

# State of Alabama

## ***DEEPWATER HORIZON OIL SPILL***

### RESTORATION PROGRESS REPORT



2018 Update



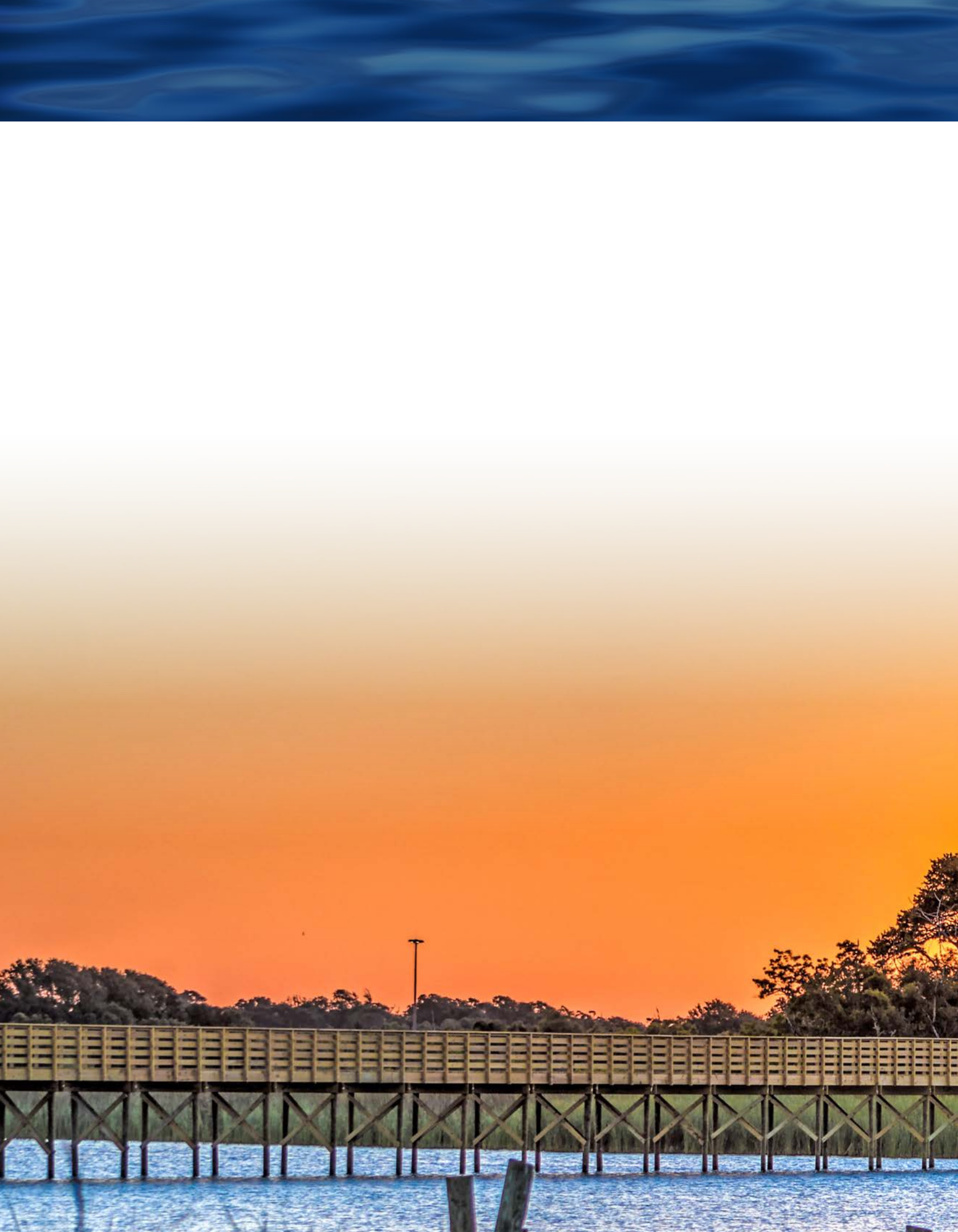




Table of Contents .....	1
Letter from Governor Kay Ivey .....	2
Letter from Commissioner Chris M. Blankenship .....	3
Executive Summary .....	4
Understanding the DWH Restoration Processes in Alabama .....	6
Restoration Goals	
Replenish and Protect Living Coastal and Marine Resources .....	12
Support and Enhance Community Resilience .....	25
Provide and Enhance Economic Development & Infrastructure .....	29
Restore, Conserve and Enhance Habitat .....	34
Provide and Enhance Recreation/Public Access .....	47
Restore Water Quality .....	55
Provide Planning Support .....	62
Project Status .....	63
Looking to the Future .....	69
Additional Alabama Restoration Information .....	70







## LETTER FROM GOVERNOR IVEY

We are blessed and fortunate to live in the most beautiful state in the country. Alabama boasts tremendous natural diversity, including over 4,500 species of plants and animals. In April 2010, that beauty was marred when the *Deepwater Horizon* exploded, killing 11 people and impacting our natural resources and way of life in coastal Alabama.

Since the earliest days of the spill, the State of Alabama has been engaged in the recovery of Alabama's natural resources and coastal economy. In partnership with our state, federal and local partners as well as thousands of Alabamians, we have worked to plan and implement restoration projects that will not only provide benefits to those of us who call Alabama home today, but also preserve our resources and strengthen the economy for future generations of Alabamians.

“... we have worked to plan and implement restoration projects that will not only provide benefits to those of us who call Alabama home today, but also preserve our resources and strengthen the economy for future generations of Alabamians.”

In this report, the Governor's Office and the Alabama Department of Conservation and Natural Resources are providing Alabama coastal stakeholders with an update of restoration activities occurring in coastal Alabama. From restoration of oyster reefs to the construction of boat ramps and fishing piers, from the acquisition of important habitat for conservation to monitoring our fisheries, Alabama has invested nearly \$711 million in projects over the past eight years. It is clear that restoration is not a small or short-lived endeavor, and as we look back on the previous eight years, we continue to plan for the future. Our citizens have been and remain an important part of the recovery effort. I hope you are as proud as I am of the progress we have made, and that we will continue to work together to preserve, enhance and protect the natural resources, people and economy of Alabama the Beautiful.

Best regards,

Kay Ivey  
Governor



## LETTER FROM COMMISSIONER BLANKENSHIP

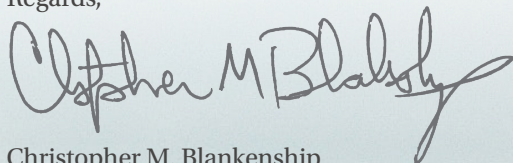
I am pleased to present to you this report on *Deepwater Horizon* (DWH) related coastal restoration activities in Alabama. Since the oil spill, and subsequent settlements, Alabama has invested significant restoration funds into foundational projects across the Alabama coast that will yield long-term benefits to our ecosystems decades into the future. These projects provide important benefits to our coastal communities and state economy as well.

This report provides updates on our activities to date as well as information regarding how restoration priorities will continue to evolve over time. We will continue to engage our stakeholders as we make important decisions regarding how to invest restoration funds and build on past success. We understand that the various restoration funding streams and timelines can make the big picture impacts of restoration projects implemented by local, state, federal, and our non-governmental partners across the coast difficult to assess. This report will provide some additional details behind those efforts, organized by restoration goal rather than funding source so that you can see how projects, collectively, are contributing to a stronger and more vibrant coastal Alabama.

We have invested in a diverse array of projects including acquiring lands important for endangered species, building marsh with the beneficial use of dredged sediment, monitoring our fisheries to support sound management, and investing in recreational projects and infrastructure. It is my hope that as you explore the geographic and resource diversity of our projects detailed in this report, you will be as excited as I am about the opportunities to build on this work in the coming years.

I deeply appreciate your input and participation in restoration activities across Coastal Alabama. I look forward to continued partnership as we implement restoration that supports our coastal economy, environment and communities.

Regards,



Christopher M. Blankenship  
Commissioner

Alabama Department of Conservation and Natural Resources



“ Alabama has invested significant restoration funds into foundational projects across the Alabama coast that will yield long-term benefits to our ecosystems decades into the future. These projects provide important benefits to our coastal communities and state economy as well. ”





## Executive Summary

On or about April 20, 2010, the *Deepwater Horizon* (DWH) mobile drilling unit exploded, caught fire, and eventually sank in the Gulf of Mexico, resulting in a massive release of oil and other substances from British Petroleum Exploration and Production (BP) Macondo well and causing loss of life and extensive natural resource injuries. Approximately 3.19 million barrels (134 million gallons) of oil were released into the ocean (U.S. v. BP et al., 2015). Oil spread from the deep ocean to the surface and nearshore environment from Texas to Florida. The oil came into contact with and injured natural resources as diverse as deep-sea coral, fish and shellfish, productive wetland habitats, sandy beaches, birds, sea turtles, and other protected marine life. The oil spill prevented people from fishing, going to the beach, and enjoying typical recreational activities along the Gulf of Mexico. The oil spill also significantly affected the health of the Gulf States' economies, impacting a wide-array of industries such as tourism, the maritime industry, and the commercial and recreational fishing industries. Extensive response actions, including cleanup activities and actions to try to prevent the oil from reaching sensitive resources, were undertaken to try to reduce harm to people and the environment. However, the extent of impacts was very significant, leading to a large and diverse restoration effort that began after the spill and that will continue for decades to come.

The State of Alabama will receive a minimum of nearly \$1.4 billion dollars resulting from the payment of claims and penalties associated with the oil spill. These dollars are to be paid in 15 annual installments, which began in April 2016.

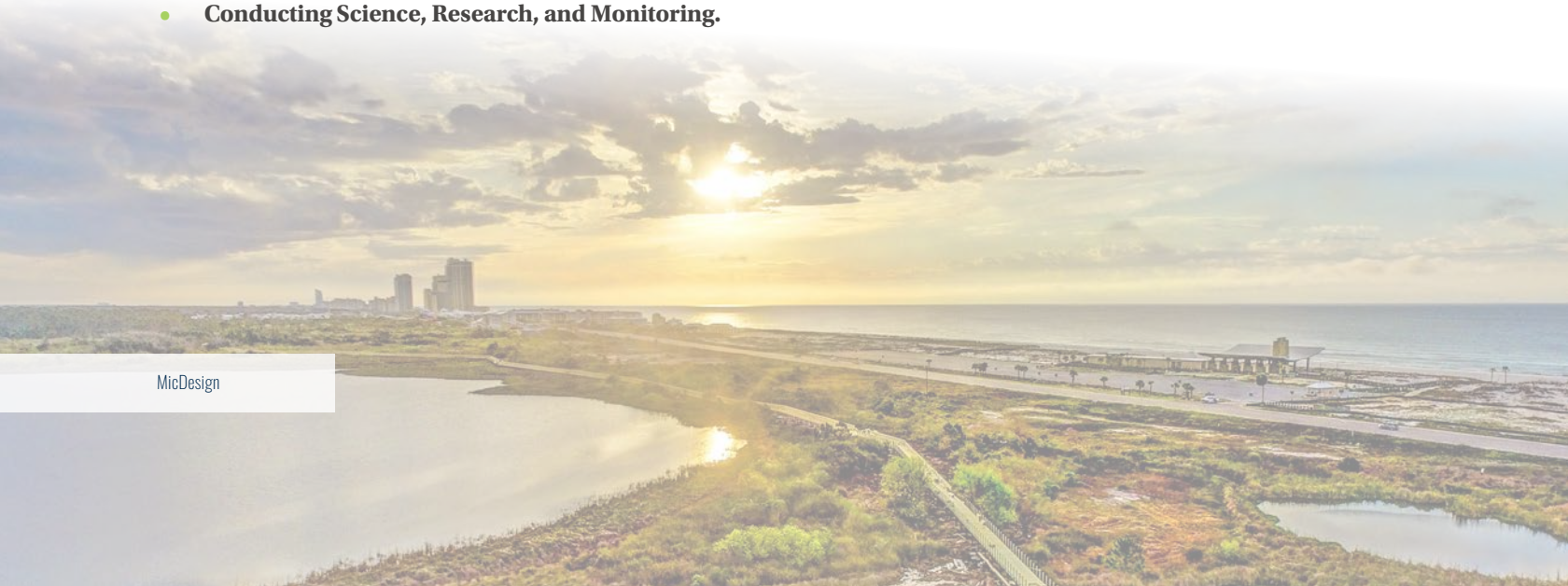
The Governor, along with the Alabama Department of Conservation and Natural Resources and the Alabama Gulf Coast Recovery Council is tasked with overseeing this funding for the benefit of Alabama's natural resources and economy. Restoration is well underway in the state, with projects being funded across a wide-array of goals that, collectively, will significantly contribute to the improvement of Alabama's coastal resources and strengthen our State economy while improving the health and resiliency of our coastal communities.

### ***Deepwater Horizon Restoration in Alabama***

To date, Alabama has committed funding to 122 projects totaling almost \$711 million.

**This money has funded and will continue to fund Alabama's restoration goals:**

- **Replenishing and Protecting Living Coastal and Marine Resources;**
- **Supporting and Enhancing Community Resilience;**
- **Providing and Enhancing Economic Development and Infrastructure;**
- **Restoring, Conserving, and Enhancing Habitat;**
- **Providing and Enhancing Recreation and Public Access;**
- **Restoring Water Quality;**
- **Providing Planning Support, and**
- **Conducting Science, Research, and Monitoring.**





## Funding Approved to Date, by Restoration Goal \$711 Million Total



Figure 1: Funding to date for Alabama projects, by restoration goal\*

## Funding Approved to Date, by Restoration Process \$711 Million Total

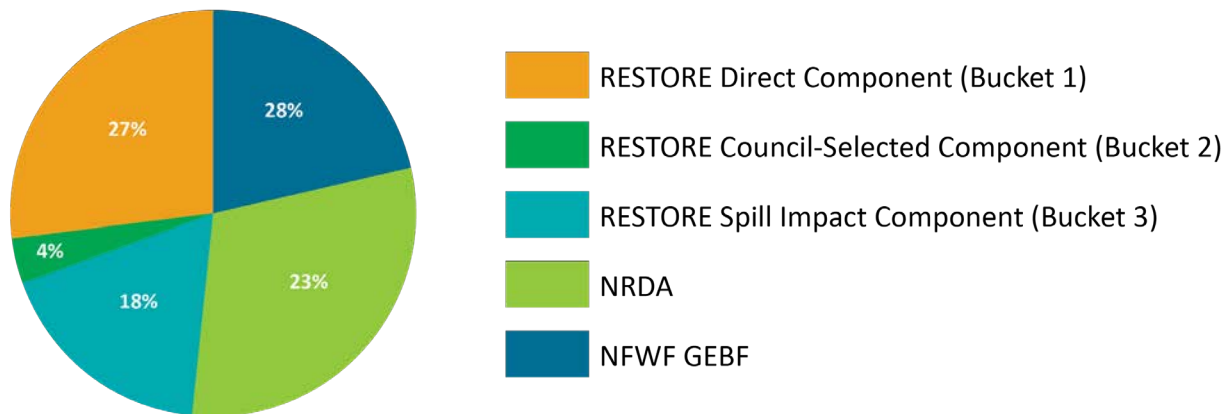


Figure 2: Total dollars approved, by restoration process\*

\*These tables include funding for projects that are expected to be approved by the National Fish and Wildlife Foundation in late 2018. These projects are not described in additional detail in this document.



## UNDERSTANDING THE DWH RESTORATION PROCESSES IN ALABAMA

The *Deepwater Horizon* (DWH) oil spill resulted in several settlements with responsible parties, leading to subsequent payments of fines and claims related to a number of statutes including the Oil Pollution Act and the Clean Water Act.

A number of different entities oversee the distribution and oversight of these funds, and the processes for decision-making varies from state to state. Below is an overview of the DWH restoration funding processes in Alabama. These processes are described in more detail on the following pages.

Restoration Process	Alabama Coordinating Entity	Total Funding for Alabama	Funding Approved as of October 1, 2018
<b>Direct Component “RESTORE Bucket 1”</b>	Alabama Gulf Coast Recovery Council	\$373 million	\$192 million
<b>Council-Selected Restoration Component “RESTORE Bucket 2”</b>	Alabama Department of Conservation and Natural Resources	\$1.6 billion across 5 Gulf States	\$26 million
<b>Spill Impact Component “RESTORE Bucket 3”</b>	Alabama Gulf Coast Recovery Council	\$326 million	\$128 million
<b>RESTORE Centers of Excellence</b>	Marine Environmental Sciences Consortium & Alabama Gulf Coast Recovery Council	\$26 million	\$0 <i>Grant application in process</i>
<b>Natural Resource Damage Assessment (NRDA)</b>	Alabama Department of Conservation and Natural Resources	\$296 million	\$219 million
<b>National Fish &amp; Wildlife Foundation Gulf Environmental Benefit Fund (NFWF GEBF)</b>	Alabama Department of Conservation and Natural Resources	\$356 million	\$155 million

Table 1. Summary of DWH Restoration Processes in Alabama

The total funding available for projects across the five gulf states is \$1.6 billion, supplemented by interest generated by the Trust Fund.





# RESTORE Act

The Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States (RESTORE) Act designated five different funding sources, of which the State of Alabama receives direct funding through four allocations: 1) the Direct Component, 2) the Council-selected restoration component, 3) the Spill Impact Component, and 4) the Centers of Excellence. Each allocation has different priorities for funding, operates under different administration governances, has varying levels of funding, and functions on differing time lines for project implementation.

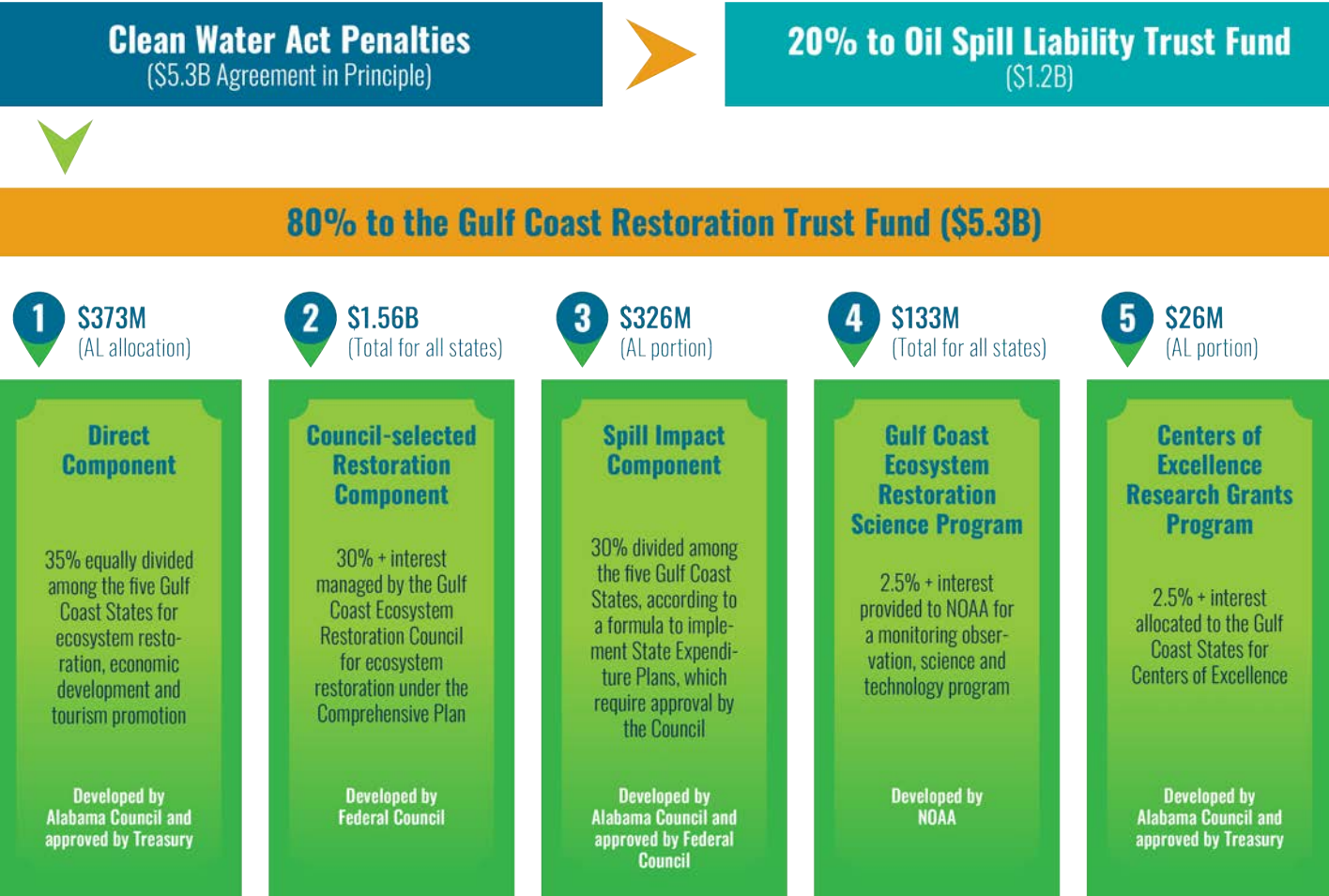


Table 2. RESTORE Act Allocations

# RESTORE Act

## RESTORE Act Funding Priorities:

The priorities for RESTORE Act funding are tied to the respective component from which the funding is allocated. The following are the general priorities, by allocation:

- **Direct Component and Spill Impact Component:** natural resources, infrastructure, economic development, and tourism.
- **Council-Selected Restoration Component:** Habitat, water quality and quantity, living coastal and marine resources, community resilience, and the Gulf economy.
- **Centers of Excellence:** science and research.

