



STATE COASTAL PROGRAMS AND NOAA: PARTNERS FOR HABITATS

Across the United States, **95,000 miles** of coastline serves as the foundation for local and national ecosystems and economies. Effectively protecting, restoring and managing these habitats requires an intricate network of government, private and academic partnerships working together to preserve complex coastal habitats while balancing the need for increased development.

For more than 40 years, coastal programs in U.S. states, territories and commonwealths have been part of the national coastal zone management effort coordinated by the **National Oceanic and Atmospheric Administration** (NOAA) to protect and restore coastal resources, protect communities from coastal hazards, and promote economic development along our nation's ocean and Great Lakes coasts. These State Coastal Programs have experience coordinating with communities and user groups to help plan and carry out activities in coastal areas.



KEY PARTNERS

State Coastal Programs are key partners with NOAA because they have local knowledge and helpful tools and skills to contribute. This comes from years of coordinating restoration projects on the coast, facilitating land acquisition projects, and leveraging money and other resources for coastal projects. They educate and provide technical assistance to landowners and coastal communities to make more informed land use decisions. Many state programs have coastal permitting programs to ensure activities that have impacts on the coast are consistent with statewide priorities. Through these activities, State Coastal Programs have developed relationships that enable them to identify and coordinate with stakeholders whose cooperation is often necessary to make habitat projects succeed. Stakeholders include tribes, port authorities, marinas, universities, local communities, and businesses dependent on healthy coasts.



COUNTING ON OUR COASTS

Coastal areas constitute just one fifth of the nation's landmass, but this critical area of habitat supports an overwhelming majority of the nation's people, development, and economic activity. By 2025, it is estimated that nearly 75 percent of the United States population will live within 50 miles of a coastline, making coastal stewardship all the more imperative to protecting our health, environment and the economy.

The preservation and restoration of coastal and estuarine areas is critical to both humans and the natural environment. The U.S. coast has many diverse natural habitats, including sand dunes, marshes, coastal and mangrove forests, coral reefs, mud flats, and underwater grasses. These habitats benefit the ecosystem while providing the foundation for many local and national economies. When healthy, these areas filter pollutants to maintain water quality, provide shelter, nesting and nursery grounds for fish and wildlife, protect rare and endangered species, and provide public access to beaches and waterfront areas.



GREEN INFRASTRUCTURE

Coastal habitats, in concert with man-made hard structures, play important roles in building and maintaining coastlines that are resilient to coastal hazards, including sea level rise, shoreline erosion and extreme weather events. Sea grass beds, oyster beds, sand dunes, wetlands and coral reefs are part of a wide range of natural habitat areas that can also serve as "green infrastructure." "Green infrastructure" provides natural protection against flooding, storm surges, erosion and other destructive forces. "Green infrastructure" can be more cost-efficient than "gray infrastructure," which includes hard structures such as sea walls, jetties and dikes. Habitat conservation has always been recognized as important to sustaining wildlife. Now, it is recognized as critical to the safety of the nation's infrastructure, communities and economy.

COASTS AT RISK

As people across the nation depend increasingly on our coasts, the risks facing these vital areas increase. Tapping into freshwater supplies needed for development can negatively impact natural plant and animal communities while roads, bridges, and access ways to beaches can cut off wildlife corridors or migration routes. Septic systems, agriculture runoff, and storm water flowing out of developed areas can increase coastal pollution and harm habitats. Preventing undue harm to our coasts while still providing opportunities for people to live, work and play in coastal areas requires coastal managers to strike a delicate balance between resource protection and economic development. State Coastal Programs play a vital role in achieving this balance.

The CZMA also created the National Estuarine Research Reserve System, which now protects more than 1.3 million coastal and estuarine acres in 28 reserves located in 22 states and Puerto Rico. Coastal Programs work closely with the reserves.

THE COASTAL ZONE MANAGEMENT ACT

In 1972, Congress enacted the Coastal Zone Management Act (CZMA) to balance the competing demands of growth and development with the need to protect coastal areas. In enacting the CZMA, Congress declared a national policy “to preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation’s coastal zone.”

Much of the shoreline, coastal waters and submerged lands are owned or managed by the states, and many coastal properties with important habitats are privately owned. Since these coastal areas are subject to an array of federal, state, and local regulations, no one agency or private organization can make sure these habitats thrive. However, the state-federal cooperation found in coastal management programs provides an effective framework to navigate the complex nature of managing a coast with a patchwork of owners, users and jurisdictions.

Strategies to manage the coast require concerted and coordinated action by local, state, tribal, and federal government agencies, scientists, land managers, and other stakeholders to find the best solutions for partnership with state-based programs in part because state-based programs help NOAA bring separate levels of government and stakeholders together to implement successful on-the-ground habitat protection.

State Coastal Programs play a vital role in preventing undue harm to our coasts while still providing opportunities for people to live, work and play in coastal areas. This requires experts to help balance competing demands.

40 YEARS OF SUCCESS: CASE STUDIES OF STATE COASTAL PROGRAMS

Effective strategies to conserve coastal habitats engage the people who use, manage and own land, as well as scientific experts. Habitat protection requires commitment and participation from a large range of public and private partners. Since Congress paved the way for the collaboration between NOAA and the states, State Coastal Programs have been vital to habitat conservation by working with NOAA to address priority habitat conservation outcomes.

