

# Living Shorelines: How to Keep the Coast the “Coast”

Eric Sparks

What are the first things that come to mind when you think about the coast? Probably most people think about beautiful water, fishing, seafood, bird watching, and other nature-based activities. The common thread between all those activities is they are dependent on having a healthy environment. One common practice that is known to degrade coastal environments is shoreline hardening. Examples of shoreline hardening include bulkheads and seawalls. These types of projects are installed at the water’s edge primarily to reduce shoreline erosion; however, they also reduce and often eliminate intertidal habitat (i.e., area of land between high tide and low tide), which is responsible for many of the natural benefits we know and enjoy in coastal areas. These benefits include: habitat for fish, crabs, birds, and some oysters, filtering pollution to improve water quality, and holding the shoreline in place. While shoreline hardening is almost necessary in industrialized or high boat traffic situations, the majority of these projects occur on residential property and in relatively calm waters where they likely aren’t necessary.

Living shorelines are an alternative to hardened shorelines to protect properties from erosion and provide natural benefits. They are a method of shoreline stabilization that uses marsh plants, oyster shell, and other materials to prevent erosion. Marsh grasses have expansive root systems that excel at holding sediment in place, thereby reducing or preventing erosion in low to moderate wave environments (e.g., most smaller bays, bayous, coastal rivers, tidal creeks, etc.). In addition to slowing down erosion, marsh also supports wildlife by providing food and habitat, filters pollution, buffers storms by absorbing waves, and provides many other natural benefits that are integral for maintaining healthy coastlines.



Credit: Eric Sparks

In areas with more waves, the shoreline plants often need protection provided by a breakwater or marsh sill. The breakwater essentially is there to break the waves before they impact the shoreline. Whereas the marsh sill serves as a small submerged wall that helps hold the newly filled and planted shoreline in place. Sills and breakwaters are often made of harder materials, such as rip rap or cast concrete, but softer materials, such as coir logs, can be incorporated in certain situations.

Living shorelines essentially re-naturalize shorelines, returning the benefits that are lost when hardened shorelines are installed. Furthermore, while hardened shorelines will most certainly fail, most living shorelines can self-maintain with little assistance, saving property owners money in the long run. To learn more about living shorelines, check out these resources to get started: [www.GulfLivingShorelines.com](http://www.GulfLivingShorelines.com); [www.masgc.org/living-shorelines](http://www.masgc.org/living-shorelines). 

*Eric Sparks, PhD, is the Assistant Director for Outreach and Coastal Ecology Specialist for the Mississippi-Alabama Sea Grant Consortium and also the Director of Coastal and Marine Extension at Mississippi State University.*