## Coordinating Entity (State):

- Direct Component and Spill Impact Component: The Alabama Gulf Coast Recovery Council (ADCNR serves as Administrator)
- Council-Selected Restoration Component: The Alabama Department of Conservation and Natural Resources
- Center of Excellence: Marine Environmental Sciences Consortium

## Total Funding:

\$725 million (Direct Component + Spill Impact Component + Center of Excellence)

## Funding Approved to Date for Alabama:

Direct Component: \$192,416,758.74  
Council-Selected Restoration Component: \$26,225,542.00  
Spill Impact Component: \$127,949,952.00  
Centers of Excellence: \$0\*

## Funding Process:

Each of the allocations have different funding processes. The Alabama Gulf Coast Recovery Council administers the Direct and Oil Spill Impact Components as well as the Center of Excellence. ADCNR is the State's representative on the Gulf Coast Ecosystem Restoration Council for the Council-Selected Restoration Component process, decision making, and project selection.

## Further Information:

<https://www.restorealabama.org/>  
<https://www.alabamacoastalrestoration.org/GCERC>  
<https://restorethegulf.gov/>

*\*Grant application in process*





## Natural Resource Damage Assessment (NRDA)

In April of 2016 a settlement was reached between the NRDA Trustees and BP for an additional \$7.8 billion in natural resource damages above and beyond the \$1 Billion early restoration funding that previously had been provided. The objective of NRDA funding is to make the environment and public whole for injuries to natural resources and services resulting from the *Deepwater Horizon* oil spill. The trustees developed a Programmatic Damage Assessment and Restoration Plan (PDARP) that addressed impact, as a whole, identified how and where funds were to be invested and provided details associated with what types of restoration are most needed and the priority geographical areas for restoration – of which the State of Alabama was one.

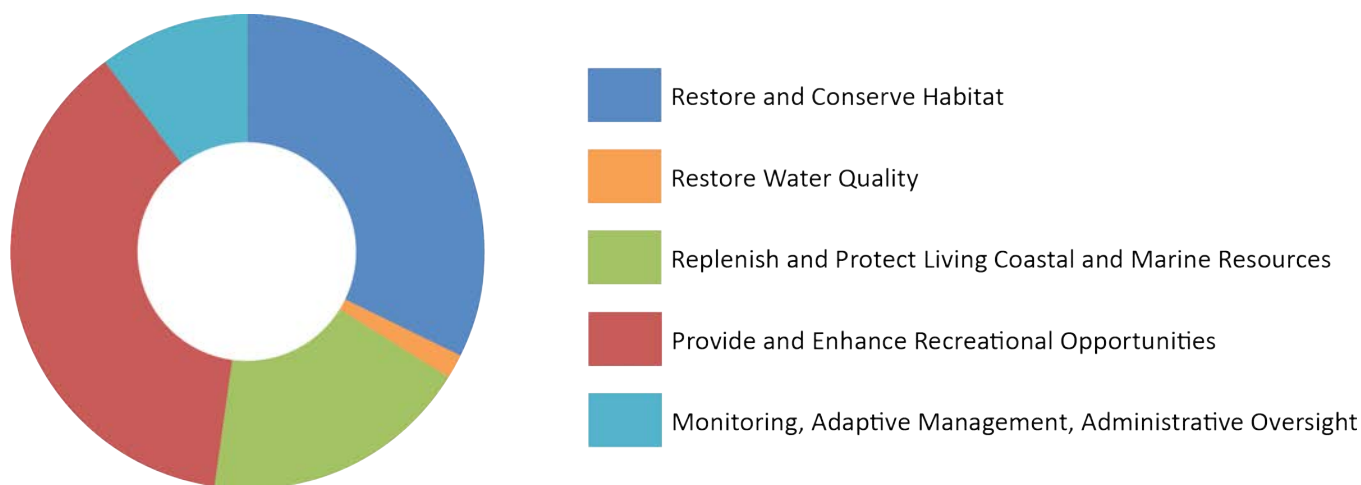


Figure 3. Alabama NRDA Allocations by Resource

### Funding Priorities:

The priorities for NRDA expenditures are set forth in the PDARP. These funds were allocated to 5 categories in the State of Alabama:

- Restore and conserve habitat;
- Restore water quality;
- Replenish and protect living coastal and marine resources;
- Provide and enhance recreational opportunities; and
- Monitoring, adaptive management, and administrative oversight.

**Coordinating Entity:** The Alabama Department of Conservation and Natural Resources, and the members of the Alabama Trustee Implementation Group (TIG). The TIG includes representatives from ADCNR, Geological Survey of Alabama, Environmental Protection Agency, Department of the Interior, National Oceanic and Atmospheric Administration, and United States Department of Agriculture.

### Total Funding Allocated to AL TIG:

\$296 million

### Funding Approved to Date (Early Restoration):

\$218,679,418 (as of October 2018)

### Funding Process:

[www.gulfspillrestoration.noaa.gov](http://www.gulfspillrestoration.noaa.gov)

### Further Information:

<http://www.gulfspillrestoration.noaa.gov/restoration-areas/alabama>

<https://www.alabamacoastalrestoration.org/NRDA>

## National Fish & Wildlife Foundation Gulf Environmental Benefit Fund

In early 2013, two plea agreements resolving criminal cases against BP and Transocean created the Gulf Environmental Benefit Fund (GEBF) within the National Fish and Wildlife Foundation (NFWF). A total of \$2.5 billion was directed into this account to fund projects benefiting the natural resources of the Gulf that were impacted by the *Deepwater Horizon* Oil Spill. The \$2.5 billion was allocated differently to each of the Gulf States (see Table 2 below). The State of Alabama will ultimately receive \$356 million.

	Payment (in millions of dollars)	Louisiana	Alabama	Florida	Mississippi	Texas
Apr. 2013	\$158.00	\$79.00	\$22.12	\$22.12	\$22.12	\$12.64
Feb. 2014	353.00	176.50	49.42	49.42	49.42	28.24
Feb. 2015	339.00	169.50	47.46	47.46	47.46	27.12
Feb. 2016	300.00	150.00	42.00	42.00	42.00	24.00
Feb. 2017	500.00	250.00	70.00	70.00	70.00	40.00
Feb. 2018	894.00	447.00	125.16	125.16	125.16	71.52
<b>Totals</b>	<b>\$2,544.00</b>	<b>\$1,272.00</b>	<b>\$356.16</b>	<b>\$356.16</b>	<b>\$356.16</b>	<b>\$203.52</b>

Table 3. NFWF GEBF Allocation to Alabama

BP = \$2,394M  
Transocean = \$150M

### Funding Priorities:

The funded priorities for NFWF GEBF include, but are not limited to:

- Restore and maintain ecological function of landscape-scale coastal habitats including barrier islands, beaches and coastal marshes;
- Restore and maintain ecological integrity of priority coastal bays and estuaries; and
- Replenish and protect living resources including oysters, red-snapper and other reef fish, gulf coast bird populations, sea turtles, and marine mammals.

### Coordinating Entity:

Alabama Department of Conservation and Natural Resources, in coordination with NFWF-GEBF

### Total Funding Allocated to Alabama:

\$356 million

### Funding Approved to Date:

\$154,854,525 (as of October 2018)

### Funding Process:

ADCNR, in coordination with NFWF GEBF, submits projects for consideration of funding on an annual funding cycle. ADCNR puts out a call for project ideas annually and selection is made based on the purposes of the NFWF GEBF plea agreement. Additional criteria for consideration include science, advancement of ADCNR natural resource priorities, and cost effectiveness of environmental benefits of projects.

### Further Information:

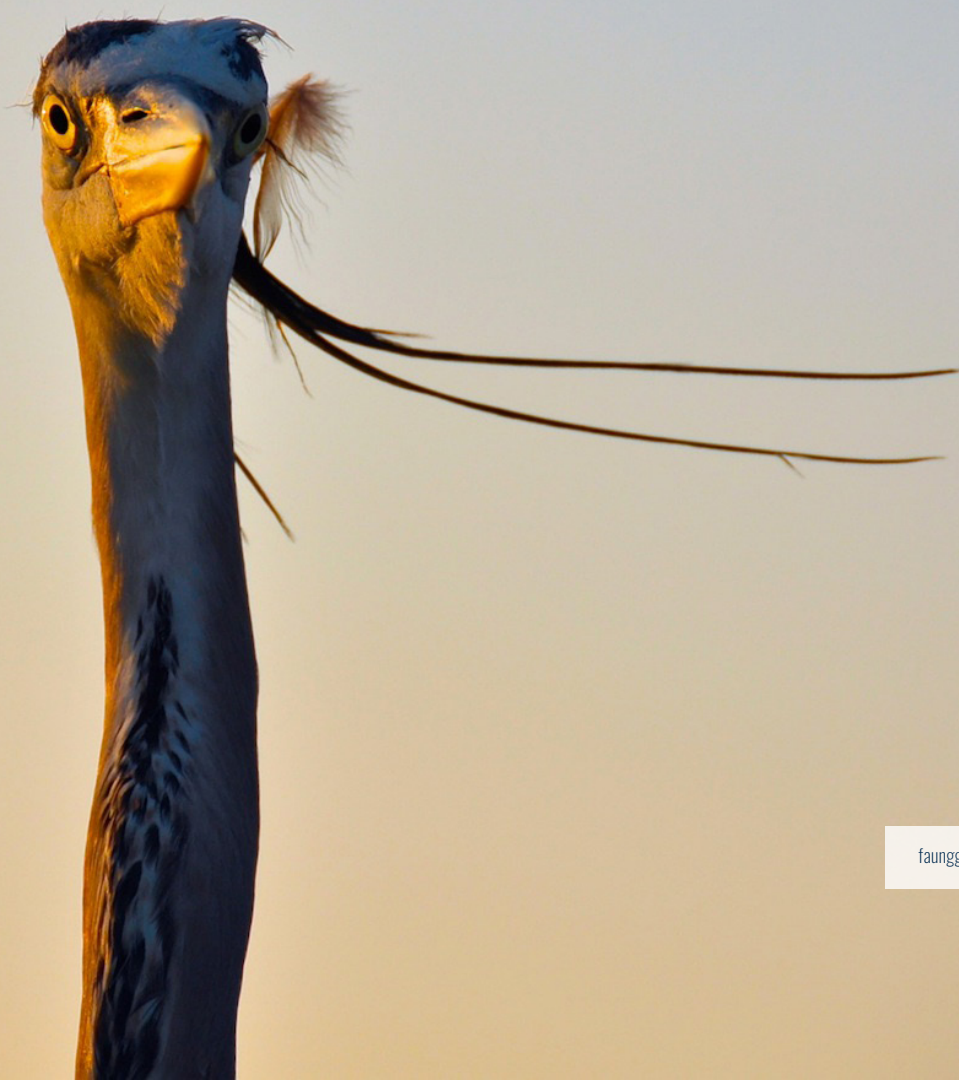
<http://www.nfwf.org/gulf/Pages/home.aspx>  
<http://www.nfwf.org/gulf/Pages/GEBF-Alabama.aspx>  
<https://www.alabamacoastalrestoration.org/NFWF>



## Update on DWH Restoration in Alabama

This update of Alabama's DWH restoration efforts will provide information on projects funded, their status, and information on primary project benefits. In order to facilitate an understanding of the scope of investment, as well as how projects are related to and build on each other, information is presented in a number of ways, including: maps organized by restoration goal, project descriptions and funding graphs. We have purposely moved away from discussing projects according to their funding source in order to provide a clearer picture of the breadth of work being conducted across a multitude of resources, but you can still identify projects by funding source by reviewing their descriptions.

The information included in this update is accurate as of October 1, 2018 and may change as new information becomes available. It is important to note that all projects proposed under the RESTORE Act Direct Component (RESTORE Bucket 1) and the Spill Impact Component (Bucket 3) have been approved by the Alabama Gulf Coast Recovery Council to move forward for funding consideration, but have not been approved for funding by the U.S. Department of Treasury (Bucket 1) or the Gulf Coast Ecosystem Restoration Council (Bucket 3) as of October 1, 2018 and thus are subject to change.

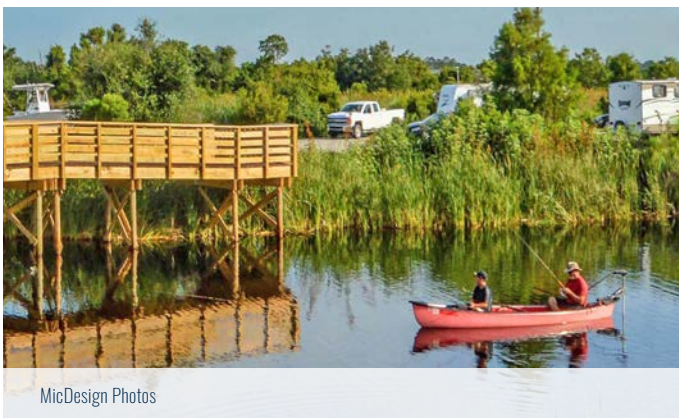


## REPLENISH & PROTECT LIVING COASTAL & MARINE RESOURCES

Alabama's abundant waters fuel Alabama's coastal economy through the sustainable production of seafood. They also provide important recreational and ecosystem benefits. From offshore fisheries to nearshore shellfish production, Alabama's coastal waters produce significant recreational and commercial opportunities for coastal stakeholders. Because of this, and as an emphasis, all of our investments in the Living Coastal and Marine Resources arena will allow the State to learn more about this important ecosystem, understand the interactions of the environment and fisheries, and thus allow ADCNR to manage the State's resources effectively on behalf of our stakeholders. Though these projects are standalone coastal marine resource-specific projects, ADCNR closely coordinates terrestrial habitat restoration, land conservation, and water quality improvement projects in order to sustain these investments in our coastal waters.

Alabama has invested in a number of projects, including:

- A 5-year data collection effort for monitoring offshore reef fisheries: This project closes the gap on water quality and fisheries information that is needed to best manage and expand Alabama's fisheries resources.
- Artificial reef creation and enhancement: This project funded the enhancement and expansion of the State's artificial reef program but is bolstered with extensive collaborative research with the University of South Alabama to understand the biological value of where we build these reefs.
- Increasing the Alabama Marine Mammal Stranding Network's ability to respond to marine mammal strandings and research marine mammals living in Alabama's coastal waters.
- Oyster restoration is a restoration priority with leveraged funding coming from both NFWF-GEBF and NRDA to provide cultch materials to enhance oyster productivity, and monitoring to understand how management influences oyster growth.





## Funding Approved to Replenish and Protect Living Coastal and Marine Resources

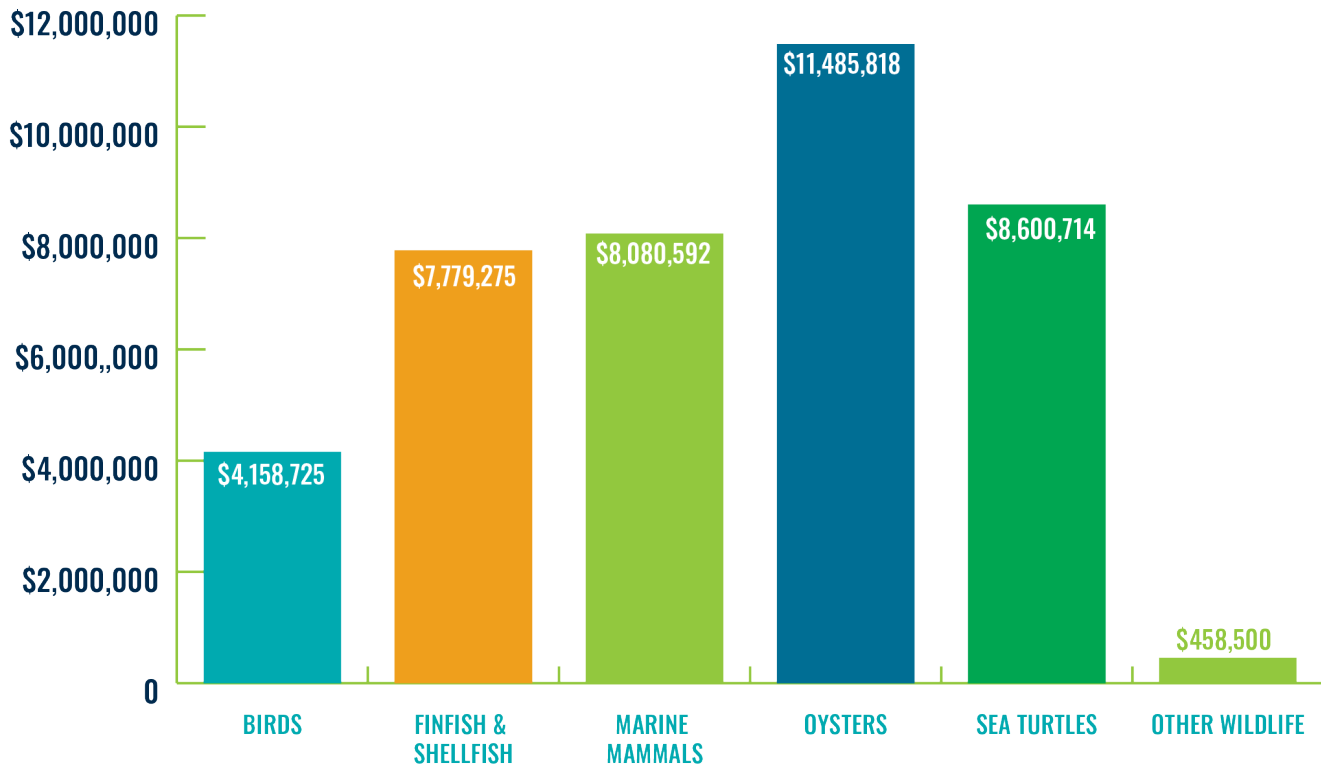
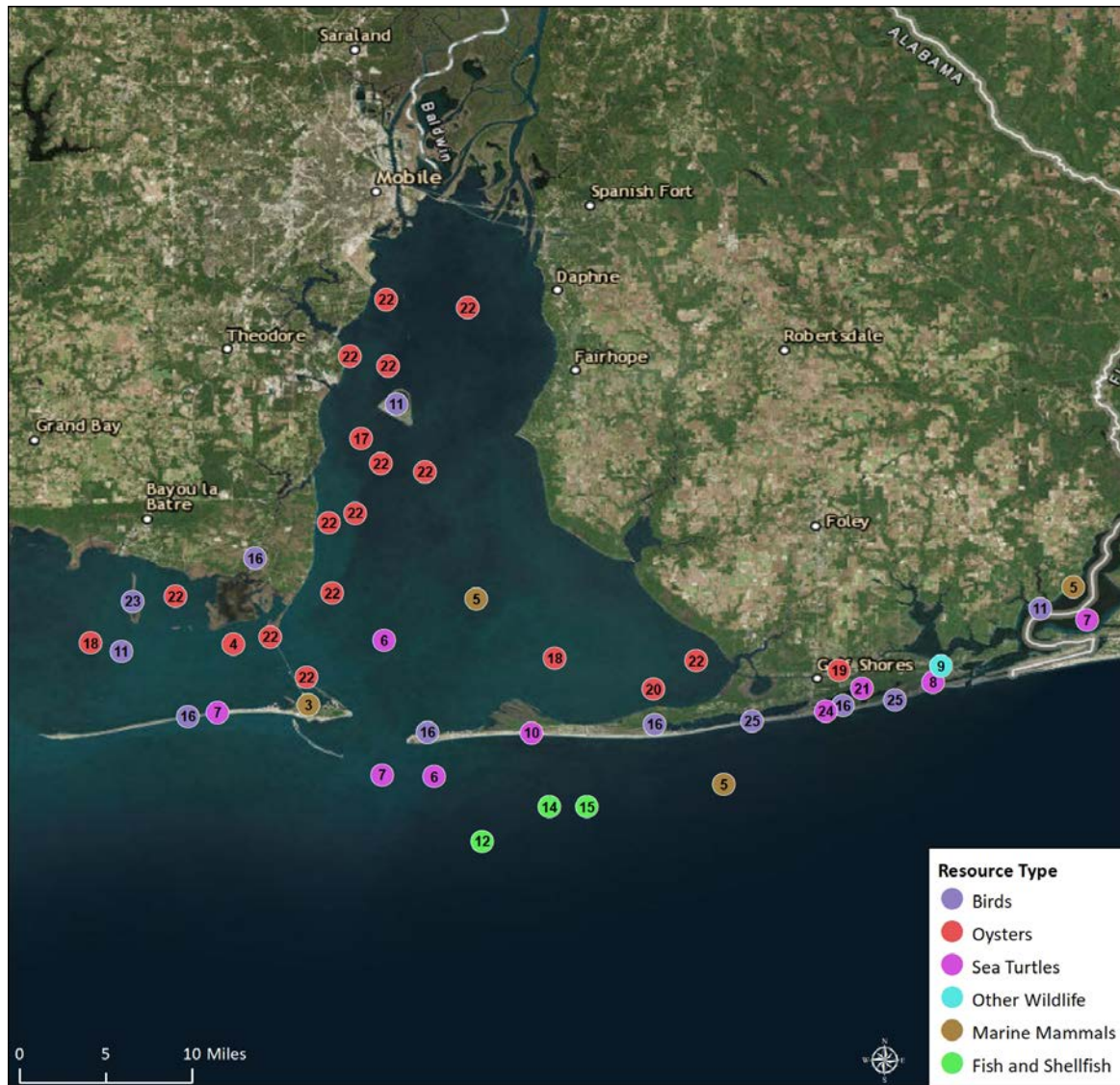


