the responsibility of protecting and preserving the Bay for future generations. The Bay is at the heart of immense ecological and economic productivity. It's also a special place to many people who enjoy its views, tranquility, and recreational opportunities. The indicators selected for this report represent a diverse cross-section of Bay features, but they are not intended to be all-encompassing. We have already identified a few topics for future indicator expansion: water clarity, chlorophyll-a concentrations (an indicator of productivity at the base of the food chain), marine mammals and reptiles, land use/development, harmful algal blooms, invasive species, and species range expansions.

We welcome your comments, suggestions and ideas to improve the report card, which we plan to update annually. A healthy environment is good for the communities we live, work, and play in. So please share this report with your family and friends. We encourage you to ask questions and seek innovative solutions to challenging environmental issue.

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