

## Heritage and Culture: Assessment of Current Situation

### Team Leader

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### Habitats to Consider

Beaches and Dunes, Freshwater Wetlands, Intertidal Marshes and Flats, Long Leaf Pine, Maritime Forests, Oyster Reefs, Pine Savannahs, Streams/Rivers/Buffers, Subtidal habitats

### Issues to Consider

Historic Places and Ways dependent on water resources, Working Waterfronts, Vistas, Scenic Byways, Festivals

### Stresses on Habitats that Contribute to Heritage and Culture

The below tables are the result of an exercise completed by 30 scientists/resource managers to evaluate the level of impact of thirteen stressors on the habitats that provide ecosystem services of value to our coastal community. Although the list of ecosystem services did not include cultural, intellectual, spiritual, or recreational experiences, many of the habitats assessed do in fact, provide those services and would contribute to HERITAGE AND CULTURE. The rating scale was from 0-3 with 0 being no impact and 3 being severe impact. For the purposes of analysis the committee defined significant stress as any average value over 2.0. These values are highlighted in the table below.

Habitat	Eco-Service	Chemical Contamination	Dredging/Filling	Fire Suppression	Fragmentation	Invasive Species	Land Use Change	Nutrient Enrichment	Pathogens	Sedimentation	Sea Level Rise	Climate Variability	Freshwater Discharge	Resource Extraction
Beaches and Dunes	Biodiversity	1.5	1.5	0.4	2.3	1.9	2.5	0.8	1	1.1	1.7	1.6	0.8	1
Beaches and Dunes	Carbon Sequestration	0.6	0.9	0.3	1.2	0.5	1.7	0.4	0.2	0.9	1.2	0.9	0.5	0.6
Beaches and Dunes	Fisheries habitat	0.5	0.6	0	0.4	0.4	0.6	0.6	0.6	0.9	0.6	0.6	0.5	0.3
Beaches and Dunes	Flood control	0.3	1.4	0	1.4	0.4	1.8	0.5	0.4	1.1	1.3	0.9	0.5	0.5
Beaches and Dunes	Groundwater replenishment	0.8	0.5	0	0.9	0.4	1.2	0.5	0.3	0.7	0.9	0.6	0.8	0.7
Beaches and Dunes	Nesting habitat for birds and turtles	1.2	1.9	0.3	2.1	1.3	2.4	0.6	0.7	1.2	1.7	1.7	0.6	1
Beaches and Dunes	Oyster production	0.4	0.4	0	0.1	0.2	0.4	0.5	0.5	0.4	0.3	0.2	0.3	0.5
Beaches and Dunes	Primary production	0.9	0.9	0.2	1.1	0.8	1.6	0.5	0.3	0.6	1.1	1	0.3	0.6