Figure 4. Funding Approved to Replenish and Protect Living Coastal & Marine Resources, 2011-2018



## Project Locations: Replenish & Protect Living Coastal & Marine Resources



### PROJECT NAME \*No map location

1) Alabama Coastal Bird Stewardship Program (F)

2) Alabama Estuarine Bottlenose Dolphin Protection: Enhancement and Education (R)

3) Alabama Marine Mammal Conservation and Recovery Program (F)

4) Alabama Oyster Culch Restoration (R)

5) Assessment of Alabama Estuarine Bottlenose Dolphin Population and Health (R)

6) CAST Habitat Usage and Population Dynamics (R)

7) CAST Protection: Enhancement and Education (R)

8) CAST Triage (R)

9) Expansion of the Orange Beach Wildlife Rehabilitation and Education Center/Gulf Coast Wildlife Recovery and Interpretive Center Feasibility, Planning & Preliminary Design (3)

10) Coastal Alabama Sea Turtle (CAST) Conservation Program (R)

11) Colonial Nesting Bird Assessment (R)

12) Enhanced Fisheries Monitoring in Alabama (F)

13) Enhancing Capacity for the Alabama Marine Mammal Stranding Network (R)

14) Multifaceted Fisheries and Ecosystem Monitoring in Alabama-Phase II (F)

15) Multifaceted Fisheries and Ecosystem Monitoring in Alabama-Phase III (F)

16) Osprey Restoration in Coastal Alabama (R)

17) Oyster Culch Relief and Reef Configuration (R)

18) Oyster Grow-Out and Restoration Reef Placement (R)

19) Oyster Hatchery at Claude Peteet Mariculture Center (R)

20) Restoration and Enhancement of Oyster Reefs in Alabama (F)

21) Restoring the Night Sky: Assessment, Training, and Outreach (R)

22) Side-scan Mapping of Mobile Bay Relic Oyster Reefs (E&D) (R)

23) Southwestern Coffee Island Habitat Restoration Project-Phase I (R)

24) Restoring the Night Sky (Early Restoration) (R)

25) Avian Breeding Habitat Program (R)

### Funding Source Code:

RESTORE Bucket 1 (1)

RESTORE Bucket 2 (2)

RESTORE Bucket 3 (3)

NFWF (F)

NRDA (R)



## Spotlight On: Fisheries Monitoring

Many of the Gulf of Mexico's fisheries have been subject to overfishing, causing significant decline in stocks. While current stock assessments do show improvements to important fisheries, it is imperative to provide more data to truly understand how best to manage the fishery and how the fishery is responding to management actions.

Coastal waters in Alabama have significant stocks of recreationally and commercially important fish species. As such, it is critical that the State has the best understanding of population dynamics, catch effort, and an abundance of information so that the State can take control of managing their own fisheries. Because of this, ADCNR has invested in three consecutive projects targeted at enhancing fisheries monitoring of reef fish species, specifically Red Snapper.

Through the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund, ADCNR has to date invested over \$7.7 million in funding three phases of fisheries monitoring:

- *Enhanced Fisheries Monitoring in Alabama's Marine Waters - 2014 - \$1,456,472*
- *Multifaceted Fisheries and Ecosystem Monitoring in Alabama's Marine - Phase II - 2015 - \$1,916,603*
- *Multifaceted Fisheries and Ecosystem Monitoring in Alabama's Marine Waters and the Gulf of Mexico - Phase III - 2016 - \$4,406,200*

At the conclusion of multiple phases, the State hopes to have 5 years of enhanced data collection. The project, across all phases, includes several components including:

- The implementation of both fisheries-dependent and fisheries-independent data collection.
- A finfish data collection effort that will focus on developing appropriate methods for reporting discards of reef fish species bycatch in the recreational fishery.
- The completion of fishery-dependent survey work relating to the nearshore blue crab fishery to provide appropriate metrics for future management of this important fishery.

This data will be used to improve ecosystem-based management capabilities, assess the recovery of reef fish stocks in association with other fisheries restoration efforts, and improve and expand single species stock assessments

for managed fish species. The single greatest impediment for ADCNR to effectively manage the State's fisheries is the lack of sound data related to catch effort and population levels. This project provides a baseline of data collection that will outline catch effort on our fish populations, provide accurate unbiased data on abundance, and thus provide information to help ADCNR inform future fisheries management and restoration actions.

### Summary:

- Alabama has invested over \$7.7 million in DWH funding to enhance fisheries monitoring.
- Collecting enhanced data collection in the marine environment enhances the State's ability to manage our important fisheries.



## Spotlight On: Oyster Cultch Restoration

### Oyster Reef Restoration

Restoring and enhancing oyster reefs and oyster resources is a long-standing goal in Alabama. Oysters represent an important element of our coastal heritage and are an integral component of the seafood industry in the state, supporting the economy and jobs in Coastal Alabama.

The State has invested in a number of oyster projects via several different restoration funding sources to address historic challenges like sedimentation, drought, and predation, as well as impacts related to the *Deepwater Horizon* oil spill and related cleanup efforts. Prior to the restoration of any oyster reefs, based on best available information, there were roughly 2,200 acres of viable oyster reefs in coastal Alabama. These projects seek to increase that acreage.

To date, ADCNR has invested just under \$7 million dollars in two separate cultch restoration projects that together restored over 900 acres of oyster reefs:

- *NRDA Early Restoration: Alabama Oyster Cultch Restoration* - \$3,239,485
- *NFWF GEBF: Restoration and Enhancement of Oyster Reefs in Alabama* - \$3,750,000

NRDA Restoration Plan II contains a number of projects that will also restore and enhance Alabama's oyster reefs.

### NRDA Early Restoration – Alabama Oyster Cultch Restoration

In 2013, through an early restoration NRDA project, oyster shell cultch material was placed over approximately 519 acres of subtidal habitat. After engineering and design and some significant planning, cultch planting occurred in April through May of 2015. A total of 65,540 cubic yards of oyster shell (13,196.6 c.y.) and limestone (52,343.5 c.y.) were planted on 519 acres of oyster reefs in Lower Mobile Bay and Mississippi Sound. This cultch restoration project occurred in close proximity to other oyster reefs managed by ADCNR and, as such, added opportunity for oyster larvae to colonize nearby reefs; bolster secondary productivity over a larger area; and boost ecosystem services of nutrient and sediment reduction in the area.

### NFWF GEBF: Restoration and Enhancement of Oyster Reefs in Alabama

This project took a multi-faceted approach to restoring oyster reefs in coastal waters. Three techniques were used to maximize oyster reef restoration:

1. The planting of 50,000 cubic yards of new cultch material.
2. The dissemination of seed oysters across the new cultch material.
3. The cultivation of existing reef beds.

It is imperative to ADCNR and the State of Alabama that oyster restoration is successful and sustainable. Inherent to both the NRDA and NFWF projects is a robust monitoring effort to help the State and ADCNR quantify oyster density, assess oyster reef health and overall restoration success of the respective techniques, which helps inform prioritization of reef location site construction details, and harvest strategies for future oyster reef restoration projects.

### Summary:

- Oyster restoration is a priority goal for ADCNR.
- The two existing projects represent a significant investment towards that restoration goal.
- To date, ADCNR has improved over 900 acres of oyster reef habitat utilizing a combination of techniques, with additional projects in the planning stages.
- Monitoring and research are vital components of oyster projects to provide information on oyster reef success and provide information for future oyster reef restoration projects.

A number of additional oyster restoration projects are in the initial planning stages.

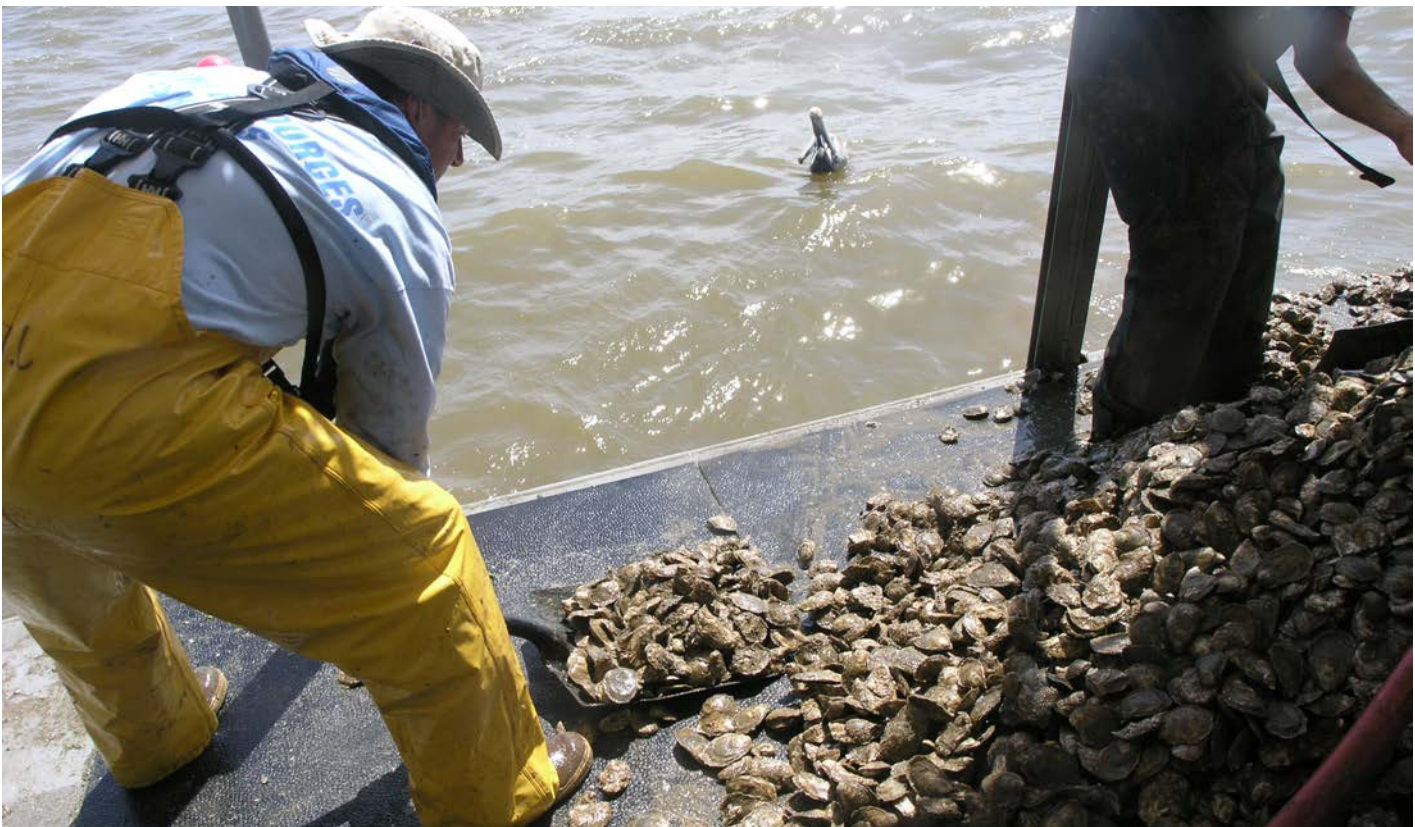




NOAA



Sam Beebe



ADCNR




## Spotlight On: Marine Mammal Conservation

Dolphins are a common sight in Alabama's coastal waters and in fact, the Gulf of Mexico has among the highest diversity of marine mammals in the world. For marine mammals, long-term effects from exposure to contaminants or other stresses from natural and human related sources can take years to be realized, and the health of marine mammals, dolphins in particular, are important indicators of the health of the marine environment.

Alabama, through the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund and the Natural Resource Damage Assessment Process, is investing in projects to bolster the capacity of Alabama's Marine Mammal Stranding Network:

- *Alabama Marine Mammal Conservation and Recovery Program - 2014 - \$1,902,600 (amended in 2017 with \$621,100) (NFWF GEBF)*
- *Enhancing Capacity for the Alabama Marine Mammal Stranding Network—2018-- \$2,432,389 (ALTIG Restoration Plan II)*

These projects increase the response and research capacity within the Alabama Marine Mammal Stranding Network (ALMMSN). The establishment of the initial project was timely as an additional \$621,100 was amended to the grant in 2017 to address higher than anticipated stranding response and additional sampling and data collection requirements. The 2018 NRDA project continues funding for this important program as the original NFWF project comes to a close.



Establishing and enhancing marine mammal stranding response is important for several reasons. Several times a year marine mammals strand in Alabama waters. In collaboration with state and federal partners, project implementors work to identify the best course of action for the rehabilitation and return of marine mammals that are still living at the time of stranding to the wild.

However, more often than not, strandings occur of already deceased animals. The establishment of the ALMMSN and bolstering response enhances survival of live stranded animals and provides continuous, consistent, and rigorous data collection from those that strand deceased.

This data collection effort provides insight and data on causes of death and allows the State to begin to define relationships among environmental variables and stranding patterns. By understanding trends, patterns, and potential correlations between variables the State will be better positioned for long-term recovery.

### Summary:

- Enhanced stranding response and data collection efforts help provide information on the cause of death for marine mammals.
- Funds are being used to operate the ALMMSN, train dedicated personnel that can then respond to incidents of strandings, and provide an opportunity to do research to further our understanding of marine mammals in Alabama coastal waters.

For information on additional projects that address marine mammals.





## Projects to Replenish & Protect Living Coastal & Marine Resources

### BIRDS

#### Alabama Coastal Bird Stewardship Program (1)

Cost: \$1,462,000.00

Funding Source: NFWF (2016)

This project will conserve priority shorebird and coastal waterbird populations by establishing a two-year bird stewardship, monitoring, and outreach program in coastal Alabama, where beaches, marshes and islands provide critical nesting, wintering, and migratory stopover habitat for many species of shorebirds and coastal waterbirds. This project will work to improve the status of bird species of conservation concern through training of volunteers to steward and monitor targeted and other species and their habitat at key nesting sites in the state.



#### Osprey Restoration in Coastal Alabama (16)

Cost: \$45,000.00

Funding Source: NRDA Phase IV Early Restoration (2015)

This project funds the installation of five osprey nesting platforms along the coast in Mobile and Baldwin Counties, Alabama in order to provide enhanced nesting opportunities for piscivorous (fish eating) raptors.

#### Southwestern Coffee Island Habitat Restoration Project—Phase I (23)

Cost: \$825,225.00

Funding Source: NRDA RPII (2018)

This project will fund planning activities related to the restoration and creation of colonial nesting bird breeding habitat and tidal wetlands along the southwestern shoreline of Coffee Island, located in Mississippi Sound in south Mobile County, Alabama. Phase I proposes funding for two tasks—(1) a synthesis of colonial wading bird and shorebird nesting data

in coastal Alabama, and (2) E&D and permitting for the restoration of habitat on Coffee Island to evaluate whether the project should be considered for further development in a later plan.

#### Colonial Nesting Wading Bird Tracking and Habitat Use Assessment—Two Species (11)

Cost: \$1,547,500.00

Funding Source: NRDA RPII (2018)

This project will initiate monitoring studies expected to inform and enhance future restoration planning for key colonial nesting wading bird species along the Alabama coast that were injured by the DWH oil spill. This project proposes a telemetry tracking study of the movements of two bird species breeding along the Alabama coast—tricolored heron and either little blue heron or white ibis.

#### Comprehensive Program for Enhanced Management of Avian Breeding Habitat Injured by Response in the Florida Panhandle, Alabama, and Mississippi (25)

Cost: (Alabama) \$279,000

Funding Source: NRDA Phase II Early Restoration

This project benefits nesting habitat for beach nesting birds in Florida, and on DOI lands in Alabama and Mississippi. Restoration activities include symbolic fencing, predator control, and stewardship around important nesting areas to prevent disturbance.

### FINFISH & SHELLFISH

#### Enhanced Fisheries Monitoring in Alabama's Marine Waters (12)

Cost: \$1,456,472.00

Funding Source: NFWF (2014)

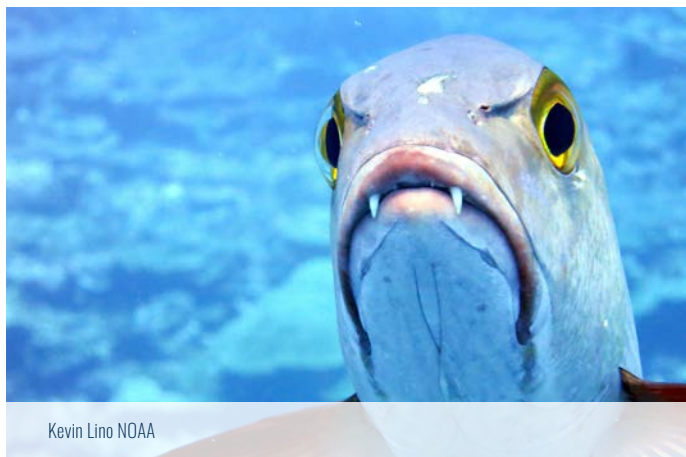
This project involves data collection to: improve ecosystem-based management capabilities; assess the recovery of reef fish stocks in association with other fisheries restoration efforts; and improve and expand single-species stock assessments for managed fish species. The project includes the implementation of both fisheries-dependent and fisheries-independent data collection. The project also includes a finfish data collection effort that will focus on developing appropriate methods for reporting discards of reef fish species bycatch in the recreational fishery.

### **Multifaceted Fisheries and Ecosystem Monitoring in Alabama's Marine Waters and the Gulf of Mexico – Phase II (14)**

Cost: \$1,916,603.00

Funding Source: NFWF (2015)

This project represents the second year of the fisheries monitoring effort in the state of Alabama and continues the implementation and meaningful expansion of the collection of data on catch effort and reef fish stock assessment in coastal Alabama. Data will be used to improve ecosystem-based management capabilities, assess the recovery of reef fish stocks in association with other fisheries restoration efforts, and improve and expand single-species stock assessments for managed fish species. This project provides critical baseline data to inform future fisheries management and restoration actions for species impacted by the spill.



Kevin Lino NOAA

### **Multifaceted Fisheries and Ecosystem Monitoring in Alabama's Marine Waters and the Gulf of Mexico – Phase III (15)**

Cost: \$4,406,200.00

Funding Source: NFWF (2016)

This project funds years three and four of the Alabama Gulf of Mexico fisheries assessment program, and builds upon previous investments in both fisheries-dependent and -independent data collection. Data collected will be used by fisheries management agencies to: foster improved ecosystem-based assessment capabilities; assess the recovery of reef fish stocks in association with other restoration efforts implemented in response to the *Deepwater Horizon* oil spill; and improve and expand single-species stock assessments for managed fish species. The project includes the implementation of both fisheries-dependent and fisheries-independent data collection, and will provide greater understanding of the potential long-term impacts of the *Deepwater Horizon* spill on fisheries.

## **MARINE MAMMALS**

### **Alabama Marine Mammal Conservation and Recovery Program (3)**

Cost: \$1,902,600.00

Funding Source: NFWF (2014)

The Alabama Marine Mammal Stranding Network (ALMMSN) project works to enhance the survival of live stranded animals and provide continuous, consistent and scientifically rigorous data collection from stranded marine mammals to better and more rapidly define causes of death, and define relationships between environmental variables and stranding patterns, thereby contributing to their long-term recovery. Funding is used to operate the ALMMSN and train dedicated personnel for future stranding response and research on marine mammals.

