PHOTO CREDIT: ADOBESTOCK

THE NATIONAL WILDLIFE FEDERATION'S RECOMMENDED PROJECTS

Apalachicola Bay

THE APALACHICOLA BAY system is one of the least polluted, least developed, most biodiverse river and bay systems in the United States. Designated as an International Biosphere Reserve, a National Estuarine Research Reserve and an Outstanding Florida Water, the river supports the most diverse assemblage of freshwater fish in Florida and the largest number of endemic species in western Florida. The Apalachicola River and its floodplain are the biological factory that fuels the estuary's productivity.

Despite its enormous ecological value, the Apalachicola ecosystem has been severely impacted over the decades, due to impoundments upstream, consumptive use of water by farms and cities, and decades of dredging and channel alterations. The combined effect of these activities has altered the river's flows, reduced habitat diversity, and degraded the river's rich sloughs and floodplains. More than four million trees have died in the floodplain due to lack of overbank flows over the past four decades, a decline of approximately 40 percent. This mismanagement of the river, combined with a prolonged drought in 2011 and 2012, has caused significant damage in the Apalachicola system. Lack of freshwater led to the collapse of the bay's oysters and triggered a federal declaration of a commercial fishery disaster. Today, the bay's oyster harvests are still far below normal. Restoring river flows and protecting the watershed are essential to the health of the Apalachicola river and bay system.

APALACHICOLA BAY
Recommended Projects

HABITAT PROTECTION

Apalachicola River Protection

The bluffs and ravines along the Apalachicola River are unique in North America and are home to many rare and endemic species. This project will protect most of the bluffs and ravines currently in private ownership. Conservation efforts will be directed toward the preservation of steepheads, streams, hardwood forests, glades, and archaeological sites as well as the removal of pine plantations, and the restoration of natural pine forests. The project will also provide areas for outdoor recreation and will preserve several archaeological sites. Most of the acreage would be acquired as a conservation easement.

PROJECT COST: $10,260,000 TO $68,228,000
LEAD ORGANIZATION: Florida Department of Environmental Protection
PARTNERS: Jackson, Gadsden, Liberty, Calhoun and Gulf Counties; The Forestland Group

Additional Benefits:

+ Socially Vulnerable Population Benefiting: **35,500**
+ Critical Facilities in Vicinity: **28**

HABITAT PROTECTION

Dickerson Bay/Bald Point Protection

The project would acquire properties containing uplands around Dickerson, Levy, and Ochlockonee Bays in the area known as Bluffs of St. Teresa. The uplands are an intricate mosaic of lakes, depression marshes, mesic flatwoods, scrubby flatwoods, and scrub habitats that are connected to the Gulf by numerous tidal creeks, salt flats, and salt marshes. These habitats adjoin similar communities in St. Marks National Wildlife Refuge to the north and west. The site includes dunes used by shorebirds and twelve archaeological sites are known to exist on the property. The acquisition will benefit habitats used by rare species such as wood storks, Sherman's fox squirrel, gopher tortoise, as well as loggerhead, green, and Kemp's ridley sea turtles.

PROJECT COST: $4,561,000
LEAD ORGANIZATION: Florida Department of Environmental Protection
PARTNERS: Franklin and Wakulla Counties

Additional Benefits:

+ Acres Available for Recreation: **19,610**
+ Socially Vulnerable Population Benefiting: **4,500**
+ Critical Facilities in Vicinity: **5**

OYSTER REEFS AND SHORELINES

St. George Sound Living Shoreline

The project will build new oyster reefs in St. George Sound that will reduce wave energy, allowing for the creation of large intertidal salt marsh closer to the shore. The oyster reefs and salt marsh will provide habitat for fish and wildlife, stabilize the shoreline, and protect Highway 98 and other infrastructure from storm surge. In addition to improving coastal resiliency, the project will provide many opportunities for job training, workforce development, and environmental stewardship programs. This project will complement other efforts funded by Deepwater Horizon spill funds. For example, the oyster reefs will increase the available oyster larvae, which could help colonize the cultch placed by a preceding oyster project funded by the Natural Resources Damage Assessment.

