

The Ways of Waterways

By Caleb Clarkson

Living on the Texas coast means being surrounded by water. In a single day, you might visit the Gulf, drive along a bay, and cross a river before heading home. Or was it a creek? Or a bayou? These names aren't just for show; they describe different kinds of water with unique sizes, depths, salinities, and flows. Knowing whether you're near a bay or lagoon (or perhaps a creek or a bayou) is more than just a fun fact—it changes how we interact with them: the fish you might catch, the birds you might see, and how we make decisions concerning their conservation and protection.

One of the most commanding bodies of water in our lives is the Gulf, and its consistent ebb and flow throughout the year greatly influences other bodies of water along the Gulf Coast region. Gulfs are large bodies of salty water surrounded by land on three or more sides and connected to a sea or ocean. It is connected to the Caribbean Sea and the Atlantic Ocean by the Straits of Florida and the Straits of Yucatan, narrow stretches of saltwater that connect our gulf to its oceanic neighbors.

Gulfs are frequently much deeper and extend further into the landscape than bays in the area, which are typically shallower and smaller. These areas are incredibly popular spots for anglers and birdwatchers alike, as they attract a diverse amount of fish, birds, and other fauna. The Gulf also acts as a staging ground for tropical rain, bringing freshwater ashore and filling our freshwater systems.

As rain falls, it gathers and pools into larger and larger tributaries of a river system. Tributaries can take on many forms; some are creeks or small rivers, waterways with a well-defined channel. Others may be bayous, slower-moving bodies of water that meander through low-lying areas. Like a large funnel, the landscape collects the rain that falls, and gravity guides it to a main channel where it empties into a large body of water, in our case, the Gulf or its bays. That “funnel” where all the rainfall flows to the same place is called a watershed. Watersheds have areas that flood when large amounts of water pool, called floodplains. Knowing which watershed you are in and where the floodplains are is useful when understanding rainstorms and their risks.

When the water finally reaches the Gulf, something special happens. The freshwater mixes with the salty water of the Gulf, creating different types of brackish water features. Estuaries are the point where the flow of freshwater meets the tides of the ocean, and they provide habitat for many iconic Texas species, including the Whooping Crane, Redfish, various types of waterfowl, and much more. Near these estuaries, large brackish marshes can form that rise and fall with the tide of the Gulf. Marshes are low-lying areas that are typically waterlogged throughout the year, and on the Gulf Coast, they can provide food, shelter, and resting areas for wildlife.

Together, these waterways, spanning from the open waters of the Gulf to the curves of a stream, form an intricate system of interconnected bodies of water that play a role in shaping life along the Texas coast. Understanding them and their differences can help us better appreciate and protect the ecosystems and communities that depend on them.

Photo caption: A Brown Pelican flying over the ocean
Credit: Mike Williams