### **Alabama Estuarine Bottlenose Dolphin Protection: Enhancement and Education (2)**

Cost: \$686,374.00

Funding Source: NRDA RPII (2018)

This project works to reduce injury and mortality in Alabama estuarine bottlenose dolphins by: (1) increasing resources for MMPA-related activities and increasing patrol hours; (2) increasing awareness and understanding of the MMPA; (3) conducting social science studies to help characterize the nature and extent of the illegal feeding of dolphins, vessel-based harassment, and interactions with hook-and-line fishing gear in Alabama; (4) conducting systematic fishery surveys to help characterize the nature and extent of dolphin interactions with commercial fishing vessels and hook-and-line gear in Alabama; and (5) developing and implementing a comprehensive and targeted outreach plan based on the results.



Brandon Trentler



### **Assessment of Alabama Estuarine Bottlenose Dolphin Populations and Health (5)**

Cost: \$3,059,229.00

Funding Source: NRDA RPII (2018)

The project is a data collection effort to: investigate stock structure across Mobile Bay, Perdido Bay, and nearshore Alabama waters and the seasonal (summer/winter) abundance, distribution, and habitat use of common bottlenose dolphins on the Alabama coast using capture-mark-recapture and photo-ID surveys; and assess dolphin condition following the DWH oil spill using field observation and remote biopsy sampling, both of which would inform future restoration planning.

### **Enhancing Capacity for the Alabama Marine Mammal Stranding Network (13)**

Cost: \$2,432,389.00

Funding Source: NRDA RPII (2018)

This project would allow ALMMSN to use and expand its existing infrastructure for cetacean stranding response and communications and data management to enhance the ALMMSN's operations. This project continues funding for the program after the NFWF project is complete.

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## **OYSTERS**

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### **Restoration and Enhancement of Oyster Reefs in Alabama (20)**

Cost: \$3,750,000.00

Funding Source: NFWF (2013)

This project will restore 600 acres of oyster reefs in Mobile Bay, Mississippi Sound, and Bon Secour Bay by enhancing the quantity and quality of cultch material currently available upon existing oyster reefs and potential new reef sites. Through the planting of 50,000 cubic yards of new cultch material, dissemination of seed oysters and cultivation of existing reef beds, this project will increase Alabama's oyster reefs by nearly 30 percent.

#### **Alabama Oyster Cultch Restoration (4)**

Cost: \$3,239,485.00

Funding Source: NRDA Phase III Early Restoration (2015)

This project will enhance and improve oyster populations in the estuarine waters of Alabama. The project will place approximately 30,000 to 40,000 cubic yards of suitable oyster shell cultch over approximately 319 acres of subtidal habitat

in Mobile County, Alabama, in proximity to other oyster reefs currently managed by the Alabama Department of Conservation and Natural Resources (ADCNR) and within the historic footprint of oyster reefs in the area.



### **Oyster Cultch Relief and Reef Configuration (17)**

Cost: \$480,262.00

Funding Source: NRDA RPII (2018)

This project will investigate the merits of deploying different types of cultch material in various configurations to facilitate positive settlement and growth of oysters on selected reef areas in Mobile Bay, Alabama, building on work they previously conducted with DISL. This project has three primary objectives: (1) determine if there are differences in oyster settlement, growth, and survival on reefs of differing levels of relief and/or orientation relative to currents, (2) determine optimum reef material relief needed to restore oyster density on specific reefs within historical reef areas in which hydrology parameters such as oxygen and salinity and oyster recruitment and survival are highly variable, and (3) estimate the cost/benefits of deploying cultch in certain configurations as opposed to traditional cultch broadcast methods. The project will include the deployment of oyster shell, limestone rock, and fossilized oyster shell in three experimental configurations including mounding, elongated furrows, and control plots using typical cultch broadcasting methods.

### **Oyster Grow-out and Restoration Reef Placement (18)**

Cost: \$962,370.00

Funding Source: NRDA RPII (2018)

This project would establish up to three protected oyster gardening grow-out areas located in Grand Bay, Portersville Bay, and Bon Secour Bay and use these adult sized oysters for restoration reef placement. The project would grow out oysters to at least one year old, place these oysters on existing reef sites, including existing complementary living shoreline sites in Mobile Bay and Mississippi Sound as well as cultched sites, and identify and prioritize future restoration reef locations.

### **Oyster Hatchery at Claude Peteet Mariculture Center–High Spat Production with Study (19)**

Cost: \$2,949,472.00

Funding Source: NRDA RPII (2018)

The project involves the construction of an oyster hatchery at the existing Claude Peteet Mariculture Center in Gulf Shores and would provide operation and maintenance funding for the facility for a 4-year project period. Project components would also include remote setting and deployment from the AMRD facility at Dauphin Island. Additionally, the project would result in the deployment of cultch material, including spat on shell, to areas identified as suitable for oyster growth. Finally, a comprehensive oyster restoration plan will be developed to identify a long-term strategy to develop and sustain stable and resilient oyster populations in coastal Alabama. The plan would characterize local oyster populations, including an understanding of larval transport and recruitment trends, as well as environmental factors that affect them.

### **Side-scan Mapping of Mobile Bay Relic Oyster Reefs (E&D) (22)**

Cost: \$104,229.00

Funding Source: NRDA RPII (2018)

This project would use sonar technology to identify benthic areas of mid- to lower-Mobile Bay that are suitable to support cultch material for oyster reef restoration. Depending on the side-scan results, these areas could be used to reestablish oyster populations through initial efforts to seed reef areas with hatchery-raised, high-density oyster spat setting. The project would survey the current extent and conditions of the relic oyster reefs identified in the 1968 reef surveys contracted by AMRD and other water bottoms not surveyed.



Ben Stern



## SEA TURTLES

### **Coastal Alabama Sea Turtle (CAST) Habitat Usage and Population Dynamics (6)**

Cost: \$1,631,696.00

Funding Source: NRDA RPII (2018)

The CAST Habitat Usage and Population Dynamics project would study migration patterns, habitat use, and distribution patterns of sea turtles along the Alabama Coast. The project involves sampling sea turtles in-water to initiate a long-term monitoring program designed to determine distribution and habitat use, vital rates (including survival rates), connectivity, and potential impacts of anthropogenic activities for sea turtles in coastal and nearshore waters of Alabama.

### **Coastal Alabama Sea Turtle (CAST) Conservation Program (10)**

Cost: \$935,061.00

Funding Source: NRDA RPII (2018)

The proposed CAST Conservation Program project is designed to support existing sea turtle programs in Alabama to strengthen efforts to protect nesting sea turtles and enhance the survival of sea turtle hatchlings in Alabama. The project will provide funding for the continued operation, expansion, and enhancement of the existing Share the Beach Sea Turtle Nest Monitoring Program, which as of January 2018 is being managed by the Alabama Coastal Foundation.



USFWS

### **Coastal Alabama Sea Turtle (CAST) Protection: Enhancement and Education (7)**

Cost: \$906,874.00

Funding Source: NRDA RPII (2018)

This project will enhance state enforcement and increase turtle protections in Alabama state waters through increased awareness and understanding of the Endangered Species Act (ESA); increase resources dedicated to ESA-related activities for state enforcement agencies; work towards reducing fisheries bycatch; and work towards reducing impacts on nesting turtles.

### **Coastal Alabama Sea Turtle (CAST) Triage (8)**

Cost: \$622,915.00

Funding Source: NRDA RPII (2018)

The CAST Triage project would provide a new, appropriately equipped facility and program for the initial triage, treatment, release, and/or transfer of injured or ill sea turtles. Currently, Alabama has no facilities equipped for handling sea turtle strandings. The project would construct a new facility on property owned by the City of Orange Beach and establish a program that would be supported by the City of Orange Beach in the future.

### **Improving Habitat Injured by Spill Response: Restoring the Night Sky (24)**

Cost: (Alabama) \$345,000.00

Funding Source: NRDA Phase II Early Restoration

This project improves nesting habitat for loggerhead sea turtles in Florida and state lands in Alabama by reducing artificial lighting impacts on nesting habitat for loggerhead sea turtles.

### **Restoring the Night Sky—Assessment, Training, and Outreach (E&D) (21)**

Cost: \$183,003.00

Funding Source: NRDA RPII (2018)

The long-term goal of the Restoring the Night Sky—Assessment, Training, and Outreach (E&D) project is to reduce the impacts of light pollution on federally managed lands that disorients nesting sea turtles and hatchlings, disrupting their reproductive activities and reducing their reproductive success.



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## OTHER WILDLIFE

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### **City of Orange Beach - Expansion of the Orange Beach Wildlife Rehabilitation and Education Center/ Gulf Coast Wildlife Recovery and Interpretive Center Feasibility, Planning & Preliminary Design (9)**

Cost: \$458,500.00

Funding Source: RESTORE B3 (SEP2018) (Proposed)

The purpose of this project is to expand the capacity and capabilities of the current rehabilitation facility to accommodate additional types of species. Marketing and outreach elements of this proposal intend to recruit, increase program awareness, disseminate educational messaging, and improve passive prevention/mitigation efforts.

This project proposes funding planning and design to expand the Gulf Coast Wildlife Recovery and Interpretive Center in Orange Beach.



# SUPPORT & ENHANCE COMMUNITY RESILIENCE

Community resilience is the ability of a community to utilize available resource to respond to, withstand, and recover from adverse situations. Coastal Alabama is all too familiar with the importance of being prepared when disaster strikes. The State has funded a number of projects that will support and enhance the State’s ability to prepare for and respond to events in a way that ultimately makes our communities stronger in spite of adversity.

Projects proposed include funding:

- Auburn University’s Gulf Coast engineering research station to improve engineering practices in a coastal environment;
- Alabama Point seawall repair and fishing access;
- Replacement of ADEM Coastal Office facilities; and
- Creating a master plan for reconnecting people, work, and play through complete streets.

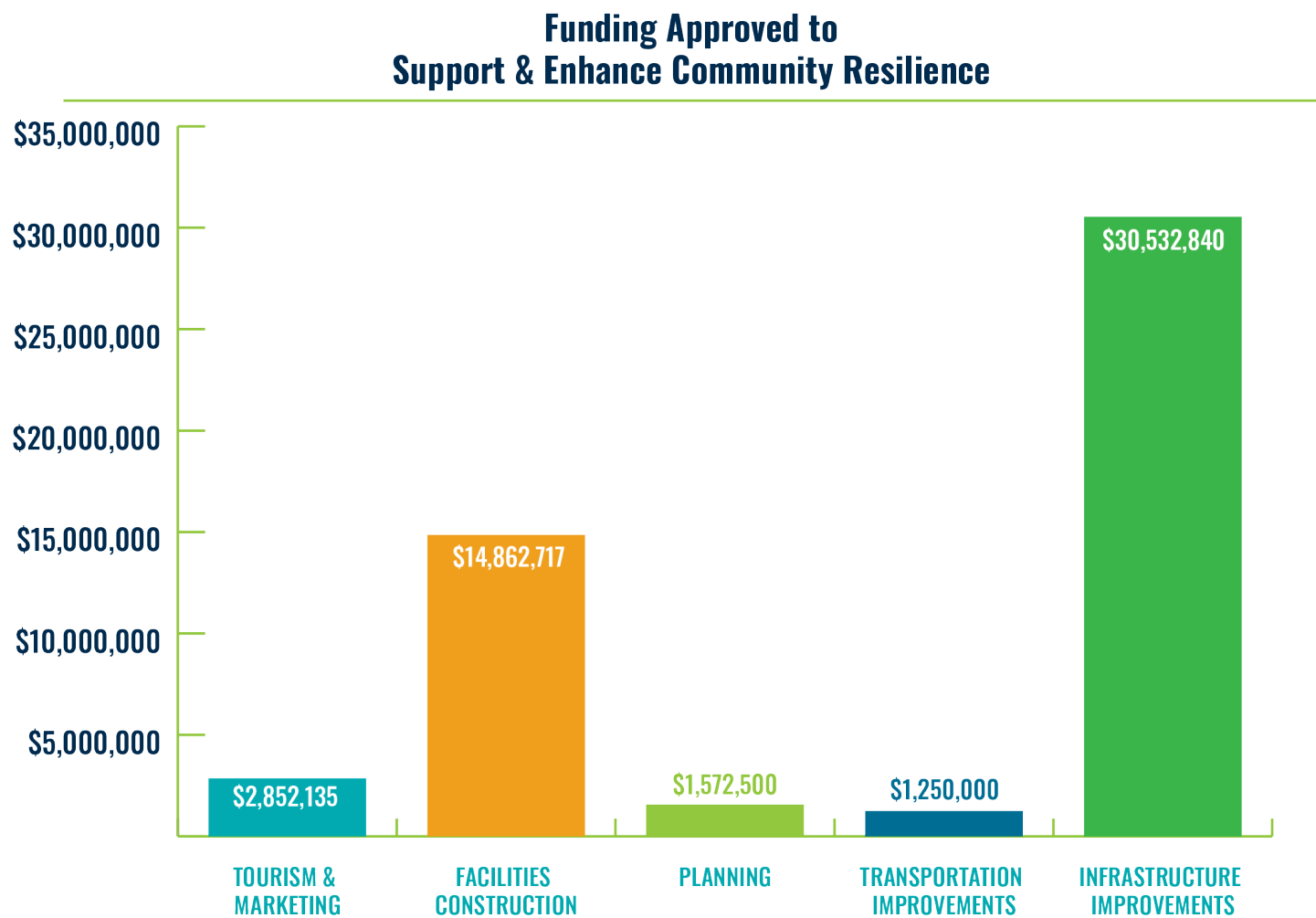


Figure 5. Funding Approved to Support and Enhance Community Resilience, 2011-2018

## Project Locations: Support & Enhance Community Resilience



### PROJECT NAME \*No map location

- 26) ADCNR - Alabama Gulf Seafood Marketing Program (3)
- 27) ADEM - Replacement of Sustandard Facilities at the ADEM Coastal Office & Mobile Field Office (3)
- 28) Auburn University - Gulf Coast Engineering Research Station (3)
- 29) City of Fairhope - Fairhope Area Community-Based Coastal Office & Mobile Field Office (3)
- 30) City of Mobile - One Mobile: Reconnecting People, Work and Play through Complete Streets (3)
- 31) City of Orange Beach - Alabama Point Seawall Repair (3)
- 32) Geological Survey of Alabama - Characterization and Delineation of Significant Sand Resource Areas Essential for Beach Restoration, Offshore Alabama (3)
- 33) City of Bayou LaBatre-Redevelop City Docks (1)
- 34) City of Fairhope - Working Waterfront and Greenspace Restoration Project (1)

**Funding Source Code:**  
 RESTORE Bucket 1 (1)  
 RESTORE Bucket 2 (2)  
 RESTORE Bucket 3 (3)  
 NFWF (F)  
 NRDA (R)

### Project Type

- Facilities Construction
- Infrastructure Improvements
- Planning
- Tourism and Marketing Activities
- Transportation Improvements



### **Alabama Gulf Seafood Marketing Program (26)**

Cost: \$2,852,135.00

Funding Source: RESTORE B3 (2018) (Proposed)

This project proposes the continuation of Alabama's Gulf Seafood Marketing Program for a period of 5 years with strategies focused on expanding the value, pride, brand, and global market share of Alabama seafood. This program was created by the Alabama Seafood Marketing Commission (ASMC) which was established in 2011 to increase business for Alabama's seafood industry. Alabama seafood is defined as any seafood product sold by Alabama businesses and sourced from Gulf and local waters.

### **ADEM - Replacement of Substandard Facilities at the ADEM Coastal Office & Mobile Field Office (27)**

Cost: \$5,862,717.00

Funding Source: RESTORE B3 (2018) (Proposed)

This project includes land acquisition, engineering/design, and construction of a new Coastal Office for the Alabama Department of Environmental Management. Tasked with the statutory mandate to protect Alabama's air, land, and water resources, an updated facility will provide more efficient and effective service.

### **Auburn University - Gulf Coast Engineering Research Station (28)**

Cost: \$9,000,000.00

Funding Source: RESTORE B3 (2018) (Proposed)

This project proposes the construction of the GCERS facility in Orange Beach to support fundamental and applied engineering research for coastal issues in Alabama, including water quality, restoration and protection of natural resources, and coastal emergency management. Additionally, this project includes two years' funding for operations and maintenance (O&M) of facility. This phased project will include planning, engineering & design, construction, and O&M.

### **City of Bayou La Batre - Redevelop City Docks (33)**

Cost: \$21,658,840.00

Funding Source: RESTORE B1 (2018) (Proposed)

This phased project includes a feasibility study/planning, engineering/design, permitting, and construction to repair Bayou La Batre's City Docks. The project intends to provide ecotourism opportunities and facilities for public use.

### **City of Fairhope - Working Waterfront and Greenspace Restoration Project (34)**

Cost: \$6,386,000.00

Funding Source: RESTORE B1 (2018) (Proposed)

This project will include improvements to the Fairhope Municipal Pier, Pier Landing, and South Beach Park to insure resiliency, sustainability, and human interaction of the City of Fairhope's most precious resource: its waterfront. This project will be implemented in phases with design and construction plans intended to incorporate low impact development (LID) standards and green infrastructure methodologies.



### **City of Fairhope - Fairhope Area Community-Based Comprehensive Land Use Plan (29)**

Cost: \$650,000.00

Funding Source: RESTORE B3 (2018) (Proposed)

This project involves the creation of a community-driven comprehensive land use plan for the City of Fairhope to address growth with an emphasis on environmental stewardship and legal foundation for implementation. Plan development envisions sustainable community growth infused with aspects of green infrastructure.

### **City of Mobile - One Mobile: Reconnecting People, Work and Play through Complete Streets (30)**

Cost: \$1,250,000.00

Funding Source: RESTORE B3 (2018) (Proposed)

The project purpose includes the design and reconstruction of the road bed, utilities, and bike/pedestrian amenities within the Broad/Beauregard/MLK right-of-way in the City of Mobile. Combined with other City initiatives, this project seeks to rectify decades of disinvestment in both the physical infrastructure of Broad Street and the surrounding built environment. Reconstruction of the existing infrastructure will result in a safe, code compliant, environmentally responsible, and aesthetically inviting streetscape, and will guide the creation of a vibrant, economically sustainable community.

### **City of Orange Beach - Alabama Point Seawall Repair (31)**

Cost: \$2,488,000.00

Funding Source: RESTORE B3 (2018) (Proposed)

The purpose of this project is to rebuild the existing Alabama Point Seawall with a more resilient method of construction for the tidally-influenced marine environment and to protect the recent improvements on the upland portion of the area. Implementation of this project will protect a unique and valuable public access point at Perdido Pass Seawall Park.

### **Geological Survey of Alabama - Characterization and Delineation of Significant Sand Resource Areas Essential for Beach Restoration, Offshore Alabama (32)**

Cost: \$922,500.00

Funding Source: RESTORE B3 (2018) (Proposed)

This project will update the Offshore Alabama Sand Information System (OASIS) platform through collaboration with interested governing and private parties; acquire data and characterization of offshore sand resource areas through the use of the OASIS update; and will disseminate work through the OASIS platform, publication(s), and presentations.



# PROVIDE & ENHANCE ECONOMIC DEVELOPMENT & INFRASTRUCTURE

Within the RESTORE Act there are certain funding sources (Bucket 1 and Bucket 3, specifically) that have eligible activities tied directly to supporting economic development and infrastructure. Alabama is investing in a number of projects to enhance economic development in Alabama’s coastal counties, support the growth of jobs, and support the value of culture and heritage of the area. In Alabama, we understand that our natural resources and our economy are intertwined—by investing oil spill funds wisely, we can improve the health of our natural resources and our economy.

