



## NOAA FISHERIES

Office of Habitat  
Conservation

*The Restoration Center is NOAA's only office solely devoted to restoring the nation's coastal, marine, and migratory fish habitat.*

*With our national network of partners, we leverage funding and develop high-quality restoration projects within four primary areas:*

- 1. Recovering threatened and endangered species.*
- 2. Sustaining fisheries.*
- 3. Reversing the damage from oil spills and toxic releases.*
- 4. Strengthening the resilience of coastal communities and ecosystems.*

# Habitat Restoration to Strengthen Coastal Resilience

*The NOAA Restoration Center, housed within the Office of Habitat Conservation in NOAA Fisheries, invests in habitat restoration across the country where our fisheries need it most.*

## Our Work Strengthening Coastal Resilience

America's coastal and marine environments are under increasing pressure from the impacts of extreme weather events, climate hazards, and changing ocean conditions.

Almost half of the nation's population lives near the coast. Communities and businesses are becoming more vulnerable to natural disasters and environmental changes and are looking for safe, effective, and affordable approaches to coastal protection.

The Restoration Center's work to restore coastal ecosystems and provide habitat for fish can also improve the resilience of communities and infrastructure—reducing vulnerability to floods and other weather-related hazards, and protecting community safety and well-being.

Conserving and restoring coral and oyster reefs, wetlands, and mangroves can prevent flooding and save hundreds of millions of dollars in storm damage. For example, during Hurricane Sandy, wetlands protected areas of the East Coast from more than \$625 million in direct flood damages.

Through habitat restoration, we provide coastal communities with tools and resources they can use to prepare and plan for, recover from, and successfully adapt to the destructive impacts of extreme weather, changing environmental conditions, and climate change.



## Example Projects

### Wetland and Barrier Island Restoration – Louisiana

- Through the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) Program, we provide funding and technical assistance to help restore valuable wetlands and barrier islands along the Louisiana coast.
- Wetlands provide tremendous benefits: they filter our water, provide habitat for fish and wildlife, and protect communities from floods and storms. In the lower 48 states, however, 80,000 acres of coastal wetlands are lost each year to development, drainage, erosion, subsidence, and sea-level rise. Some of the most dramatic wetland loss is occurring in Louisiana, where coastal wetlands are lost at an average rate of one football field every hour.
- Since 1990, NOAA has been the federal sponsor of nearly 30 wetland restoration projects through the CWPPRA Program, restoring more than 12,500 acres of vulnerable Louisiana coastline and helping build the resilience of coastal communities.
- Through CWPPRA, we work with state and federal partners and landowners to fund and implement these large-scale restoration projects, which slow the high rate of wetlands loss in Louisiana while improving marine fisheries. This work also defends communities and vital oil and gas infrastructure from storms and flood damage.

### Shoreline Protection – North Carolina, Alabama, Florida, Mississippi

- Living shorelines are a natural infrastructure technique that uses plants, sand, or rock to stabilize the shoreline instead of concrete sea walls or other hard structures. In addition to preventing erosion, they provide habitat for fish and wildlife.
- For almost 20 years, the Restoration Center has partnered with the North Carolina Coastal Federation on living shoreline creation. Our work to increase the use of living shorelines helped stabilize more than 6,200 feet of shoreline at 24 sites across the state. The work involved more than 6,300 volunteer hours and provided jobs and hands-on training to unemployed contractors.
- In addition, as part of our work restoring natural resources after the *Deepwater Horizon* spill, we're assisting with several NOAA-led projects to create living shorelines across the Gulf region, including in Pensacola Bay, Florida; Swift Tract, Alabama; and Hancock County, Mississippi. Together, these three projects will restore more than 60 acres of marsh and 66 acres of reef habitat.
- Not only do these projects restore habitat, they're helping make our coasts more resilient by reducing erosion and buffering the shoreline from waves and storms. With potential for increased rainfall and more intense storms in the future, restoring and protecting natural infrastructure can protect the futures of communities on the coast.

### Southern Flow Corridor Restoration – Oregon

- In Tillamook County, Oregon, years of vegetation loss, diking, ditching, and draining led to repeated flooding, causing hardships for residents, businesses, and agriculture. Between 1996 and 2000, flooding damages in the area exceeded \$60 million.
- In addition, almost 90 percent of tidal wetlands in the Tillamook estuary have been lost to development and agriculture. Once home to more than 200,000 Endangered Species Act-listed Oregon Coast coho salmon, just 2,000 of the fish returned to Tillamook Bay in 2012.
- To improve drainage and provide habitat in the area, we worked alongside more than a dozen local, state, federal, tribal, and private partners to remove old levees, fill, and tide gates and reconnect 520 acres of tidal wetlands.
- The resulting “flow corridor” allows flood waters to move freely and quickly away from the town of Tillamook, protecting more than 500 nearby structures from flooding. Estimates suggest that \$9.2 million in economic benefits will accrue from avoided flood damages over the next 50 years.
- In addition to flooding benefits, the project restored 443 acres of habitat and opened 13 miles of tidal channels for coho salmon, Chinook salmon, steelhead, and other fish and wildlife.

Photo credits: page 2 (top), Tillamook Estuaries Partnership.