Habitat	Eco-Service	Chemical Contamination	Dredging/Filling	Fire Suppression	Fragmentation	Invasive Species	Land Use Change	Nutrient Enrichment	Pathogens	Sedimentation	Sea Level Rise	Climate Variability	Freshwater Discharge	Resource Extraction
Beaches and Dunes	Sediment and nutrient retention and export	0.4	1.4	0.1	1	0.7	1.8	0.7	0.1	1.5	1	0.7	0.4	0.7
Beaches and Dunes	Storm buffer/hazard protection	0.6	1.8	0.2	2	0.5	2.4	0.5	0.5	1.3	1.8	1.3	0.7	0.6
Beaches and Dunes	Water quality enhancement	1.1	1.4	0.1	1	0.5	1.6	1.1	0.9	1.1	0.8	0.7	0.8	0.6
Beaches and Dunes	Wildlife habitat	1.5	1.8	0.8	2.2	1.6	2.4	0.9	1	1.3	1.8	1.6	0.7	1.1
Freshwater Wetlands	Biodiversity	1.9	2.3	0.9	2.3	2.4	2.6	1.6	1.1	2.2	1.6	1.8	2	1.6
Freshwater Wetlands	Carbon Sequestration	1	2	0.7	1.7	1.5	2.3	1.4	0.7	2.1	1.5	1.5	1.5	0.9
Freshwater Wetlands	Fisheries habitat	1.8	2.5	0.5	2.1	2.1	2.4	1.9	1	2.2	1.7	1.8	2.2	1.4
Freshwater Wetlands	Flood control	0.6	2.4	0.5	1.9	1.1	2.4	0.8	0.5	2.2	1.8	1.4	1.9	1.1
Freshwater Wetlands	Groundwater replenishment	1.3	2.1	0.4	1.8	0.9	2.2	1.3	1	1.7	1.7	1.4	2.1	1.2
Freshwater Wetlands	Nesting habitat for birds and turtles	1.7	2.5	1.2	2.5	2.1	2.7	1.5	1.3	1.9	2	1.7	2.1	1.5
Freshwater Wetlands	Oyster production	0.8	1	0.2	0.8	0.8	1.1	1	0.8	1	0.6	0.7	1	0.6
Freshwater Wetlands	Primary production	1.3	2.1	0.8	1.9	1.9	2.6	1.9	0.7	2.1	1.7	1.5	1.9	1.2
Freshwater Wetlands	Sediment and nutrient retention and export	0.9	2.3	0.6	1.9	1.2	2.6	2.1	0.6	2.6	1.5	1.5	2	1.6
Freshwater Wetlands	Storm buffer/hazard protection	0.7	2.4	0.5	2.2	1.1	2.7	0.8	0.4	2.2	1.8	1.7	1.6	1.2
Freshwater Wetlands	Water quality enhancement	2	2.5	0.6	2	1.2	2.4	2.4	1.6	2.1	1.4	1.3	2	1.7
Freshwater Wetlands	Wildlife habitat	1.7	2.5	1.1	2.3	2.3	2.5	1.8	0.9	1.9	1.8	1.6	1.9	1.6
Intertidal Marsh and Flats	Biodiversity	1.7	2.4	0.7	2.2	1.8	2.3	1.6	1.1	2.3	2.3	1.5	1.8	1.2

Habitat	Eco-Service	Chemical Contamination	Dredging/Filling	Fire Suppression	Fragmentation	Invasive Species	Land Use Change	Nutrient Enrichment	Pathogens	Sedimentation	Sea Level Rise	Climate Variability	Freshwater Discharge	Resource Extraction
Intertidal Marsh and Flats	Carbon Sequestration	1.1	1.8	0.6	1.7	1	2.3	1.5	0.7	1.9	1.9	1.4	1.1	0.7
Intertidal Marsh and Flats	Fisheries habitat	1.6	2.6	0.4	2	1.4	2.4	1.7	1.2	2.4	2.3	1.6	1.8	1.3
Intertidal Marsh and Flats	Flood control	0.9	1.9	0.6	1.7	0.9	2.4	0.8	0.5	1.7	1.9	1.4	1.6	0.9
Intertidal Marsh and Flats	Groundwater replenishment	0.8	1.1	0.1	1	0.6	1.5	0.9	0.6	1	1	1	1.2	0.8
Intertidal Marsh and Flats	Nesting habitat for birds and turtles	1.3	2.2	0.9	2	1.5	2.3	1.3	1	2	2.1	1.6	1.3	1.2
Intertidal Marsh and Flats	Oyster production	1.6	2.1	0.4	1.4	0.9	1.6	1.3	1.5	1.8	1.5	1.2	1.7	1.3
Intertidal Marsh and Flats	Primary production	1.2	2.1	0.7	1.6	1.1	2.2	1.7	0.8	2.3	2.1	1.6	1.6	1
Intertidal Marsh and Flats	Sediment and nutrient retention and export	0.8	2.1	0.5	1.8	0.9	2.3	1.6	0.5	2.4	2.1	1.4	1.6	1
Intertidal Marsh and Flats	Storm buffer/hazard protection	0.7	2.1	0.5	1.9	0.9	2.3	0.7	0.6	2	2.2	1.4	1.4	1.1
Intertidal Marsh and Flats	Water quality enhancement	1.8	2.2	0.6	1.7	0.9	2.2	1.9	1.5	2.1	1.7	1.3	1.8	1.1
Intertidal Marsh and Flats	Wildlife habitat	1.4	2.4	0.8	2.1	1.5	2.2	1.6	1.2	2	2.2	1.6	1.6	1.1
Longleaf Pine Habitat	Biodiversity	1.1	0.9	2.5	2.4	2.3	2.4	1.1	1.1	0.9	0.9	1.4	0.8	2.1
Longleaf Pine Habitat	Carbon sequestration	0.6	0.9	2.1	1.7	1.9	2.5	1	0.5	0.5	0.8	1.4	0.7	2
Longleaf Pine Habitat	Fisheries habitat	0.4	0.3	0.1	0.6	0.6	0.7	0.4	0.4	0.5	0.5	0.4	0.4	0.4
Longleaf Pine Habitat	Flood control	0	0.9	1.2	2	0.6	2.3	0.2	0	0.6	0.7	0.8	1.1	1.6