Projects are described in more detail below, and include projects that:

- Support the revitalization of the Africatown community with the construction of a welcome center that will house the history of the area;
- Convert a derelict former Bulk Handling Facility into a state-of-the-art Roll On/Roll Off (RO-RO)/Mobile Vehicle Processing Facility at the Port of Mobile;
- Fund significant road improvements on the Baldwin Beach express, and increase the capacity of other roadways in Baldwin County;
- Invest in working waterfronts, technology corridors, community centers on environmental education, and town center improvements; and
- Invest in water system improvements throughout South Alabama

**Projects Approved to  
Provide & Enhance Economic Development and Infrastructure**

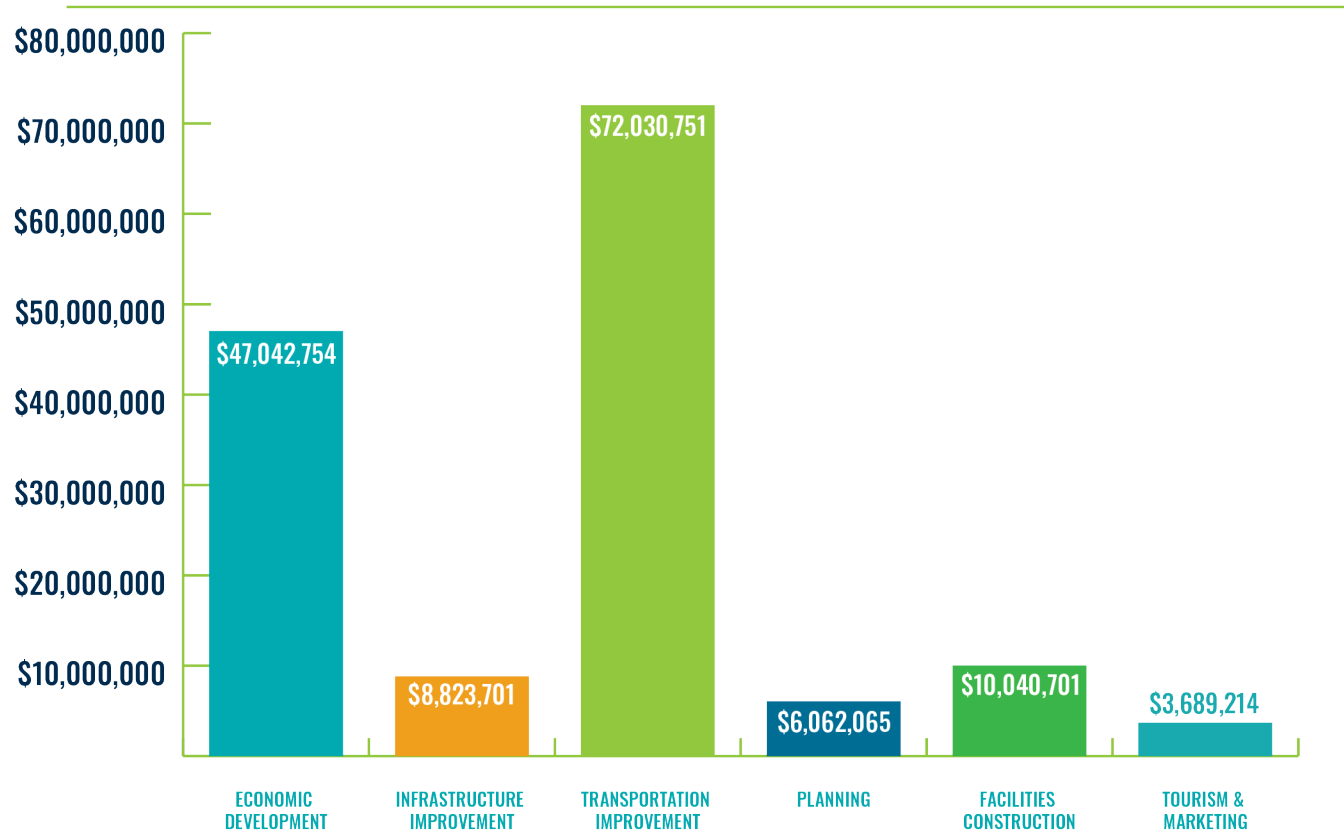
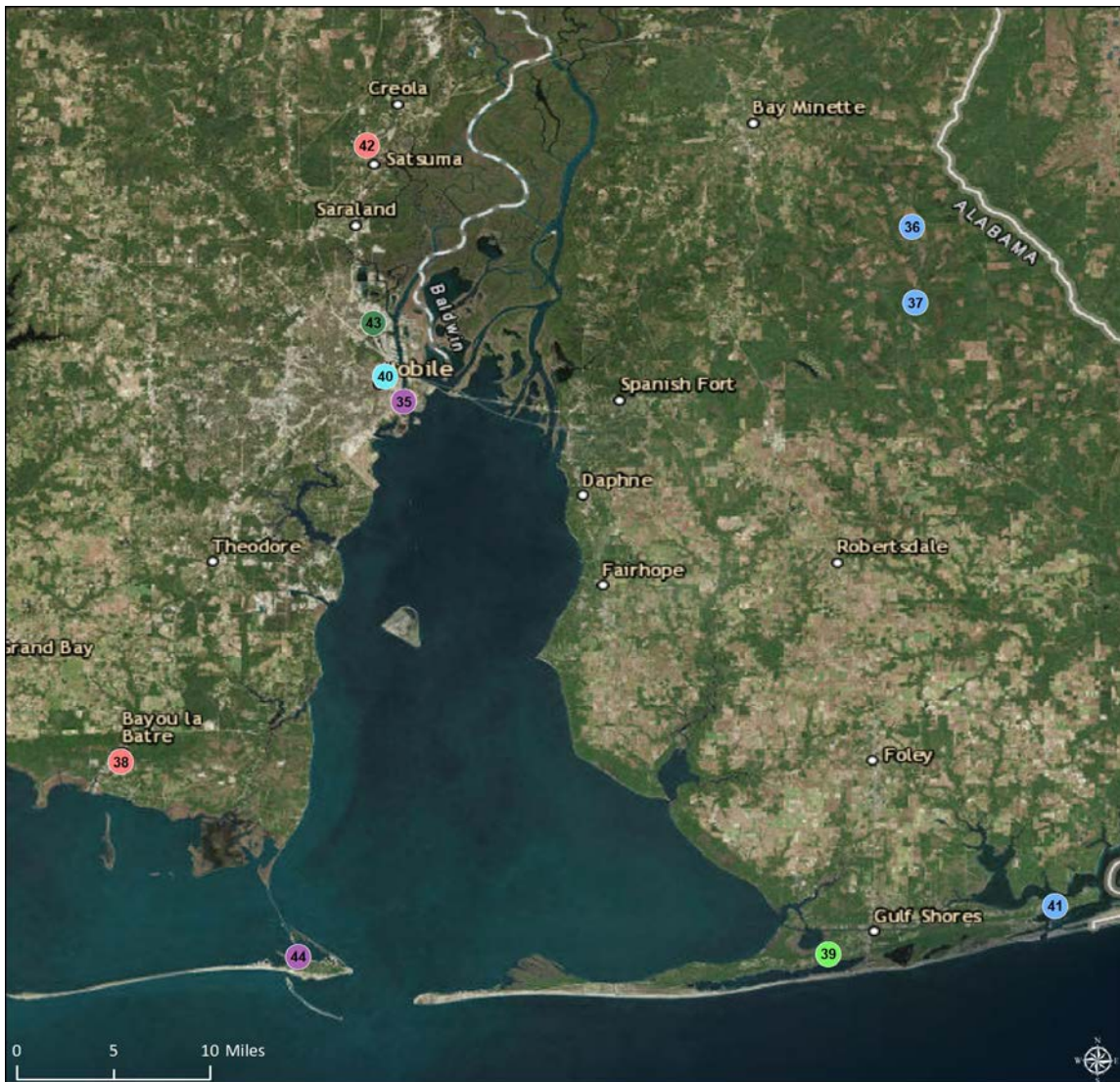


Figure 6. Funding Approved to Provide and Enhance Economic Development and Infrastructure, 2011-2018

## Project Locations: Provide & Enhance Economic Development & Infrastructure



### PROJECT NAME

- 35) Alabama State Port Authority - Automotive Logistics /RO-RO Terminal (1)
- 36) Baldwin Beach Express I-10 to I-65 Extension Right-of-Way Acquisition (1)
- 37) Baldwin County ALDOT Capacity Improvements (1)
- 38) City of Bayou La Batre - Water Distribution System Upgrades (1)
- 39) City of Gulf Shores - Ambassadors of the Environment (1)
- 40) City of Mobile - Innovating St. Louis Street: Mobile's Technology Corridor (1)
- 41) City of Orange Beach - Canal Road Improvements East of State Road 161 (3)
- 42) City of Satsuma - Northwest Satsuma Water & Sewer Project (1)
- 43) Historic Africatown Welcome Center (1)
- 44) Town of Dauphin Island - Aloe Bay Harbour Town, Phases I, II, & III (1)
- 45) Town of Mount Veron - Mount Veron Water Treatment Plant (1)

### Funding Source Code:

RESTORE Bucket 1 (1)  
RESTORE Bucket 2 (2)  
RESTORE Bucket 3 (3)  
NFWF (F)  
NRDA (R)

### Project Type

- Economic Development Activities
- Facilities Construction
- Infrastructure Improvements
- Planning
- Tourism and Marketing Activities
- Transportation Improvements



## Spotlight On: Africatown Welcome Center

Africatown is a community of national historic significance to the Gulf Coast Region. The site of the landing of the last slave ship to enter the United States, Africatown is filled with rare documents, relics, and artwork. The community's rich culture and heritage needs to be preserved for future generations and the area developed and promoted as a tourism destination. The Africatown Neighborhood Plan, endorsed and supported by the Mobile City Planning Commission, establishes a common goal to capture Africatown's historic and natural values through development of a permanent history center. Plans are being made to develop a historic welcome center on the identified site, which will be strategically located in the heart of the community and adjacent to a historic cemetery.

The project proposed to be funded on the RESTORE Multi-Year Implementation Plan is:

- *Historic Africatown Welcome Center Phase 1 and II - 2018*  
- \$3,689,215

The African Neighborhood Plan establishes a common goal to capture Africatown's historic and natural values through development of a permanent history center. Many of the historic relics are in disrepair and in danger of being permanently lost or destroyed. Without immediate and sustained preservation efforts, the community's rare historic heritage will be lost. A building is needed to house the historic relics and to serve as a welcome center to promote tourism for the area.

Direct Component (Bucket 1) funds will be used to plan, design, permit and construct a welcome center in the historic Africatown community.

### Summary:

- Project includes construction of a Welcome Center in the historic Africatown.
- Project will provide an education opportunity to learn about historic heritage in the City of Mobile.



Amy Walker

## Projects to Provide & Enhance Economic Development & Infrastructure

### **Alabama State Port Authority - Automotive Logistics/RO-RO Terminal (35)**

Cost: \$29,630,741.30

Funding Source: RESTORE B1 (2018) (Proposed)

This project will convert a derelict former Bulk Handling Facility into a state-of-the-art Roll On/Roll Off (RO-RO)/Mobile Vehicle Processing Facility at the Port of Mobile. The development of the Facility will allow automobile and equipment manufacturers in Alabama and other neighboring states access to more cost-effective deep water gateway for exporting American made products, as well as importing commodities and components that support those manufacturers, creating jobs, and improving the regional and national economy.

### **Baldwin Beach Express I-10 to I-65 Extension Right-of-Way Acquisition (36)**

Cost: \$11,687,481.96

Funding Source: RESTORE B1 (2018) (Proposed)

This submittal seeks funding for Right-of-Way (ROW) property acquisition to accommodate the proposed 24.5 mile Baldwin Beach Express extension between I-10 and I-65. The objective is to acquire all right-of-way necessary to move to the construction phase. Regional economic recovery, tourism, industrial growth, and public safety are supported and enhanced through the completion of this project.

### **Baldwin County ALDOT Capacity Improvements (37)**

Cost: \$58,504,000.00

Funding Source: RESTORE B1 (2018) (Proposed)

The Alabama Department of Transportation, Baldwin County, and the cities of Spanish Fort, Daphne, Fairhope, Orange Beach, and Gulf Shores are cooperatively pursuing the completion of five major infrastructure projects in the Gulf Coast Region to reduce congestion and enhance access to and between the surrounding areas. The project partners seek to leverage funding from three major sources to add additional lanes to three major state routes in five separate projects, totaling 18.31 miles of capacity improvements.

### **City of Bayou La Batre - Water Distribution System Upgrades (38)**

Cost: \$5,465,180.00

Funding Source: RESTORE B1 (2018) (Proposed)

The City of Bayou La Batre proposes to replace 86,200 linear feet of 2-inch water lines with 6-inch or larger lines to improve water pressure and fire protection. This increased capacity will allow the City to be prepared for residential and commercial developments and will result in lower insurance rates for residents due to more adequate fire protection.

### **City of Gulf Shores - Ambassadors of the Environment (39)**

Cost: \$10,040,701.62

Funding Source: RESTORE B1 (2018) (Proposed)

The City of Gulf Shores will construct a state-of-the-art facility utilizing the latest green building technologies, on 11.86 acres of City- owned property located adjacent to Gulf State Park. The architecture will mimic functional natural cycles found in the habitat types that are easily accessible in coastal Alabama. The purpose of the Gulf Shores Ambassadors of the Environment Program is to create a sustainably-designed ecotourism program where participants can learn about the ecology, biodiversity, sustainability, and resource management of the northern Gulf of Mexico in order to promote conservation and stewardship of our natural resources.

### **City of Mobile - Innovating St. Louis Street: Mobile's Technology Corridor (40)**

Cost: \$6,062,065.00

Funding Source: RESTORE B1 (2018) (Proposed)

The project proposal includes the design and reconstruction of infrastructure within the St. Louis Street right-of-way in the City of Mobile. The planning, design, and reconstruction of existing utility, streetscape, roadway, and storm drainage infrastructure would represent a significant milestone. Comprehensively, this phased initiative correlates with broader objectives for fostering additional business development and economic revitalization opportunities within the corridor and surrounding area.



### **City of Orange Beach - Canal Road Improvements East of State Road 161 (41)**

Cost: \$1,848,270.00

Funding Source: RESTORE B3 (2018) (Proposed)

This project will promote community resilience and economic growth by addressing the hindrance of economic development on Canal Road east of and near SR-161 intersection in Orange Beach. Growth of businesses and the tourism industry in Orange Beach have led to increased traffic volumes, resulting in a need to enhance capacity and efficiency. This project will provide sufficient infrastructure improvements to all the City of Orange Beach to safely address economic growth to benefit the local economy.

### **City of Satsuma - Northwest Satsuma Water and Sewer Project (42)**

Cost: \$1,813,521.00

Funding Source: RESTORE B1 (2018) (Proposed)

This project will extend water and sewer infrastructure under I-65 to provide potable water, fire protection, and gravity sanitary sewer to households currently relying on individual wells and on-site septic tanks. This project will improve water quality with the removal of approximately 100 septic tanks and will provide growth opportunities for the City of Satsuma.

### **Historic Africatown Welcome Center (43)**

Cost: \$3,689,214.86

Funding Source: RESTORE B1 (2018) (Proposed)

This phase of the project will include planning, engineering/design, permitting, and construction for the Africatown Welcome Center and tourism program. The Welcome Center will provide the public with information about the Africatown community and the surrounding Gulf Coast Region in addition to providing a stand-alone location for the preservation and viewing of historical documents and relics significant to the Africatown community.

### **Town of Dauphin Island - Aloe Bay Harbour Town, Phase I, II, & III (44)**

Cost: \$17,412,013.00

Funding Source: RESTORE B1 (2018) (Proposed)

This project proposes to develop a business district with public facilities along Aloe Bay to enhance economic and tourism opportunities for the Town of Dauphin Island. Phase I includes planning, design and engineering, acquisition, and permitting.

This phase will gather information, define problem areas, identify potential solutions and alternatives, and develop a timeline for implementation. Phase II will develop the design and environmental permitting, establish costs and prepare construction plans and documents. Phase III will facilitate construction of the project.

### **Town of Mount Vernon - Mount Vernon Water Treatment Plant (45)**

Cost: \$1,545,000.00

Funding Source: RESTORE B1 (2018) (Proposed)

The proposed project will include significant upgrades to Mount Vernon's water treatment facility, including a concrete clearwell and baffles, included draft aeration, a new treatment building, electrical and HVAC, and chemical feed system. The construction of new components at the Water Treatment Plant will enable the town to comply with ADEM and EPA minimum standards and regulations and will improve water quality.



USFWS

## RESTORE, CONSERVE & ENHANCE HABITAT

Land acquisition and conservation are a cornerstone of coastal restoration, as are habitat enhancement and restoration. Together, these activities significantly contribute to the restoration and recovery of habitats and resources impacted by the DWH oil spill. Land conservation, in conjunction with appropriate habitat restoration provides habitat services for wildlife, birds, and flora as well as provides downstream ecosystem service benefits of water quality and quantity improvement. Indirectly, those benefits impact living coastal marine resources such as oysters, SAVs, and inland fisheries.

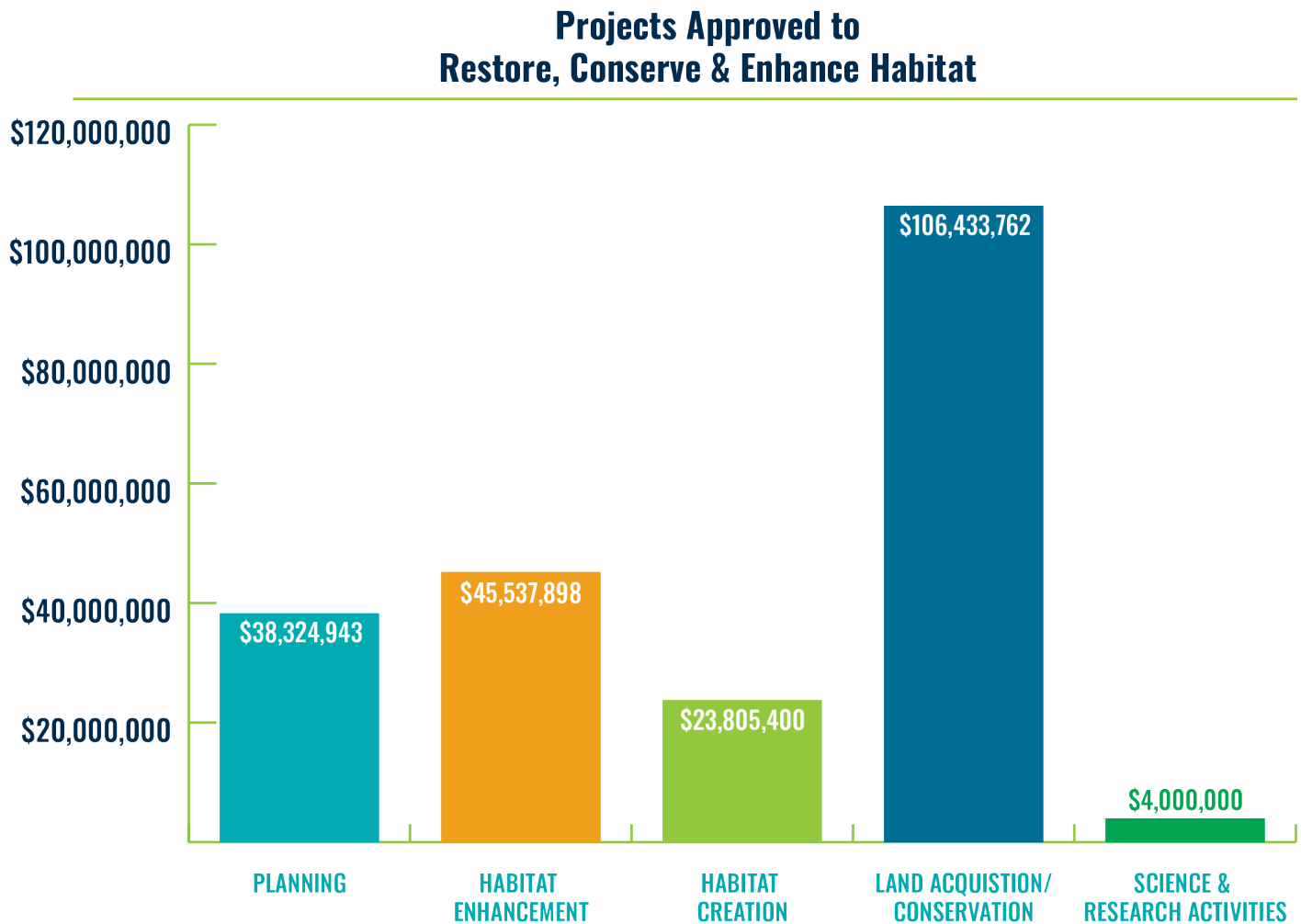
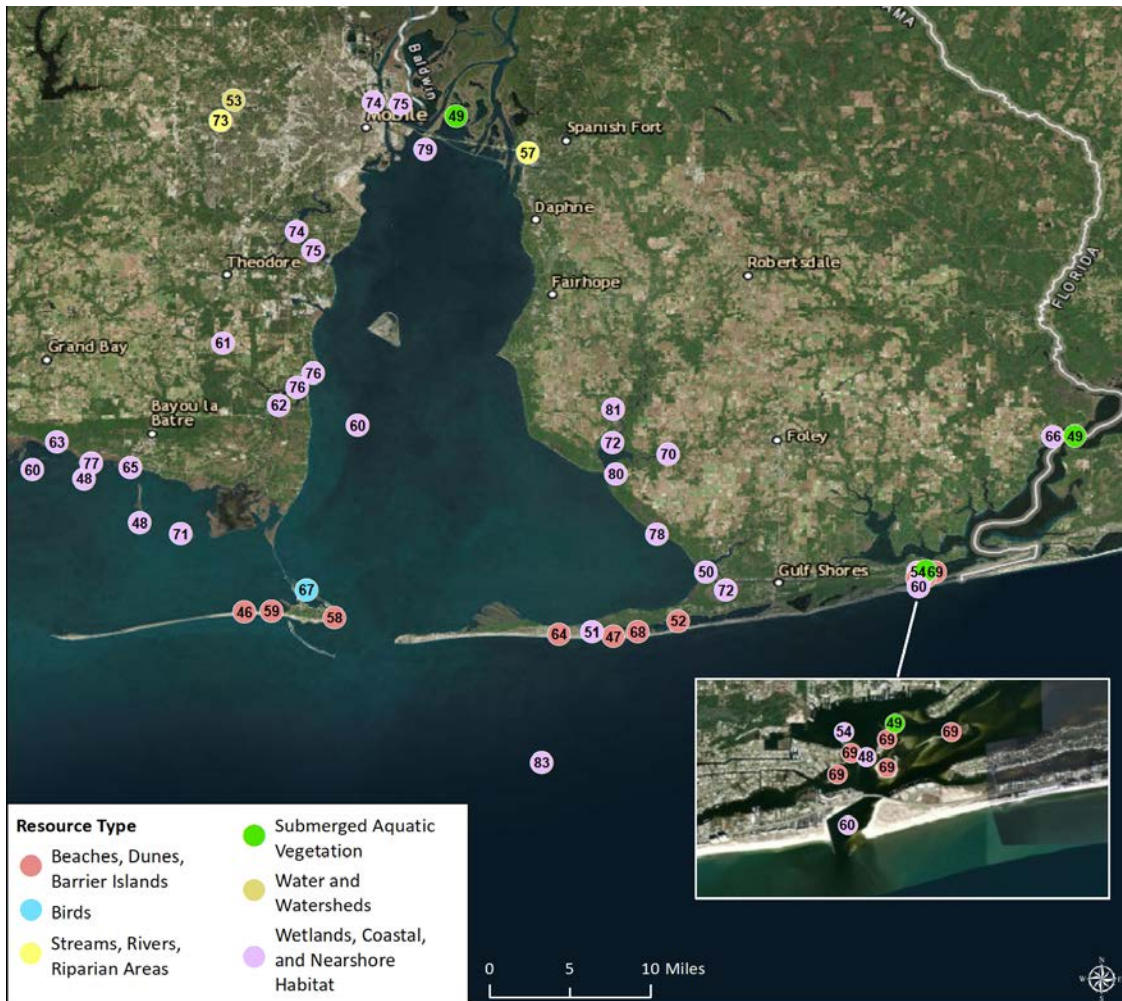