HAWAII

Years of agricultural use and encroaching development in He‘eia, O‘ahu in Hawaii transformed more than 400 acres of wetlands, featuring abundant taro patches and healthy fish ponds, into a fallow swamp choked by invasive plants.

The State Coastal Program Approach

The Hawaii State Coastal Program received funding to support planning efforts to restore the wetlands and adjacent uplands on the island of O‘ahu. The funding award enabled community partners, including the Hawaii Community Development Authority, Ko‘olaupoko Hawaiian Civic Club, and the community-based nonprofit organization Kako‘o‘Oiwī, to develop a 2010-2015 strategic restoration plan. The plan outlines three primary objectives to restore the wetland to improve water quality; educate and involve community members in traditional Hawaiian land stewardship customs; and restore the historical agricultural-based industry.

The process strengthened community partnerships and helped leverage additional funding and expertise from federal and state agencies, nongovernmental organizations, and school groups. To support the restoration effort, hundreds of community volunteers participate in monthly restoration days to remove invasive plants and plant native species. The strategic plan, supported by funding from the State Coastal Program, laid a solid foundation for the restoration project and provides an excellent example of how collaboration and coordination among community partners can lead to effective watershed management and habitat restoration.

TEXAS

Texas' coastal resources and habitats support a wealth of economic activities, but retreating shorelines, more frequent and powerful storms, and population growth are all placing increasing demands on the coast's limited natural resources and encroaching on vital habitats

The State Coastal Program Approach

With funding from NOAA, Texas' State Coastal Program launched a long-term planning process to develop a spatial planning tool and framework to identify and protect key resources along the coast. The plan aims to balance economic growth with the protection of critical habitats. A team of coastal experts evaluated levels of concern for issues affecting each of Texas' four coastal regions and identified areas with critical needs to be addressed. The top three issues of coast-wide concern were wetlands and habitat loss, impacts to fish and wildlife, and erosion. Those results will help guide coastal resource decisions makers and serve as a baseline in developing a long-term spatial planning tool and framework.

VIRGINIA

After the hurricanes of the 1930s and a devastating disease, eelgrass disappeared from the seaside bays of Virginia's eastern shore. Bay scallops and other fish that depend on eelgrass as a protective nursery disappeared, along with much of the seaside's tourism industry as its once famous hunting lodges on the barrier islands were washed away.

The State Coastal Program Approach

With eelgrass failing to grow back, the Virginia State Coastal Program funded the Virginia Institute of Marine Science (VIMS) to test a new approach - scattering eelgrass seeds on the Seaside. The method was tremendously successful. To build on this restoration momentum, the State Coastal Program initiated a multi-year initiative to restore the ecology of the seaside bays as well as to promote sustainable industries such as shellfish farming and ecotourism.

Eelgrass is now spreading naturally and about 300 restored acres has grown and spread to cover nearly 5,000 acres – accounting for 73 percent of eelgrass restored worldwide. Bay scallops have been re-introduced and have begun to breed again. Oyster reefs were constructed and are thriving. Researchers, commercial fishermen and shellfish farmers have all observed high oyster recruitment on restored reefs and noticeable increases in oyster densities in the last five years.

The State Coastal Program also has focused on boosting the area's ecotourism infrastructure, creating a seaside water trail, conducting ecotour guide certification courses, constructing multiple kayak launches, and installing interpretive signage.

FLORIDA

To conserve the great diversity of wildlife in hard bottom habitats in southeast Florida, multiple agencies and organizations have been working for years on various conservation initiatives. But the conservation programs and partnerships involving a variety of public and private partners lacked a single coordinated geodatabase to inform the monitoring and management of the Florida reef tract that stretches from the Florida Keys to Martin County on the Atlantic Coast. Florida's coral reef system in this area generates \$6.3 billion in tourism-related sales and income annually and supports 71,000 jobs.

The State Coastal Program Approach

Using funding made available through the State Coastal Program, the Florida Fish and Wildlife Conservation Commission is addressing the need for a more cohesive approach to conservation efforts. The Coordinated Coral and Hardbottom Ecosystem Mapping, Monitoring, and Management Program builds upon datasets currently used by federal, state, and university scientists to provide a unified Florida reef tract map, a highly detailed and synoptic view of the coral reef ecosystem that meets the needs of resource managers. This "living map" is readily available online and offers visual information regarding a variety of deepwater habitats.

Based on the success of the project, NOAA has recommended supplemental funding. The new project would support the field work to improve the unified Florida coral reef tract map and the production of education and outreach materials to advance the Florida Department of Environmental Protection Coral Reef Conservation Program's formal stakeholder working group process.

MAINE

The Maine Coastal Program helped create the Maine Stream Habitat Viewer. This online tool displays fish habitat and other stream features important to Maine's economy, ecology and way of life. It also displays locations of dams and public road crossings surveyed to determine if they're likely to block the movements of fish and stream-dependent wildlife. This tool provides a starting point for towns, private landowners, and others to learn more about stream habitats, allocate scarce resources to priority needs and species and access technical and financial help. The Maine Coastal Program supports the Maine Stream Connectivity Work Group -- a partnership of over 25 state, federal, non-government, and industry organizations working to enhance Maine's stream restoration efforts.

<http://mapserver.maine.gov/streamviewer/streamdocHome.html>.