Habitat	Eco-Service	Chemical Contamination	Dredging/Filling	Fire Suppression	Fragmentation	Invasive Species	Land Use Change	Nutrient Enrichment	Pathogens	Sedimentation	Sea Level Rise	Climate Variability	Freshwater Discharge	Resource Extraction
Longleaf Pine Habitat	Groundwater replenishment	1.4	1.1	1.1	1.9	1	2.3	1.4	0.9	1.1	0.7	1.2	1.4	1.9
Longleaf Pine Habitat	Nesting habitat for birds and turtles	1.1	1.1	2.4	2.2	2.2	2.4	1.2	1	1.2	1.1	1.5	1.2	2
Longleaf Pine Habitat	Oyster production	0	0	0	0.3	0	0.5	0.2	0.1	0.2	0.1	0.2	0.1	0.2
Longleaf Pine Habitat	Primary production	0.8	1	2	2.3	1.4	2.3	1	0.8	0.9	0.7	1.3	1	2
Longleaf Pine Habitat	Sediment and nutrient retention and export	0.4	1.1	1.6	2.1	1.2	2.3	1.2	0.5	1.3	0.8	0.9	1.2	1.6
Longleaf Pine Habitat	Storm buffer/hazard protection	0.4	1.3	1.3	1.7	0.9	2	0.5	0.3	1	0.8	1	1.1	1.4
Longleaf Pine Habitat	Water quality enhancement	1.1	1.1	1.1	2	0.9	2.1	1.5	0.8	1.6	0.7	1	1.5	1.6
Longleaf Pine Habitat	Wildlife habitat	1.4	0.9	2.5	2.5	2.5	2.4	1.3	1.1	1	1.1	1.8	1.2	2.5
Maritime Forest	Biodiversity	0.8	1.2	1.2	2.3	1.9	2.2	1	0.9	0.8	1.2	1.6	0.6	1.5
Maritime Forest	Carbon sequestration	0.5	0.8	0.9	1.7	0.7	2.1	0.5	0.3	0.7	1	1.4	0.3	1.4
Maritime Forest	Fisheries habitat	0.1	0.5	0	0.4	0.2	0.8	0.4	0.1	0.4	0.4	0.8	0.2	0.7
Maritime Forest	Flood control	0.2	1	0.5	2	0.2	1.9	0	0	1	0.7	1	0.7	1.1
Maritime Forest	Groundwater replenishment	1.1	1.2	0.8	1.6	0.8	2	0.6	0.4	1.1	0.9	1.1	1.3	1.5
Maritime Forest	Nesting habitat for birds and turtles	1.4	1.3	1.5	2.3	2.7	2.4	1.3	1.3	1.2	1.4	1.8	0.9	1.4
Maritime Forest	Oyster production	0.3	0.3	0	0.3	0.1	0.5	0.3	0.3	0.3	0.3	0.4	0.5	0.6
Maritime Forest	Primary production	0.6	1	1.1	1.6	1.1	2.1	0.9	0.6	0.9	0.9	1.4	0.8	1.1
Maritime Forest	Sediment and nutrient retention and export	0.4	1.2	1.1	1.6	1.1	2.4	1.3	0.6	1.1	1	1.4	0.8	1.2