Figure 7. Funding Approved to Restore, Conserve and Enhance Habitat, 2011-2018



## Project Locations: Restore, Conserve & Enhance Habitat



### PROJECT NAME \*No map location

- |  |  |  |
|--|--|--|
| 46) Alabama Barrier Island Restoration Assessment (F)  | 58) Dauphin Island Bird Habitat Acquisition and Enhancement Program (F)                | 73) Mobile Bay National Estuary Program- 12 Mile Creek (2)                         |
| 47) Alabama Dune Restoration Cooperative Project (R)   | 59) Dauphin Island Conservation Acquisition (F)  | 74) Mobile Bay Shore Habitat Conservation Acquisition Initiative - Phase II (F)    |
| 48) Alabama Living Shorelines Program (2)  | 60) Enhancing Opportunities for Beneficial Use of Dredge Sediments (2)                 | 75) Mobile Bay Shore Habitat Conservation and Acquisition Initiative - Phase I (F) |
| 49) Alabama Submerged Aquatic Vegetation Restoration and Monitoring Program (2)  | 61) Fowl River Watershed Restoration (F)   | 76) Mobile County Conservation Acquisition and Salt Aire Shoreline Restoration (F) |
| 50) Bon Secour - Oyster Bay Wetland Acquisition Project (F)  | 62) Fowl River Watershed Restoration: Coastal Spits and Wetlands Project - Phase I (F) | 77) Point aux Pins Living Shoreline Project (R)                                    |
| 51) Bon Secour National Wildlife Refuge Acquisition (F)  | 63) Grand Bay Acquisition (F)  | 78) Swift Tract Living Shoreline Project (R)                                       |
| 52) City of Gulf Shores - Little Lagoon Restoration Project (3)  | 64) Gulf Highlands Conservation Acquisition (F)  | 79) Upper Mobile Bay Beneficial Use Wetland Creation Site (2)                      |
| 53) City of Mobile - Three Mile Creek Watershed Restoration (3)  | 65) Lightning Point Acquisition and Restoration Project-Phase I (F)                    | 80) Weeks Bay Land Acquisition East Gateway Tract (R)                              |
| 54) City of Orange Beach - Environmental Restoration of Cotton Bayou and Terry Cove (3)  | 66) Lillian Park Beach Habitat and Shoreline Protection (3)                            | 81) Weeks Bay Land Acquisition Harrod Tract (R)                                    |
| 55) Coastal Alabama Comprehensive Watershed Restoration Planning Project ( <a href="http://www.mobilebaynep.com/the_watersheds">http://www.mobilebaynep.com/the_watersheds</a> ) (2) | 67) Little Dauphin Island Restoration Assessment (F)                                   | 82) Comprehensive Living Shoreline Monitoring (2)                                  |
| 56) Coastal Habitat Restoration Planning Initiative ( <a href="http://www.mobilebaynep.com/the_watersheds">http://www.mobilebaynep.com/the_watersheds</a> ) (F)                      | 68) Little Lagoon Living Shorelines (R)  | 83) Alabama Artificial Reef and Habitat Enhancement (F)                            |
| 57) D'Olive Watershed Restoration (F)  | 69) Lower Perdido Islands Restoration Phase I (E&D) - Boggy Point (R)                  |  |
|  | 70) Magnolia River Land Acquisition - Holmes Tract (R)                                 |  |
|  | 71) Marsh Island (Portersville Bay) Marsh Creation (R)                                 |  |
|  | 72) Marsh Restoration in Fish River, Weeks Bay, Oyster Bay and Meadows Tract (2)       |  |

**Funding Source Code:**  
 RESTORE Bucket 1 (1)  
 RESTORE Bucket 2 (2)  
 RESTORE Bucket 3 (3)  
 NFWF (F)  
 NRDA (R)



## Spotlight On: Artificial Reef Restoration

Coastal Alabama's artificial reef program spans nearshore, offshore, and deep water, and provides important ecosystem service benefits associated with fish production and secondary productivity. Additionally, these reefs provide significant recreational and commercial fishing opportunities for Alabama's coastal stakeholders. The benefits of artificial reefs are significant and numerous — investment in reef expansion is also an investment in a wide variety of reef-associated living coastal marine resources. ADCNR's goal is to enhance over 140,000 acres of reef habitat in Alabama's jurisdictional waters.

ADCNR invested in a National Fish and Wildlife Foundation Gulf Environmental Benefit Fund project for artificial reef restoration:

- *Alabama Artificial Reef and Habitat Enhancement – 2015*  
- \$12,525,400

This project funded the enhancement and expansion of the state's artificial reef program to improve habitats for reef fish and other species in coastal Alabama. The project consisted of the following components:



Alabama Marine Resources Division

- Within Alabama nearshore reefs, two new reefs constructed and several existing reefs will be restored.
- Over 125 structures will be deployed 3 miles offshore, and over 600 concrete and limestone pyramids will be deployed within 6-9 miles from shore to expand those artificial reefs.
- Additionally, 20 acres of seabed in the Gulf of Mexico will be enhanced as a juvenile reef fish recruitment reef and up to 140 high relief reef modules constructed of concrete and limestone will be deployed in the offshore waters of the Gulf of Mexico.
- Two ships will be reefed.

Similar to ADCNR's oyster restoration and recovery efforts, monitoring associated with reefs is critical in understanding benefits and successes of restoration projects. These monitoring efforts provide critical information on biological succession of newly placed structures in varying areas (nearshore to deep water), temporal and spatial patterns of habitat utilization by different reef fish species, and evaluate how well the structures performed (i.e. look at structural integrity, durability, and stability measures.)

### Summary:

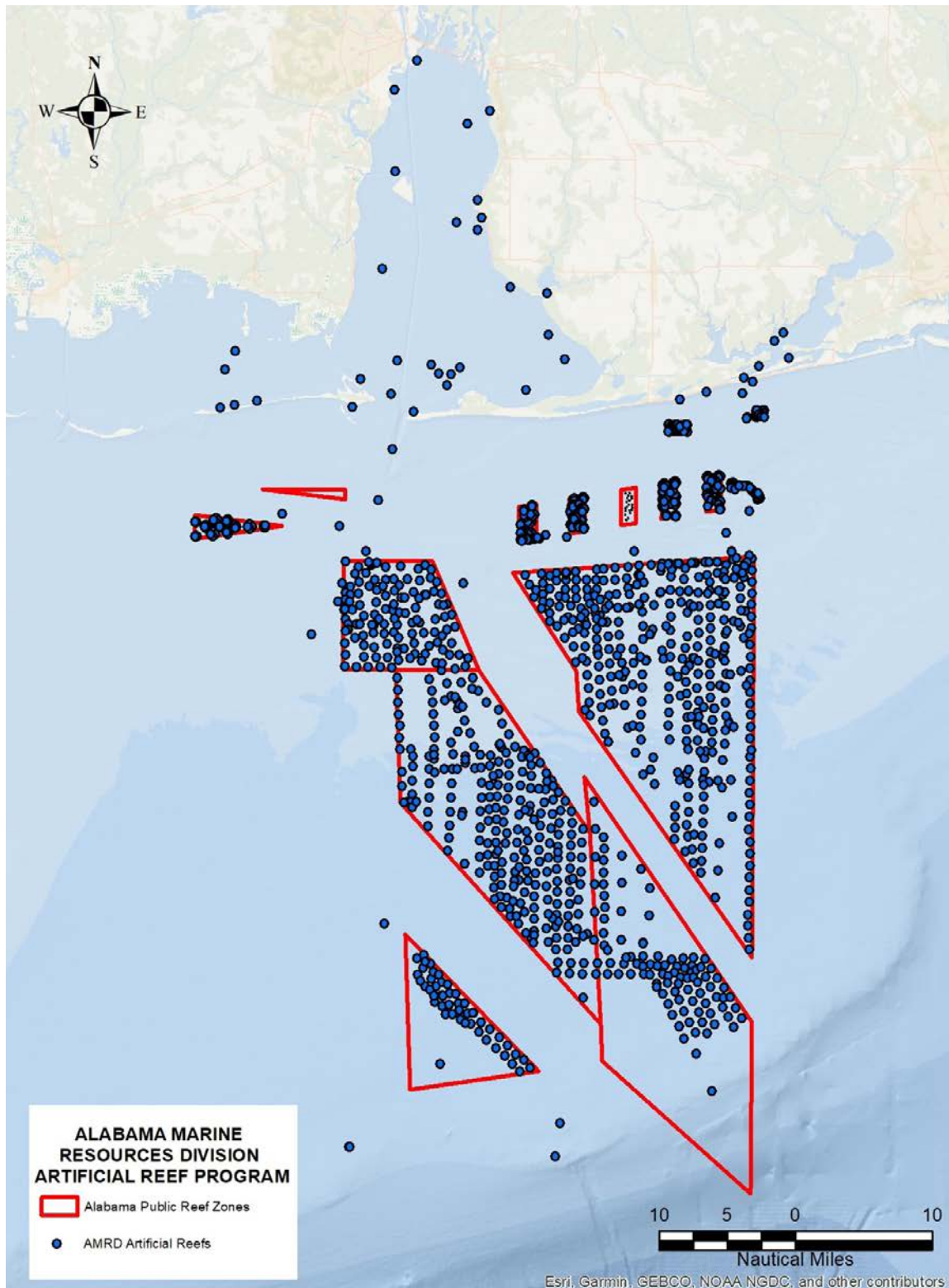
- Restoring artificial reefs provides a host of marine ecosystem benefits.
- Nearshore, off-shore, and inshore reefs are being restored as part of this project.
- Artificial reef structures are being deployed into these areas to provide surface area for benthic growth.



ADCNR



## Alabama Artificial Reef Locations



## Spotlight On: D'Olive Watershed Restoration

The D'Olive watershed is one of several coastal watersheds that drain to Mobile Bay. The watershed has experienced excessive erosion and sedimentation since the 1970's that has dramatically reduced the extent of seagrass beds in portions of Mobile Bay. Stormwater runoff from new developments has significantly impacted watershed morphology, function, and hydrology causing stream channel instability, head-cutting, mass slumping, and wetlands degradation. Altered hydrology, loss of natural wetlands and riparian areas, and inadequate natural flood plains have negatively impacted aquatic and wildlife species' survival and habitat.

To restore the watershed and reduce nutrient and sediment loads to Mobile Bay, ADCNR, in partnership with the Mobile Bay National Estuary Program, has invested in the following project:

- *NFWF-GEBC: D'Olive Watershed Restoration - 2013 - \$12,781,000 (\$6,000,000 added in 2015 to increase project scope to account for historic storms)*

This project provides funds to restore degraded streams and install management measures to reduce the downstream impacts in the D'Olive watershed through a combination of stormwater retrofits, stream restorations and detailed monitoring. Work will include projects on three distinct tributaries of the D'Olive watershed and will significantly contribute to improved water quality and habitat creation in D'Olive and Mobile Bays.

### Summary:

- D'Olive is a critical watershed input to Mobile Bay.
- Multiple funding streams have come together to reduce sediment and nutrient loading.
- This is a long term project to improve water clarity and restore SAVs.



Volkert



Volkert



Volkert



## Spotlight On: Land Conservation & Acquisition

To date, Alabama has acquired and protected over 4,000 acres of habitat in coastal Alabama. ADCNR, in close coordination with the Forever Wild Land Trust program, as well as State and Federal partners, have and will continue to invest in land conservation and other restoration efforts across South Alabama.

Here are a few of the land acquisition efforts to date:

- *NFWF-GEBCF: Grand Bay Acquisition - 2015*

Grand Bay is one of the most pristine and diverse areas remaining on the Alabama Gulf coast and the parcels proposed for acquisition are critical inholdings linking existing protected and managed areas. This project will acquire three parcels consisting of 674 acres of priority coastal habitat in southwestern Mobile County.

- *NFWF-GEBCF: Bon Secour Oyster Bay Wetland - 2016*

The tidal marshes, maritime forests, and freshwater swamps located in this project area are important habitat for many species of conservation significance including threatened and endangered species such as the Alabama red-bellied turtle and the eastern indigo snake, and various wading birds. This acquisition project will protect and restore approximately 836 acres of diverse coastal habitat in the City of Gulf Shores.

- *NFWF-GEBCF: Dauphin Island - 2016*

This primary barrier island provides important nesting, loafing, stopover and foraging habitats for a variety of coastal birds, shorebirds, neotropical migrants and other avian species, as well as nesting habitat for endangered sea turtles. This project will result in the acquisition of approximately eight acres of remaining undeveloped beachfront (1,200 linear feet) on a mid-island section of Dauphin Island.

- *NFWF-GEBCF: Bon Secour NWR - 2017*

This project includes the acquisition of a 251-acre property on the Fort Morgan Peninsula that has been identified as a high conservation priority in the State of Alabama. The parcel will be deeded to the U.S. Fish and Wildlife Service (USFWS) for inclusion and management within Bon Secour National Wildlife Refuge (BSNWR).

- *NFWF-GEBCF: Lightning Point - 2016*

This project will protect and restore a key stretch of coastal shoreline at the mouth of Bayou La Batre River. Specifically, the project includes the acquisition of more than 100 acres of coastal habitat.

- *NFWF-GEBCF: Gulf Highlands - 2016*

This project funds the acquisition, conservation and management of 113 acres with 2,700 feet of gulf frontage beach/dune habitat – the largest, privately held, undeveloped beachfront parcel remaining in coastal Alabama. Protection of this key habitat would benefit nesting sea turtles, migratory birds and shorebirds, and allow its continued function as refuge for the endangered Alabama beach mouse.

### Summary:

- Over 4,000 acres of critical coastal habitat acquired to date.
- Multiple threatened and endangered species habitat protections have been implemented.
- Other project benefits include improved water quality and restored SAVs.



Michael Rivera

## Spotlight On: Fowl River Restoration

Coastal restoration planning allows communities to highlight threats and stressors and provides decision makers the ability to implement restoration projects and strategies to ensure objectives of restoration are achieved.

The Mobile Bay National Estuary Program has implemented significant restoration planning efforts in multiple watersheds draining into Mobile Bay, including the Fowl River watershed. Restoration of important coastal spits and wetlands within the lower reaches of Fowl River is a significant priority action identified in the recently completed Fowl River Watershed Management Plan, funded under a prior GEBF award.

The project that is funded by NFWF GEBF is:

- *Fowl River Watershed Restoration: Coastal Spits and Wetlands Project - Phase I - 2016 - \$1,127,000*

This project funds engineering and design studies to develop a solution to stabilize and protect four priority in-river wetland spits and restore marshland throughout the intertidal portions of lower Fowl River. This project will reduce the risk of future harm to habitats necessary for sustaining a healthy fishery and improve water quality from this significant watershed to Mobile Bay.

The Mobile Bay National Estuary Program will oversee an engineering assessment to develop plans for the restoration of coastal marsh habitat, including 7,600 linear feet of priority shoreline along the lower reaches of Fowl River. Additionally, this project will fund hydrologic modeling and a marsh health and recovery study for the watershed to provide managers a valuable tool to guide and prioritize future restoration projects throughout the Watershed.

### Summary:

- Restoration planning identified the need for protecting coastal habitats.
- Project includes an engineering assessment to understand best course of action for marsh habitat restoration.



ADCNR



## Spotlight On: Salt Aire Restoration

Land development is a threat to the quality and quantity of critical coastal habitat. Land conservation and subsequent restoration efforts improve ecosystem function and resilience of the Mobile Bay estuary through protection, restoration and conservation of habitats.

Two projects in Mobile County have been funded to acquire critical habitats on the western shore:

- *Mobile County Conservation Acquisition – 2015 - \$4,257,400*

This project expands the Mobile County Commission's investment in habitat conservation and restoration by acquiring and conserving a 233-acre parcel located on Mobile Bay near the mouth of Fowl River. The parcel contains approximately 90 acres of brackish marsh habitat and transitional upland habitat with a high diversity of plants, birds and aquatic species. Funding will be utilized to complete due diligence and acquisition of the parcel, and the development and implementation of a conservation stewardship and management plan.

- *Salt Aire Shoreline Restoration – 2017 - \$12,700,000*

This project leverages the earlier acquisition of the 233-acre Salt Aire property (2015 GEBF) and proposes protection of degraded shoreline and restoration of 30 acres of associated coastal marsh on the western shore of Mobile Bay. Construction of wave attenuation structures and the beneficial use of dredge material for marsh creation are both envisioned. Collectively, both projects cover all of the watersheds that locally drain into Mobile Bay. Restoration of the Salt Aire shoreline will be accomplished by placement of approximately 5,600 linear feet of segmented low-profile breakwater structures, and the placement of approximately 150,000 cubic yards of dredge material from an existing nearby disposal area, resulting in an estimated 30 acres of restored marsh habitat.

### Summary:

- Coordination of two restoration projects.
- Initial project conserved a valuable parcel of coastal habitat.
- The second project will restore that habitat utilizing living shoreline technologies.



ADCNR

## Projects to Restore, Conserve & Enhance Habitat

### **Alabama Artificial Reef and Habitat Enhancement (83)**

Cost: \$12,525,400.00

Funding Source: NFWF (2015)

This project funds the enhancement and expansion of the state's artificial reef program to improve habitats for reef fish and other marine species in coastal Alabama. Two new reefs will be constructed and existing reefs will be restored within Alabama's nearshore waters; 125 structures will be deployed 3 miles offshore; 600 concrete and limestone pyramids will be deployed within 6-9 miles from shore; 20 acres of seabed in the Gulf of Mexico will be enhanced as a juvenile reef fish recruitment reef; and up to 140 high relief reef modules constructed of concrete and limestone will be deployed in the offshore waters of the Gulf of Mexico.

### **Alabama Barrier Island Restoration Assessment (46)**

Cost: \$4,277,600.00

Funding Source: NFWF (2014)

The assessment seeks to evaluate restoration alternatives and to better understand how various restoration alternatives can optimize the island's resiliency to storm events, enhance wildlife habitat, and bolster the island's lifespan.

### **Alabama Dune Restoration Cooperative Project (47)**

Cost: \$1,480,000.00

Funding Source: NRDA Phase I Early Restoration (2012)

This project supports the restoration of 55 acres of primary dune habitat, including the habitat of the sea turtle and beach mouse.

### **Alabama Living Shorelines Program (48)**

Cost: \$6,250,000.00

Funding Source: RESTORE B2 FPL 1 (2015)

Project supports funding to conduct all preliminary planning associated with the potential future construction of three (3) proposed Living Shorelines Projects (Coffee Island, Boggy Point, and Point aux Pins). Activities for this planning component would include field investigations, surveys, construction planning, engineering design, and regulatory compliance/permitting.