PROJECT COST: $10,000,000
LEAD ORGANIZATION: Ecology and Environment, Inc.
PARTNERS: Apalachicola NERR, Apalachee Regional Planning Council, Florida DEP, FWC, FDOT, FDACS

Additional Benefits:

+ Socially Vulnerable Population Benefiting: **3,000**
+ Critical Facilities in Vicinity: **19**
+ Miles of Transportation Routes Protected: **6**

COASTAL WETLANDS

Building Vegetative Buffers for Sediment Reduction

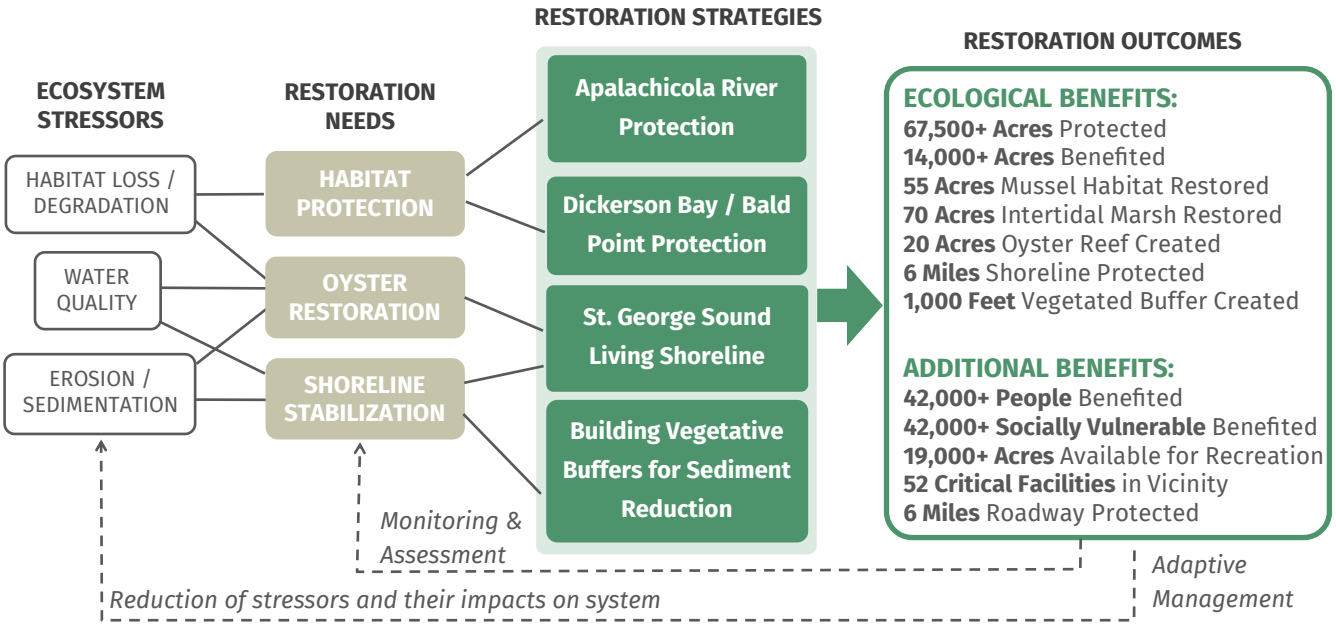
Two locations—Virginia Cut and Sand Mountain—contribute unnatural amounts of sand and sediment to the Apalachicola River, affecting the channel downstream and potentially harming mussels and other aquatic species. This project will reduce sediment input by enlarging or building vegetative buffers around these two locations, which were originally disturbed by the Corps of Engineers. The additional riparian tree canopy will increase shading of the water, which could help mitigate the effects of rising temperatures on fish. Over the longer term, the plantings may help to slowly narrow the channel, which ultimately would send more water back into the floodplain through sloughs and crevasses, and improve those habitats for wetland trees, fish larvae and nutrient supply. This project will work in conjunction with the critically important Apalachicola River Slough Restoration project, which will reestablish vital freshwater flows into the floodplain, improving essential floodplain habitat and nutrient supplies to the bay and beyond, with myriad benefits to many species.

PROJECT COST: $9,060,000
LEAD ORGANIZATION: University of Florida
PARTNERS: Apalachicola Riverkeeper, Appalachian State University, UC Berkeley, Land+Water LLC.

PHOTO CREDIT: FLORIDA FISH AND WILDLIFE, NWF

Our Approach to Project Evaluation

The National Wildlife Federation's Gulf of Mexico Restoration Program developed a science-based and systematic approach to evaluate estuarine restoration needs. This approach assesses critical stressors, identifies focal areas, determines restoration needs, and establishes restoration targets to make recommendations. The diagram below illustrates the application of this process for Apalachicola Bay and demonstrates the benefits that the suite of restoration projects could collectively achieve.



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