Habitat	Eco-Service	Chemical Contamination	Dredging/Filling	Fire Suppression	Fragmentation	Invasive Species	Land Use Change	Nutrient Enrichment	Pathogens	Sedimentation	Sea Level Rise	Climate Variability	Freshwater Discharge	Resource Extraction
Maritime Forest	Storm buffer/hazard protection	0.4	1.1	0.9	2.1	0.8	2	0.4	0.4	0.9	1.2	1.6	0.6	1.2
Maritime Forest	Water quality enhancement	1	1.2	0.6	1.5	0.9	2	1.3	1	1.3	0.8	1.1	1.1	1.2
Maritime Forest	Wildlife habitat	1.1	1.3	1.6	2.3	2.2	2.4	1.2	1.2	1.1	1.3	1.8	1	1.6
Oyster Reefs	Biodiversity	1.8	2.3	0.3	1.5	1.5	1.5	2	1.8	2.4	1.3	1.4	2.2	1.9
Oyster Reefs	Carbon Sequestration	0.8	1.2	0.2	0.9	0.7	1	1.1	0.9	1.3	0.8	0.8	1.2	1.3
Oyster Reefs	Fisheries habitat	1.6	2.1	0.3	1.7	1.3	1.5	1.7	1.5	2.2	1.2	1.2	2	2.1
Oyster Reefs	Flood control	0.4	0.8	0.2	0.8	0.6	0.9	0.6	0.4	0.8	0.7	0.4	0.7	0.9
Oyster Reefs	Groundwater replenishment	0.2	0.2	0	0	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Oyster Reefs	Nesting habitat for birds and turtles	0.2	0.2	0	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2
Oyster Reefs	Oyster production	2.1	2.2	0.3	1.8	1.5	1.5	2	2.2	2.8	1.7	1.7	2.2	2.5
Oyster Reefs	Primary production	0.9	1.2	0.3	0.9	0.8	1.3	1.4	0.9	1.4	0.9	0.9	1.3	1.3
Oyster Reefs	Sediment and nutrient retention and export	0.7	1.6	0.3	1.1	0.7	1.5	1.2	1	1.9	1.2	1.1	1.7	1.6
Oyster Reefs	Storm buffer/hazard protection	0.6	1.5	0.2	1.2	0.8	1.3	0.8	0.9	1.5	1.2	0.9	1.2	1.5
Oyster Reefs	Water quality enhancement	1.9	2.1	0.4	1.5	1.1	1.7	2.1	1.9	2.4	1.3	1.2	2.1	1.9
Oyster Reefs	Wildlife habitat	1.2	1.4	0.2	1.1	0.9	1.2	1.2	1.2	1.6	1.1	1.1	1.4	1.2
Pine Savanna Forest	Biodiversity	1.3	1.6	2.6	2.2	2.4	2.5	1.2	1.1	1.1	1	1.5	1.1	1.8
Pine Savanna Forest	Carbon sequestration	0.5	1	1.7	1.7	0.8	1.8	0.7	0.3	0.5	0.7	1.2	0.6	1.8
Pine Savanna Forest	Fisheries habitat	0	0	0	0.1	0.1	0.3	0.1	0.1	0.1	0.2	0.1	0	0.1
Pine Savanna Forest	Flood control	0.5	1.4	1	1.7	1	1.9	0.3	0.3	0.6	0.9	1.1	1.2	1.9

Habitat	Eco-Service	Chemical Contamination	Dredging/Filling	Fire Suppression	Fragmentation	Invasive Species	Land Use Change	Nutrient Enrichment	Pathogens	Sedimentation	Sea Level Rise	Climate Variability	Freshwater Discharge	Resource Extraction
Pine Savanna Forest	Groundwater replenishment	1.4	1.3	0.9	1.6	0.5	2	1	0.8	1	0.7	1.1	1.2	1.5
Pine Savanna Forest	Nesting habitat for birds and turtles	1.5	1.5	2.1	2.2	2	2.2	1.2	1.1	1.1	1.1	1.5	1.1	1.6
Pine Savanna Forest	Oyster production	0	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0.1
Pine Savanna Forest	Primary production	1	1	1.3	1.7	1.1	2.1	0.7	0.8	0.8	0.7	1.2	0.7	1.5
Pine Savanna Forest	Sediment and nutrient retention and export	0.7	1.4	1.3	2	1.1	2.1	1.2	0.5	1.1	0.8	1.3	1.4	1.6
Pine Savanna Forest	Storm buffer/hazard protection	0.3	1	0.9	1.7	0.5	1.8	0.2	0.2	1	0.9	1.1	1.2	1.1
Pine Savanna Forest	Water quality enhancement	1.5	1.2	1	2	0.9	1.9	1.4	1.3	1.6	0.7	1.3	1.7	1.6
Pine Savanna Forest	Wildlife habitat	1.4	1.6	2.4	2.4	2.4	2.4	1.3	1.3	1.1	1.2	1.6	1.5	2.1
Streams and Rivers	Biodiversity	1.9	2	0.7	1.9	2.2	2	1.7	1.4	2.2	1.2	1.4	2.1	1.6
Streams and Rivers	Carbon Sequestration	0.9	1.1	0.5	0.9	0.9	1.5	1.2	0.5	1.4	0.9	1.1	1.3	1.2
Streams and Rivers	Fisheries habitat	2	2.2	0.4	1.8	2.1	2.2	1.8	1.5	2.3	1.1	1.3	2.2	1.7
Streams and Rivers	Flood control	0.6	1.7	0.4	1.5	0.9	2.1	0.7	0.5	1.6	1.2	1.3	2.1	1.1
Streams and Rivers	Groundwater replenishment	1.1	1.5	0.4	1.2	1	1.6	1.1	0.6	1.3	0.9	1.1	1.9	1.5
Streams and Rivers	Nesting habitat for birds and turtles	1	1.4	0.9	1.2	1.1	1.4	1	1	1.4	1	1.1	1.2	1.1
Streams and Rivers	Oyster production	0.8	0.6	0.3	0.7	0.5	0.6	0.6	0.8	0.8	0.5	0.4	0.9	0.5
Streams and Rivers	Primary production	1.4	1.5	0.6	1.1	1.5	1.7	1.9	0.8	1.8	0.8	1.1	1.9	1.1
Streams and Rivers	Sediment and nutrient retention and export	0.8	2.1	0.5	1.5	1.1	2.2	1.6	0.5	2.2	1	1.1	2.2	1.5