### **Alabama Submerged Aquatic Vegetation Restoration and Monitoring Program (49)**

Cost: \$875,000.00

Funding Source: RESTORE B2 FPL 1 (2014)

The proposed project would include activities to implement two submerged aquatic vegetation (SAV) restoration and protection projects: The Lower Perdido Bay Sea Grass Protection and Restoration Project and the Upper Mobile Bay and Lower Mobile-Tensaw River Delta SAV Restoration Project. Additional activities include monitoring SAV coverage and species composition at least twice.

### **Bon Secour - Oyster Bay Wetland Acquisition Project (50)**

Cost: \$12,511,400.00

Funding Source: NFWF (2016)

Project to acquire land to protect and restore approximately 935 acres of diverse coastal habitat in the City of Gulf Shores.

### **Bon Secour National Wildlife Refuge Acquisition (51)**

Cost: \$5,914,900.00

Funding Source: NFWF (2017)

This project proposes the acquisition of a 251-acre property on the Fort Morgan Peninsula that has been identified as a high conservation priority in the State of Alabama. The parcel will be deeded to the U.S. Fish and Wildlife Service (USFWS) for inclusion and management within Bon Secour National Wildlife Refuge (BSNWR). The property represents an important priority area within the authorized acquisition boundary of the Refuge and includes scrub/shrub, pine flatwood, saltwater marsh, and tidal creek habitats, with permanent and semi-permanent wetlands scattered across the parcel.

### **Coastal Alabama Comprehensive Watershed Restoration Planning Project (55)**

Cost: \$4,342,500.00

Funding Source: RESTORE B2 FPL1 (2015)

This project funds the Mobile Bay National Estuary Program (MBNEP) for purposes of completing comprehensive Watershed Management Plans for 19 priority watersheds in coastal Alabama. The MBNEP adopted the Watershed Management Planning Protocol and prioritized 31 coastal and intertidal watersheds for the development of standardized comprehensive management plans designed to guide future conservation and restoration efforts. To date, four watersheds are complete with implementation projects underway, eight others have been awarded funds through the National Fish and Wildlife Foundation's (NFWF) Gulf Environmental Benefit Fund (GEBF), and RESTORE funds are sought for the remaining 19 priority watersheds.



### **Coastal Habitat Restoration Planning Initiative (56)**

Cost: \$4,185,200.00

Funding Source: NFWF (2014)

This project will acquire high resolution mapping of the diverse habitats in Alabama's two coastal counties to identify the conditions of streams, rivers, riparian buffers, wetlands, intertidal marshes and submerged aquatic vegetation of Mobile Bay and the nearshore Gulf and Mississippi Sound waters.

### **Little Dauphin Island Restoration Assessment (67)**

Cost: \$1,481,500.00

Funding Source: NFWF (2017)

This project will provide funding to study both nearshore and onshore restoration options for a future project to enhance and protect Little Dauphin Island. Included in the Bon Secour National Wildlife Refuge managed by the U.S. Fish and Wildlife Service (USFWS), Little Dauphin Island is an important nesting and foraging area for several coastal bird species, including several imperiled shorebird species.

### **Mobile Bay National Estuary Program-12 Mile Creek (73)**

Cost: \$2,100,000.00

Funding Source: RESTORE B2 FPL 1 (2015)

Project will support engineering and design of a stream restoration plan for restoring Twelve Mile Creek, one of six main tributaries within the Three Mile Creek Watershed; development of an invasive species control program focused on aquatic vegetation in Three Mile Creek; preparation of necessary environmental compliance and regulatory clearances documentation; quality assurance; and pre-restoration monitoring

### **City of Gulf Shores - Little Lagoon Restoration Project (52)**

Cost: \$5,995,686.00

Funding Source: RESTORE B3 (2018) (Proposed)

This project will restore and improve approximately 2,500 acres of habitat within Little Lagoon by creating 1,000 feet of living shorelines, improving hydrologic connectivity of the existing canal system, converting approximately 200 septic systems, restoring shellfish and marsh/seagrass, and conducting ecological research and long-term monitoring. Project objectives include improvements to water quality, increased habitat area, and increased ecological productivity. The project will have secondary beneficial impacts to the region including improved and more resilient infrastructure, and increased recreational ecotourism opportunities.

### **City of Mobile - Three Mile Creek Watershed Restoration (53)**

Cost: \$11,730,000.00

Funding Source: RESTORE B3 (2018) (Proposed)

The purpose of this project is to reduce further bank destabilization along upper portions of Three Mile Creek, reducing sedimentation to downstream features like Langan Park Lake and Three Mile Creek. Improvements in water quality, stormwater management, and flood control will restore Langan Park lake to its original capacity and usefulness. The objectives of this phased project include stabilization of Twelve Mile Creek from East Drive to Langan Park Lake; leverage stream improvements occurring upstream (East Drive to the headwaters) and utilize hydrologic modeling occurring for the sub-watershed; and dredge Langan Park Lake to alleviate flooding.

### **City of Orange Beach - Environmental Restoration of Cotton Bayou and Terry Cove (54)**

Cost: \$500,000.00

Funding Source: RESTORE B3 (2018) (Proposed)

This project will develop an ecological understanding of the environmental and ecological health of the Cotton Bayou/Terry Cove Systems with an outcome to understand what restoration activities would enhance the overall health of the system. This planning activity will provide engineering and design and cost estimate for proposed restoration.

### **Comprehensive Living Shoreline Monitoring (82)**

Cost: \$4,000,000.00

Funding Source: RESTORE B2 FPL1 (2015)

This project supports the development of a plan for monitoring and assessing the performance and efficacy of at least ten (10) proposed and existing living shoreline projects in coastal Alabama.

### **Dauphin Island Bird Habitat Acquisition and Enhancement Program (58)**

Cost: \$4,525,000.00

Funding Source: NFWF (2017)

This project will enhance coastal bird habitat along one mile of recently restored beach that is immediately adjacent to a 200 acre bird sanctuary on Dauphin Island. The project will include sand fencing, dune plantings, signage, stewardship, and, if necessary, additional sand placement. Additionally, funding is intended to acquire and enhance important bird habitats

on Dauphin Island to benefit shorebirds, wading birds and seasonal migrants. Due diligence and landowner outreach will be undertaken as the first step to acquire an estimated 13 acres of undeveloped habitat to protect critically important migratory stopover habitat and facilitate management of contiguous blocks of conservation lands. Lands acquired through this project will be deeded to and managed by the Dauphin Island Bird Sanctuary (DIBS). DIBS will also undertake prescribed fire and invasive species management to enhance the ecological value of these newly-protected habitats.

#### **Dauphin Island Conservation Acquisition (59)**

Cost: \$3,568,600.00

Funding Source: NFWF (2016)

This project funds the acquisition of eight acres of remaining undeveloped beachfront (1,200 linear feet) on a mid-island section of Dauphin Island. This primary barrier island provides important nesting, loafing, stopover and foraging habitats for a variety of coastal birds, shorebirds, neotropical migrants and other avian species, as well as nesting habitat for endangered sea turtles.

#### **D'Olive Watershed Restoration (57)**

Cost: \$12,781,000.00

Funding Source: NFWF (2013)

This project provides funding to restore degraded streams and install management measures to reduce the downstream impacts in the D'Olive watershed through a combination of stormwater retrofits, stream restorations and detailed monitoring. Stabilization of these stream segments will significantly reduce sediment loading in the northeast quadrant of Mobile Bay, improving the quality and clarity of the water necessary for re-establishing submerged aquatic vegetation (SAV) beds in the upper Bay.

#### **Enhancing Opportunities for Beneficial Use of Dredge Sediments (60)**

Cost: \$3,000,000.00

Funding Source: RESTORE B2

The Enhanced Opportunities for Beneficial Use of Dredged Sediments project would allow Alabama to complete planning, design, engineering, and feasibility assessments for three project areas where future placement of dredged sediments would achieve habitat restoration.

#### **Fowl River Watershed Restoration (61)**

Cost: \$3,244,150.00

Funding Source: NFWF (2013)

Project includes implementation of measures to protect and restore 14 acres of coastal wetlands on Mon Louis Island. It also includes the development of a watershed management plan for Fowl River Watershed to identify future conservation investments to benefit the watershed.

#### **Fowl River Watershed Restoration: Coastal Spits and Wetlands Project – Phase I (62)**

Cost: \$1,127,000.00

Funding Source: NFWF (2016)

This funds engineering and design studies to develop a solution to stabilize and protect four priority in-river wetland spits and restore marshland throughout the intertidal portions of lower Fowl River. This project will reduce the risk of future harm to habitats necessary for sustaining a healthy fishery and improve water quality from this significant watershed to Mobile Bay.

#### **Grand Bay Acquisition (63)**

Cost: \$5,777,500.00

Funding Source: NFWF (2015)

This project will acquire three parcels consisting of 674 acres of priority coastal habitat in southwestern Mobile County. Grand Bay is one of the most pristine and diverse areas remaining on the Alabama Gulf coast and the parcels proposed for acquisition are critical inholdings linking existing protected and managed areas, providing a more holistic approach to long-term management and stewardship for the Grand Bay system.

#### **Gulf Highlands Conservation Acquisition (64)**

Cost: \$37,957,100.00

Funding Source: NFWF (2016)

This project provides funding to acquire, conserve, and manage 113 acres with 2,700 feet of Gulf frontage beach/dune habitat – the largest, privately held, undeveloped beachfront parcel remaining in coastal Alabama. Protection of this key habitat would benefit nesting sea turtles, migratory birds and shorebirds, and allow its continued function as refuge for the endangered Alabama beach mouse.

#### **Lightning Point Acquisition and Restoration Project – Phase I (65)**

Cost: \$5,903,100.00

Funding Source: NFWF (2016)



Project will protect and restore a key stretch of coastal shoreline at the mouth of Bayou La Batre River. Specifically, the project includes the acquisition of more than 100 acres of coastal habitat and the engineering and design for restoring approximately 28 acres of marsh and 1.5 miles of intertidal nearshore breakwater.

#### **Lillian Park Beach Habitat and Shoreline Protection (66)**

Cost: \$626,460.00

Funding Source: RESTORE B3 (2018) (Proposed)

Implementation of this project will establish a stable sand beach shoreline to improve public safety while mitigating wave energy contributions to beach erosion and habitat loss along Perdido Bay. This phased project will include planning, engineering/design, and construction and intends to increase the resilience of the estuarine and marine habitat.

#### **Little Lagoon Living Shoreline (68)**

Cost: \$210,999.00

Funding Source: NRDA RPII (2018)

The Little Lagoon Restoration Project will restore and improve approximately 2,500 acres of habitat within Little Lagoon by creating 1,000 feet of living shoreline, improving hydrologic connectivity of the existing canal system, converting approximately 200 septic systems to city sanitary sewer, restoring shellfish and marsh/seagrass, and conducting ecological research and long-term monitoring.

#### **Lower Perdido Islands Restoration Phase I (E&D) (69)**

Cost: \$994,523.00

Funding Source: NRDA RPII (2018)

This project will fund the development of a unified strategy for protecting the ecological functions of the Perdido Islands complex while allowing for passive public recreation.

#### **Magnolia River Land Acquisition (Holmes Tract) (70)**

Cost: \$4,144,162.00

Funding Source: NRDA RPII

This project proposes to acquire an approximately 80-acre tract with more than 1 mile of frontage on Magnolia River and Weeks Creek. Restoration management activities will also be implemented to provide the best habitat for native and endemic species possible.

#### **Marsh Island (Portersville Bay) Marsh Creation (71)**

Cost: \$11,280,000.00

Funding Source: NRDA Phase I Early Restoration (2012)

The Marsh Island (Portersville Bay) Restoration Project involves the creation of salt marsh along Marsh Island, a state-owned island in the Portersville Bay portion of Mississippi Sound, Alabama. This project will restore approximately 50 acres of salt marsh through the placement of a permeable segmented breakwater, the placement of sediments and the planting of native marsh vegetation. Additionally, the breakwater will provide protection for the existing 24 acres of Marsh Island, which has been experiencing shoreline loss at the rate of 5-10' per year.

#### **Marsh Restoration in Fish River, Weeks Bay, Oyster Bay and Meadows Tract (72)**

Cost: \$3,158,013.00

Funding Source: RESTORE B2 FPL1

This project will complete planning and design with local partners to restore natural hydrology to a total of 470 acres of wetlands at three sites within the Mobile Bay ecosystem in Alabama. A restoration plan, engineering design, regulatory compliance, monitoring and evaluation plan, and outreach and education plan would be completed to implement three project activities to restore coastal wetlands across Mobile Bay.

#### **Mobile Bay Shore Habitat Conservation and Acquisition Initiative – Phase I (75)**

Cost: \$300,000.00

Funding Source: NFWF (2015)

This project advances goals of conserving and protecting coastal habitat through land acquisition in Mobile Bay. Gulf Environmental Benefit Funds will be utilized to perform the necessary due diligence activities to inform future acquisition and management of several key intact tidal marsh habitats within the jurisdiction of the City of Mobile. This project will fund due diligence and planning needed to identify specific, high-priority properties for future acquisition, with a goal of preserving intact undeveloped intertidal habitat within the City of Mobile.

#### **Mobile Bay Shore Habitat Conservation Acquisition Initiative - Phase II (74)**

Cost: \$6,923,800.00

Funding Source: NFWF (2017)

Phase II of the Mobile Bay Shore Habitat Conservation and Acquisition Initiative will acquire, restore and preserve intact

high-priority, undeveloped properties within three specific areas of the City of Mobile. These three priority intertidal habitat areas include riparian, wetland and upland habitats that are used by a variety of fish and wildlife species injured by the *Deepwater Horizon* oil spill.

#### **Mobile County Conservation Acquisition and Salt Aire Shoreline Restoration (76)**

Cost: \$4,257,400.00

Funding Source: NFWF (2015)

This project leverages an earlier acquisition of the 233-acre Salt Aire property (2015 GEBF) and proposes protection of degraded shoreline and restoration of 30 acres of associated coastal marsh on the western shore of Mobile Bay. Construction of wave attenuation structures and the beneficial use of dredge material for marsh creation are both envisioned.

#### **Mobile County Conservation Acquisition and Salt Aire Shoreline Restoration (76)**

Cost: \$12,700,000.00

Funding Source: NFWF (2017)

This project leverages the earlier acquisition of the 233-acre Salt Aire property (2015 GEBF) and proposes protection of degraded shoreline and restoration of 30 acres of associated coastal marsh on the western shore of Mobile Bay. Construction of wave attenuation structures and the beneficial use of dredge material for marsh creation are both envisioned. The 2015 GEBF award funded both the acquisition of the property and engineering and design of the requested restoration work. Restoration of the Salt Aire shoreline will be accomplished by placement of approximately 5,600 linear feet of segmented low-profile breakwater structures, and the placement of approximately 150,000 cubic yards of dredge material from an existing nearby disposal area, resulting in an estimated 30 acres of restored marsh habitat.

#### **Point aux Pins Living Shoreline Project (77)**

Cost: \$2,300,000.00

Funding Source: NRDA Phase IV Early Restoration (2015)

The Point aux Pins Living Shoreline project will stabilize shoreline located near Point aux Pins which has shown evidence of erosion over time. In addition to protecting shorelines, the Shell Belt and Coden Belt Road Living Shoreline project will enhance the growth of planted native marsh vegetation in Mobile County.

#### **Swift Tract Living Shoreline Project (78)**

Cost: \$5,000,080.00

Funding Source: NRDA Phase III Early Restoration (2014)

The Swift Tract Living Shoreline Project would construct approximately 1.6 miles of breakwaters covered with oyster shell to reduce shoreline erosion, protect salt marsh habitat, and restore ecosystem diversity and productivity in Mobile Bay.

#### **Upper Mobile Bay Beneficial Use Wetland Creation Site (79)**

Cost: \$2,500,000.00

Funding Source: RESTOREB2 FPL1 (2015)

Project supports the development of the final design and permitting of a 1,200 acre wetland creation site in the Upper Mobile Bay south of the US Highway 90/98 causeway. The site has been developed in coordination with an Interagency Working Group (IWG) established to evaluate sediment management practices in Mobile Bay.

#### **Weeks Bay Land Acquisition East Gateway Tract (80)**

Cost: \$4,247,000.00

Funding Source: NRDA RPII (2018)

A 175-acre undeveloped tract at the mouth of Weeks Bay in Baldwin County will be acquired, protected, and restored, including over 100 acres of wetlands. This project would also include E&D for removal of a bulkhead on the waterfront point of the property that splits Weeks Bay and Mobile Bay.

#### **Weeks Bay Land Acquisition Harrod Tract (81)**

Cost: \$3,606,900.00

Funding Source: NRDA RPII (2018)

Approximately 231 acres, one of the largest remaining undeveloped parcels of cypress and gum swamp, marsh, and river shoreline in coastal Alabama and the largest privately-owned tract on the lower Fish River, would be acquired, protected, and restored.



# PROVIDE & ENHANCE RECREATION & PUBLIC ACCESS

Injury wasn't limited to just natural resources as a result of the DWH Oil spill, but also included recreational loss injury and loss of public access to our natural resources. For example, people couldn't access certain local beaches in Alabama during the response effort nor could they engage in recreational past times on the water like boating and fishing.

Alabama is investing and is proposing to invest in a number of projects that will enhance the recreational opportunities on our coast, including:

- Reconstruction of the Fort Morgan pier. The pier has been an iconic feature of our coastal landscape and funding is providing the needed upgrades to the pier to make it become functional once more.
- Improvements to our state parks to allow coastal residents and visitors alike to enjoy the states resources.
- Blueway and Greenway developments in the City of Mobile.