Habitat	Eco-Service	Chemical Contamination	Dredging/Filling	Fire Suppression	Fragmentation	Invasive Species	Land Use Change	Nutrient Enrichment	Pathogens	Sedimentation	Sea Level Rise	Climate Variability	Freshwater Discharge	Resource Extraction
Streams and Rivers	Storm buffer/hazard protection	0.8	1.6	0.6	1.3	1	1.7	0.7	0.5	1.7	1.2	1.2	1.8	1.1
Streams and Rivers	Water quality enhancement	1.9	1.7	0.6	1.4	1.1	1.9	1.9	1.7	1.9	0.9	1.2	1.9	1.2
Streams and Rivers	Wildlife habitat	1.5	1.7	0.8	1.5	1.7	1.8	1.4	1.1	1.7	1	1.3	1.6	1.4
Subtidal habitats	Biodiversity	1.6	2.4	0.3	1.3	1.5	1.4	1.7	1.2	2.3	1.2	1.2	2	1.9
Subtidal habitats	Carbon Sequestration	0.6	1.4	0	0.5	0.6	1	1.7	0.4	1.7	0.7	0.8	0.9	1
Subtidal habitats	Fisheries habitat	1.4	2.1	0.3	1.3	1.2	1.4	1.9	1.3	2.2	1	1.3	1.5	1.7
Subtidal habitats	Flood control	0	0.1	0	0.2	0	0.2	0	0	0.2	0.2	0.1	0.1	0.1
Subtidal habitats	Groundwater replenishment	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0
Subtidal habitats	Nesting habitat for birds and turtles	0.1	0.2	0	0.2	0.2	0.3	0.2	0.1	0.4	0.1	0.1	0.4	0.2
Subtidal habitats	Oyster production	1.1	1.5	0.2	0.7	0.8	0.9	1.2	1.2	1.6	0.8	1	1.3	1.3
Subtidal habitats	Primary production	0.6	1.8	0.2	1	0.7	1.2	1.9	0.6	1.8	1	1.3	1.5	1.2
Subtidal habitats	Sediment and nutrient retention and export	0.4	1	0.1	0.7	0.3	1	1.4	0.4	1.6	0.6	0.8	1.2	0.7
Subtidal habitats	Storm buffer/hazard protection	0.1	0.5	0	0.5	0.2	0.5	0.2	0	0.7	0.5	0.5	0.4	0.2
Subtidal habitats	Water quality enhancement	1.2	1.6	0.1	1	0.6	1.2	1.7	1	1.7	0.9	0.9	1.4	1.1
Subtidal habitats	Wildlife habitat	0.9	1.5	0.5	1.1	0.9	1	1.1	0.8	1.6	1.1	1.1	1.1	1

## **Strengths**

*What is in place currently that supports the health/sustainability of this value?*

### **Research, Monitoring, Management Plans**

**Alabama Register of Historic Places, Alabama Historical Commission** - The Alabama Register of Historic Places is the state's official list of cultural resources, 50 years or older, including districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture at the local, state, and/or national level. The ARHP lists 49 properties in Mobile and Baldwin counties. <http://preserveala.org/alabamaregister.aspx>

**National Register of Historic Places** - The National Register (NR) of Historic Places is the nation's official list of cultural resources, 50 years or older, including districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture at the local, state, and/or national level. The NR is part of a nationwide program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archaeological places. List of properties in Alabama included in the National Register of Historic Places: <http://preserveala.org/nationalregister.aspx>

**National Historic Landmarks Program** - National Historic Landmarks are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. <http://www.nps.gov/history/nhl/>

**Alabama State Archaeological Site File** - The Office of Archaeological Research (OAR) maintains the Alabama State Site File and Report Archives for all archaeological sites and Section 106 reports in the state of Alabama. Hard copies of site forms, topographic maps and Section 106 reports, as well as other pertinent archaeological literature are housed at OAR reference room, located at Moundville Archaeological Park. <http://museums.ua.edu/oar/assf.htm>

**Deepwater Horizon Oil Spill Clean Up Support, Cultural Resources Monitoring, HDR Inc.** – International company HDR, Inc. is the contracted company for BP that has brought in underwater archaeologists and ethnographers to study the impact of the oil spill on traditional community resources. The monitoring includes ethnic fishing villages and Native American communities as well as sea floor sampling and testing. <http://www.hdrinc.com/sites/all/files/content/books/book-files/5062-hdr-sustainability-corporate-responsibility.pdf> pp14.

**Ongoing Coastal Research, Center for Archaeological Studies, U of South AL** Ground-breaking research at sites like Old Mobile and Port Dauphin has revealed much about Alabama's earliest colonial history. The rapid pace of modern development has also led us to sites like Bottle Creek, the Exploreum, and Dog River Bridge, where Indians and French, British, Spanish, and Early American settlers left their marks on the landscape. <http://www.southalabama.edu/archaeology/center.html>

**Alabama's Coastal Connection Corridor Management Plan** - The mission of this project is to identify, promote and enhance the assets of Alabama's Coastal Connection through the development and implementation of a Corridor Management Plan and through obtaining both state and national designation as a Scenic Byway. <http://www.gulfshores.com/stats/Scenic%20Byway%20CMP.pdf>

**Fort Morgan's Master Plan** – Deals specifically with Ft. Morgan State Historic Site, which preserves a broad array of important natural and cultural resources on state property at the mouth of Mobile Bay, administered by the Alabama Historical Commission. <http://openmeetings.baldwincountyal.gov/sirepub/cache/2/1bej3m55ymrrlm45sh401r55/17340511102012124635546.PDF>



**Working waterfronts** - Coastal Alabama residents have relied on access to the water for their livelihood for generations. Towns like Bayou La Batre and Orange Beach operate fishing boats, seafood processing facilities, boat yards, charter fishing operations, and support industries.

<http://www.mobilebaynep.com/images/uploads/library/2010ProceedingsFinal.pdf>

**The Alabama Natural Heritage Program** State database of rare and threatened species is the most comprehensive database of species distribution and abundance. The Program has provided state and federal agencies, corporations, environmental groups, and the public with the information needed to monitor, preserve and protect Alabama's natural areas and biodiversity.

[http://mercury.ornl.gov/clearinghouse/send/xsltText2?full\\_datasource=anhp&fileURL=d:%5Cmercury\\_instances%5Cusgs%5Canhp%5Charvested%5Cwww.alnhp.org\\_metadata\\_ALNHP-eors.xml](http://mercury.ornl.gov/clearinghouse/send/xsltText2?full_datasource=anhp&fileURL=d:%5Cmercury_instances%5Cusgs%5Canhp%5Charvested%5Cwww.alnhp.org_metadata_ALNHP-eors.xml)

### **Ecosystem Restoration, Protection, Conservation**

**Three Mile Creek** - This creek and its surrounding watershed present an extraordinary opportunity to turn what is now a community liability, due to its degraded condition, into a community amenity similar to "river walks" in other cities. By restoring the hydrology and water quality of this historic cultural and environmental resource, property values within its watershed would be enhanced, Three Mile Creek would become a unique urban ecotourism destination, and area economic development prospects would be improved. The watershed planning process is getting under way.

[http://www.mobilebaynep.com/what\\_we\\_do/current\\_initiatives/three\\_mile\\_creek\\_watershed/](http://www.mobilebaynep.com/what_we_do/current_initiatives/three_mile_creek_watershed/)

**The Marsh Island (Portersville Bay) Restoration Project** - Involves the creation of a 50-acre salt marsh along Marsh Island, a state-owned island in the Portersville Bay portion of Mississippi Sound, Alabama. Once known as the "Coney Island of the South," it was a popular tourist and fishing spot in the early 20th century. <http://www.doi.gov/deepwaterhorizon/upload/AlabamaMarshIslandF.pdf>

**Africatown** – Currently awaiting NRHP status, Africatown (AfricaTown; African Town) is the site of the arrival of the last documented slave ship to reach the United States. Aboard the famed ship Clotilda, was the community's co-founder Cudjo Lewis, who achieved notoriety when he was interviewed about his experiences in Africa, his journey to Mobile on the slave ship, and his life after he regained his freedom. The Africatown settlement is located on a hill north of the city beside the Alabama River in the area known as Plateau and Magazine Point. <http://www.encyclopediaofalabama.org/face/Article.jsp?id=h-1402>

**Shell Mound Park, Dauphin Island** – Located on the north shore of the barrier island, these massive shell middens date to A.D. 1100 - 1550. Formed by the accumulation of debris from repeated meals of roasted oysters, fish and other delicacies by early Native Americans, the mounds were built by people from the Bottle Creek site, a major Mississippian mound center to the north in the Mobile-Tensaw Delta, as a place to visit during winter to gather and roast oysters. <http://www.exploresouthernhistory.com/shellmound.html>

**The Rochon-De Muy Plantation on Dog River** – Prior to construction of the new Dog River Bridge, research at the site told much about Alabama's earliest colonial history.

<http://www.usouthal.edu/archaeology/center.html>

**Blakeley State Park** – A part of the Civil War Discovery Trail, Blakeley State Park preserves multiple historic sites nestled in pristine woodlands and marshes along the Tensaw River.

<http://www.blakeleypark.com/>

**Ft. Gaines Park** – Guarding the western entrance to Mobile Bay for more than 150 years, the Town of Dauphin Island preserves this Civil War citadel and adjacent property.

<http://www.exploresouthernhistory.com/fortgainesal.html>

**Ft. Morgan Historic Park** – Still showing the scars from shell impacts, the fort, located on the east side of the mouth of Mobile Bay, is one of the most historic sites in Alabama. Built in 1833, it's known as an important stop for Creek Indians during the historic Trail of Tears as well as playing a vital role in the famed 1864 Battle of Mobile Bay. <http://www.exploresouthernhistory.com/fortmorgan.html>

**Ft. Mims Historic Park** – Visitors can take a step back to the days of the Creek War of 1813-1814 particularly, the Redstick Creek attack on this settler refuge in August 1813 triggered a military response by the United States that led to destruction of the Creek Nation and the cession of 21 million acres of land for American settlement. <http://www.exploresouthernhistory.com/fortmims1.html>

**Federal and State-owned lands in the Mobile-Tensaw Delta** -- Bottle Creek and Battery Huger are two of the many significant archaeological sites offered protection on state and federal lands in the Delta. <http://www.outdooralabama.com/public-lands/stateLands/foreverWild/ForeverWildReport.pdf>  
<http://www.usace.army.mil/Library.aspx>

**Oyster Reef Replenishment**– These intermittent projects strictly utilize waterbottoms/substrates that support oysters development. Establishment of these reefs is beneficial to shorelines and marshes resulting in economic benefit. Historical Commercial harvest is the purpose.

**Oyster Reef Restoration** - Part of a federal economic stimulus program aimed at restoring the nation's coastlines, a plan to build two oyster reefs that would block waves and create fish habitat in south Mobile County. Nearly a mile of underwater reefs along eroding shoreline in two locations: near Bay Front Park in Mobile Bay and in Portersville Bay near Bayou La Batre have been built.

#### **Federal, State, Local Regulations And Policies, Technical Training**

1. **ADEM and ADCNR Coastal Permitting** – Projects having the potential to impact Alabama's coastal historical resources are subject to review pursuant to ADEM's Coastal Rules.
2. <http://adem.alabama.gov/programs/coastal/coastalPermitting.cnt>
3. **USACE Section 404 Fill Permits** <http://www.sam.usace.army.mil/rd/reg/section404.htm>
4. **USACE Nationwide Permits** <http://www.sam.usace.army.mil/rd/reg/nwp.htm>
5. **National Historic Preservation Act, Section 106 Review Process** - Requires Federal agencies to take into account the effects of their undertakings on historic properties, and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment.
6. <http://www.achp.gov/106summary.html>

#### **Volunteer programs, outreach, education**

**Mobile Bay Oyster Gardening** joins volunteers together with science and nature to grow these vital members of estuarine ecology. <http://www.aces.edu/pubs/docs/A/ANR-1207/>

**Dauphin Island Sea Lab** – The State of Alabama's premier marine science education and research facility. The DISL Estuarium, the only public coastal aquarium in the state, is also located on the campus on the east end of the barrier island. <http://www.disl.org/>

**USA Archaeology Museum Educational Programs** - Educational Programming at the Archaeology Museum pulls from Alabama's curriculum to emphasize historical awareness and critical thinking. Tours aim to inspire awe and generate curiosity about archaeology and the region's past making history meaningful to students today. <http://www.usouthal.edu/archaeology/museum-education.html>

**USA Center for Archaeology Studies** – Offers hands-on volunteer opportunities. <http://www.usouthal.edu/archaeology/education.html>

## **Weaknesses/Threats**

*What stresses are currently putting negative pressure on the long-term viability of this value?*

1. **Waterfront Development/Land Use Changes** – While development is needed to keep a community viable, there has to be a balance reached between anthropogenic development and protection of the environment. It is estimated that by 2025 the coastal population of Alabama will increase nearly 90 percent. Pg. 5 and 6 <http://www.mobilebaynep.com/images/uploads/library/State-of-Mobile-Bay-Final.pdf>
2. **Digging for Artifacts** – Uncontrolled metal detecting, artifact collecting, and digging on archaeological sites in the area removes artifacts from historical contexts, degrades the information potential of the archaeological record, and damages sites integrity. These activities are illegal when they occur on publically-owned sites and on private property without landowner permission. Digging for artifacts is an increasing threat to our archaeological resources. <http://www.nps.gov/archeology/tools/Laws/arpa.htm>
3. **Increased Intensity of Storms** – As ocean temperatures raise so does the intensity of hurricanes, according to many scientists. Regardless of the cause, stronger storms result in significant erosion of beaches, intertidal marshes and many associated ecosystems. <http://www.gfdl.noaa.gov/global-warming-and-hurricanes>
4. **Sea Level Rise**- The melting of ice sheets and glaciers is adding more water to oceans. Meanwhile, the ocean water is warming which means expansion. Both indicators are resulting in a continued trend of lost shoreline and coastal archaeological sites are being impacted. <http://www.epa.gov/climatechange/science/indicators/oceans/sea-level.html>
5. **Poor Resource Visibility and Recognition** – Many archaeological sites are unobtrusive and not recognized by the public as important resources deserving of preservation and protection. Encouraging interest and education at a local level would help attract attention and support for historical markers and other ways to highlight the presence of important sites.

## **Opportunities**

*Are there any opportunities that you know of to support the long term sustainability of this value?*

1. Educating tourists during their recreational activities– deep sea and pier fishing
2. Restore Act? NRDA
3. Outreach, education on state of Fishery-Deep Sea Fishing Rodeo, Greater Gulf State Fair
4. Training of charter boats and guides, commercial and recreational fishermen
5. Archaeological testing program to retrieve baseline data from surviving resources
6. Ethnographic research on local interests in the waters of the Mobile Bay Estuary
7. Evaluate threat levels to historic and archaeological resources to development plans to mitigate threats and enhance site protection.
8. Educational outreach program development aimed at increasing awareness and appreciation of human interactions with the Mobile Bay Estuary through time

9. Encourage cross-interests between botanists, birders, recreational fishers, canoe and kayakers, etc. in enjoying and preserving archaeological habitats and sites.
  10. Historical place name study of the waterways, landforms, and cultural features of the Mobile Bay landscape. This sort of historical and oral historical study can retrieve rapidly disappearing folk names from the past century and can reveal peoples' relationship to the environment.
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