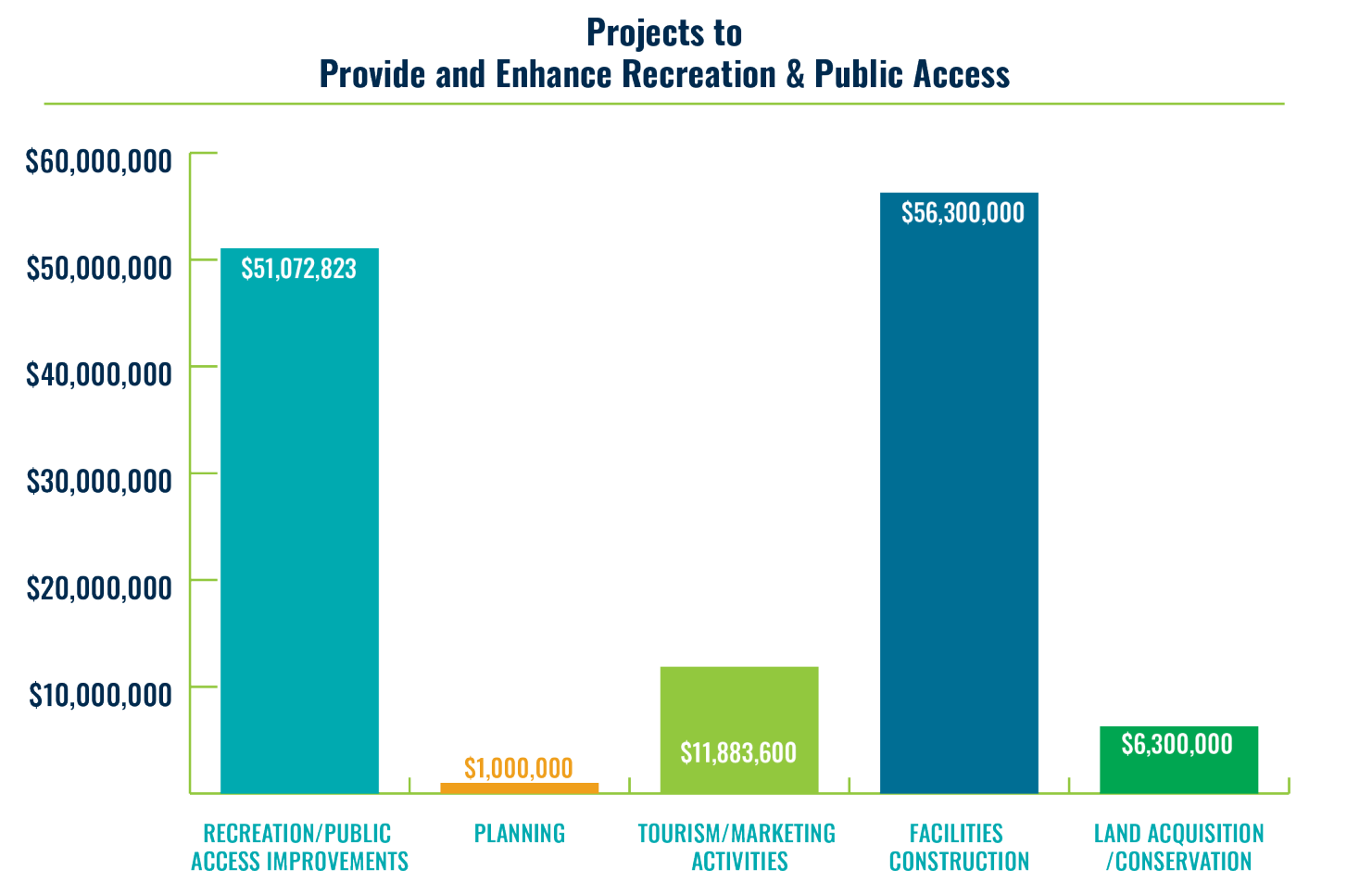
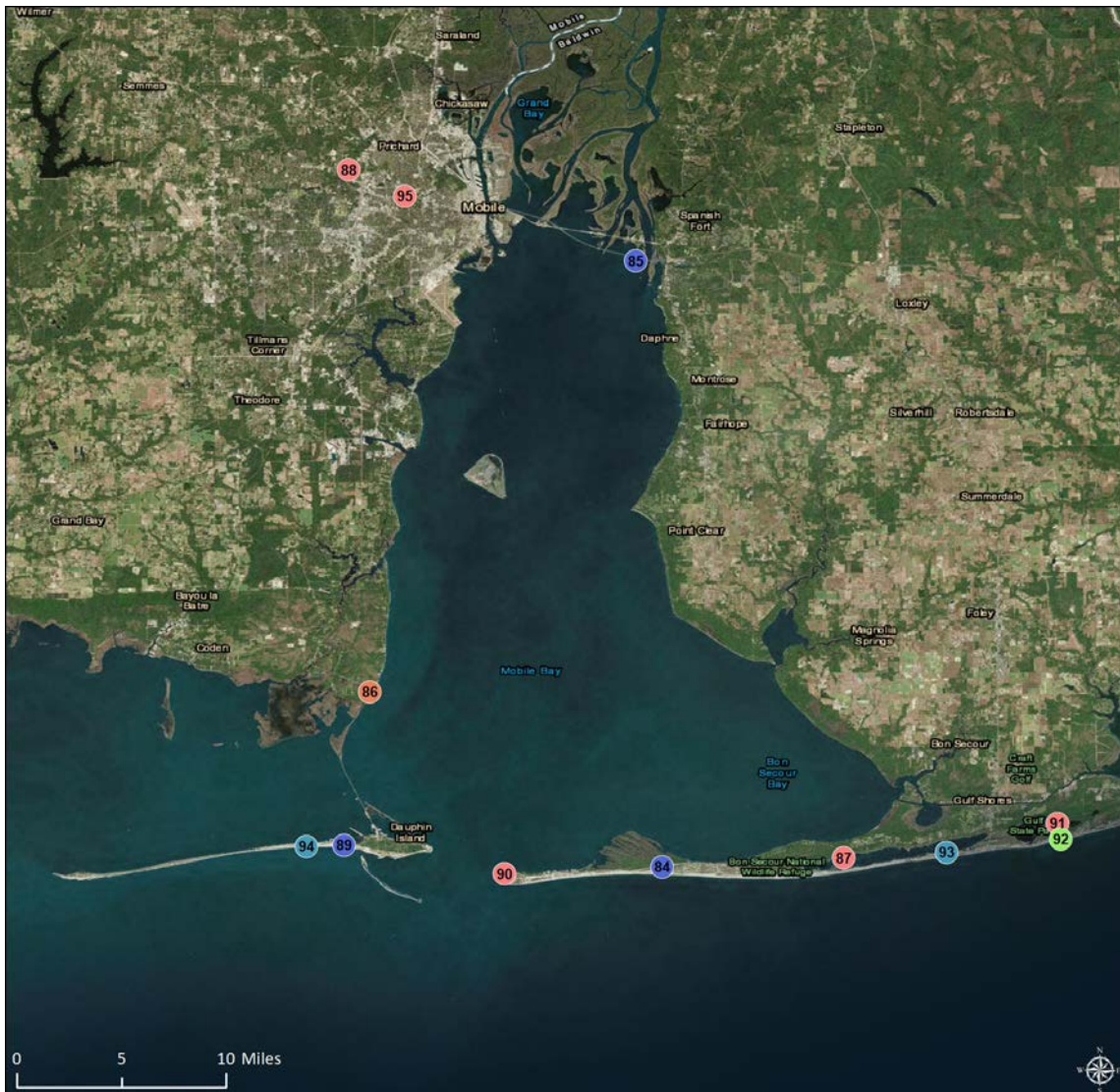


Figure 8. Funding Approved to Provide & Enhance Recreation & Public Access, 2011-2018

## Project Locations: Provide & Enhance Recreation & Public Access



### PROJECT NAME

- |   |  |
|---|--|
| 84) ADCNR, State Parks - Fort Morgan Parkway Trail Extension (3)    | 92) Gulf State Park Lodge and Associated Public Access Amenities (R)     |
| 85) ADCNR, State Parks - Meaher Park Improvements (3)               | 93) Laguna Cove Little Lagoon Natural Resource Protection (R)            |
| 86) Bayfront Park Restoration and Improvements (E&D) (R)            | 94) Mid-Island Parks and Public Beach Improvements (Parcels B and C) (R) |
| 87) Bon Secour National Wildlife Refuge Trail Enhancement (R)       | 95) Mobile County - Mobile County Blueway Trail Development (1)          |
| 88) City of Mobile - Mobile Greenway Initiative (1)                 |  |
| 89) Dauphin Island Eco-Tourism and Environmental Education Area (R) |  |
| 90) Fort Morgan Pier Rehabilitation (R)                             |  |
| 91) Gulf State Park Enhancements (R)                                |  |

**Funding Source Code:**  
 RESTORE Bucket 1 (1)  
 RESTORE Bucket 2 (2)  
 RESTORE Bucket 3 (3)  
 NFWF (F)  
 NRDA (R)

### Project Type

- Facilities Construction
- Habitat Enhancement
- Land Acquisition/Conser...
- Planning
- Recreation and Public Access Improvements
- Tourism and Marketing Activities



## Spotlight On: Fort Morgan Pier Rehabilitation

Recreational fishing opportunities were significantly impacted by the DWH oil spill and Alabama has put in place a number of restoration projects to help compensate for those losses. One of those projects is the restoration and rehabilitation of the Fort Morgan Fishing Pier.

The project is funded through early restoration NRDA:

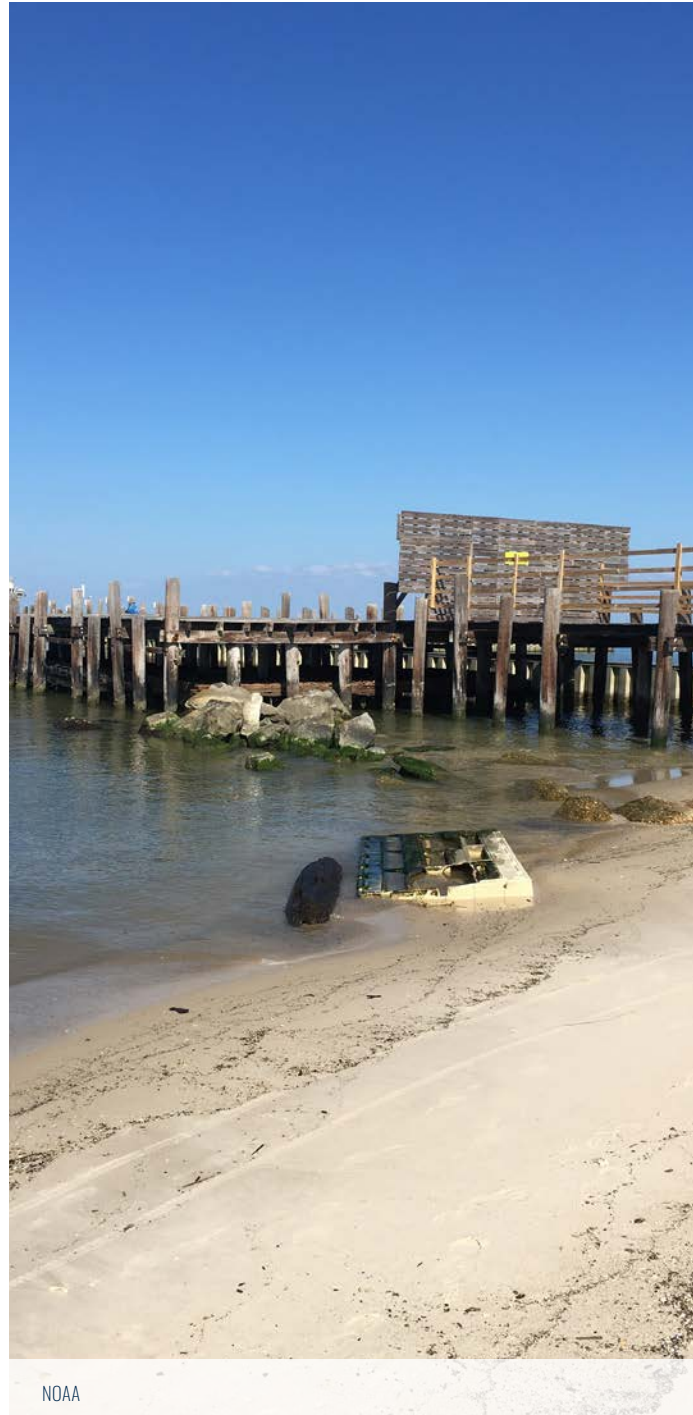
- *Fort Morgan Pier Rehabilitation Restoration – 2016 - \$3,075,000*

At more than 40 years old, the Fort Morgan fishing pier has fallen into disrepair and was closed in 2014 for safety reasons. The proposed project would rehabilitate the pier on its existing foundations so that it could be returned to use for recreational fishing. No new infrastructure, such as parking or restrooms, would be required, as all necessary amenities are already in place at the Fort Morgan State Historic Site. Educational signage on fishing regulations, stewardship of coastal resources, and related information would be placed along the rehabilitated pier.

The estimated cost of the project is \$3,075,000. This includes planning, engineering and design, construction, monitoring, and Trustee supervision. Operation and maintenance would be funded through the admission fees described for the Fort Morgan Historic Site.

### Summary:

- This project is funding the rehabilitation of the fishing pier to compensate for recreational access that was inhibited during the DWH oil spill.



NOAA

## Spotlight on: Meaher Park Improvements

State parks in coastal Alabama afford coastal stakeholders the opportunity to interact with the amenities that Alabama's coastline has to offer. Meaher State Park is a very popular park in the shadow of downtown Mobile and it is perfectly placed to be a gateway for tourists to the Mobile-Tensaw Delta.

The project is proposed to be funded through RESTORE State Expenditure Plan:

- *ADCNR – State Parks – Meaher Park Improvements – 2018*  
- \$3,450,000

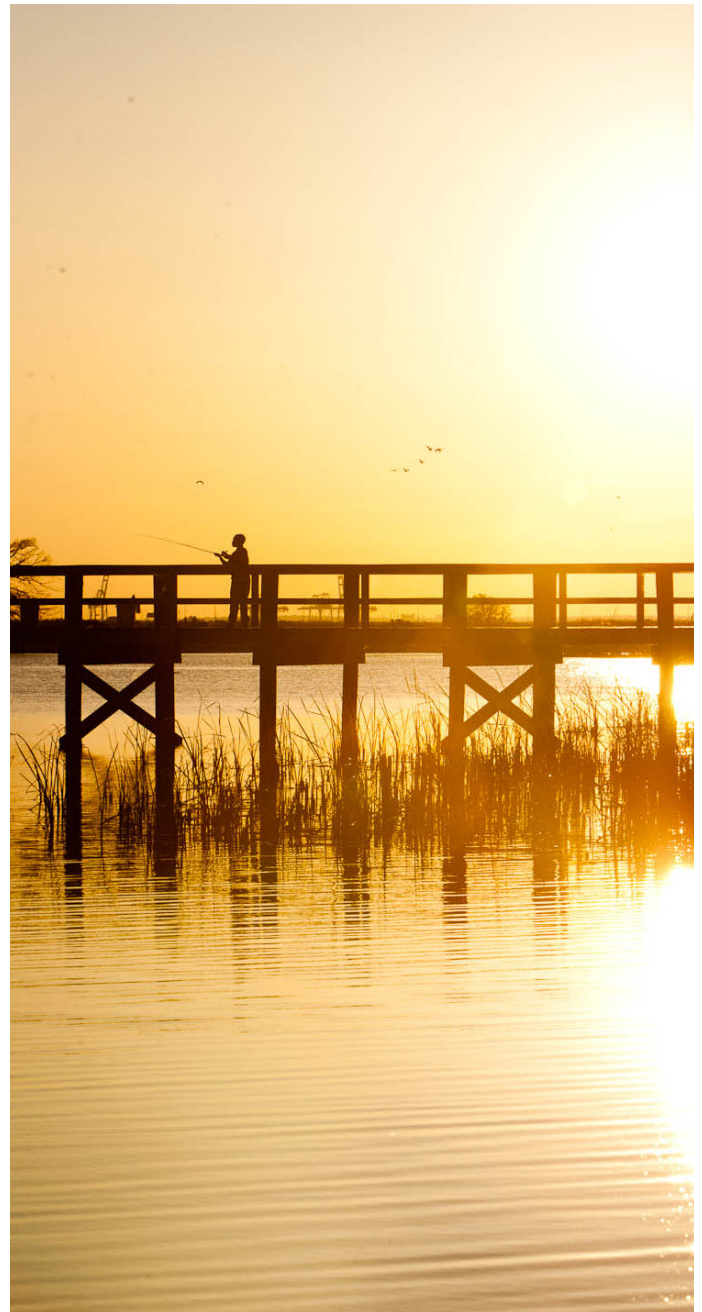
This project would greatly increase and enhance outdoor recreation opportunities along a major east-west corridor heavily utilized by citizens and guests of Alabama. Currently Meaher frequently fills to capacity, and an upgrade in facilities is needed. This project would add 156 full service campsites as well as support facilities such as parking, bath houses, a fishing pier, and utility infrastructure. In addition, 10 RV park model cabins would be installed along with appropriate skirting, decking, steps, and/or ramps.

### Summary:

- This project will enhance recreational opportunities at Meaher State Park – a popular campground close to Mobile and the Mobile-Tensaw Delta.



Outdoor Alabama



Outdoor Alabama



## Spotlight on: Mobile Greenway Initiative

Greenways are becoming popular in major urban areas for recreation and environmental protection. A greenway is typically a strip of undeveloped land near an urban area, set aside for recreational use or environmental protection.

The Mobile Greenway Initiative is a series of infrastructure projects intended to accomplish the following goals:

1. Reconnect City of Mobile citizens and neighborhoods through cycling and pedestrian-oriented transportation options.
2. Create and enhance social and recreational opportunities.
3. Build a healthier community through improved access to passive recreational opportunities.
4. Initiate a sustainable, place-based economy in under-served areas.
5. Through “greenway” acquisitions, develop a more resilient environment for both citizens and wildlife.

This greenway project is proposed for funding on the RESTORE Multi-Year Implementation plan:

- *Mobile Greenway Initiative – 2018 - \$9,991,000*

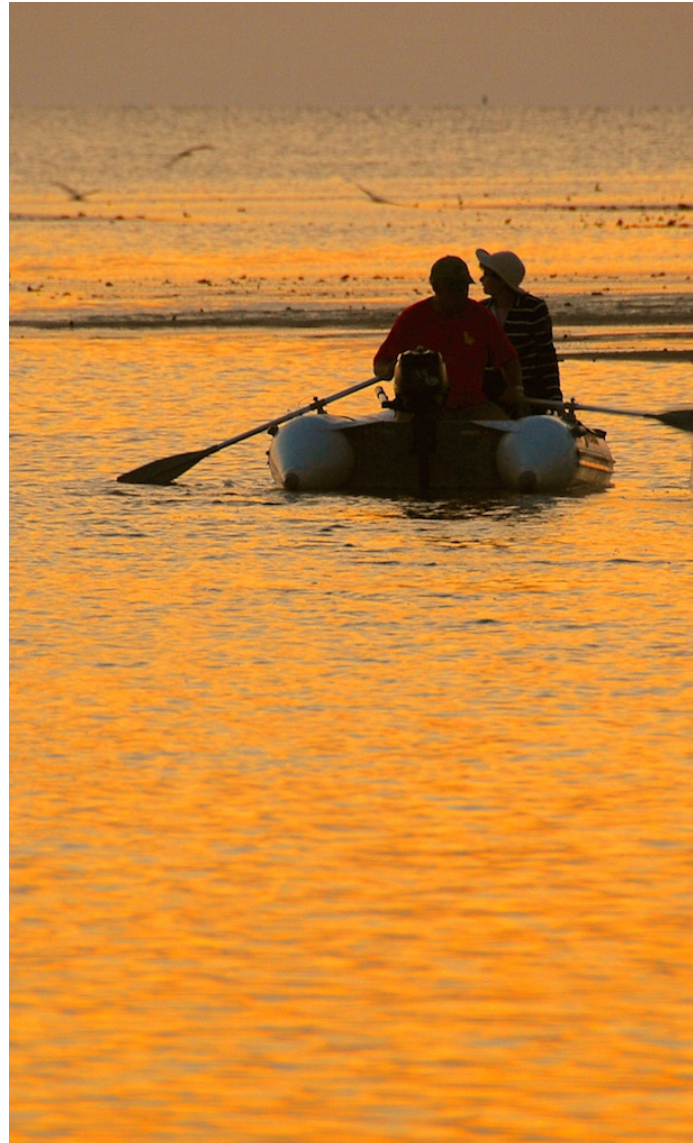
RESTORE Act Direct Component funds will be used to construct six segments of the Three Mile Creek Greenway Trail in two phases. Phase I will include Segments 1, 2, and 3, which accounts for two miles of the trail. Phase II will include Segments 4, 5, 6, and 7 (southern alignment), which accounts for four miles of the trail. In addition, funds will be accessed for complete administration of this grant, including, but not limited to, project development and oversight, contracting, and sub-recipient monitoring.

When completed, the Three Mile Creek Greenway Trail (TMCg) will connect families to several local parks and to the city’s overall system of trails. Running adjacent to Three Mile Creek, this particular trail follows almost 12 miles of waterway, from Langan Park in west Mobile to the Mobile River in east Mobile. The Map for Mobile process identified mobility and connectivity as key elements in the plan, along with recreation opportunities for citizens.

This project leverages several funding sources including capital infrastructure dollars, CDBG funds, and additional city capital funds to undertake planning and engineering and design together.

### Summary:

- The greenway initiative will provide a 12 mile continuous path for Mobile citizens.
- Connect neighborhoods across the city of Mobile.
- Brings together several funding sources to achieve the goal.



faungg's photos

## Projects to Provide & Enhance Recreation & Public Access

### **ADCNR, State Parks - Fort Morgan Parkway Trail Extension (84)**

Cost: \$4,433,600.00

Funding Source: RESTOREB3 (2018) (Proposed)

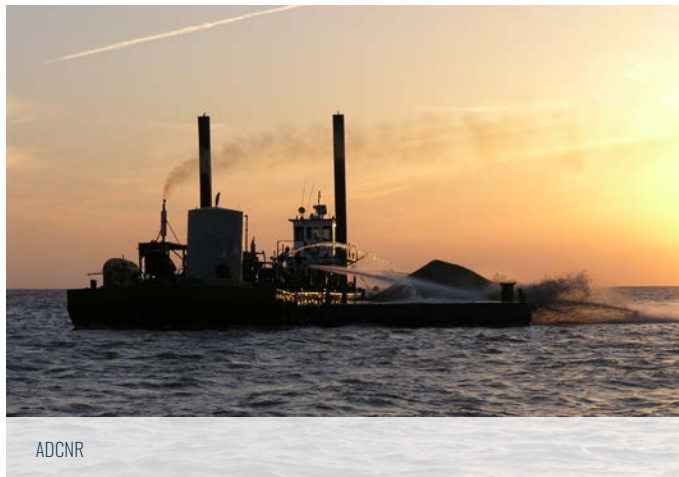
This project proposes to extend and ultimately complete the Fort Morgan Parkway Trail from Fort Morgan Historical Park to Gulf State Park and includes the construction of a midzone to provide parking, restroom facilities, and interpretive signage. When complete, the Fort Morgan Parkway Trail will provide approximately 30 miles of recreation trail from Fort Morgan to Orange Beach and will connect with numerous trail spurs and loops along the way.

### **ADCNR, State Parks - Meaher Park Improvements (85)**

Cost: \$3,450,000.00

Funding Source: RESTOREB3 (2018) (Proposed)

This project will add 156 full service campsites, as well as parking, bath house, a fishing pier, and utility infrastructure to Meaher Park in Spanish Fort. In addition, 10 RV park model cabins will be installed along with appropriate skirting, decking, steps and/or ramps. This project will greatly increase and enhance outdoor recreation opportunities along a major east-west corridor used heavily by citizens and visitors.



### **Bayfront Park Restoration and Improvements (engineering and design only) (86)**

Cost: \$1,000,000.00

Funding Source: NRDA RPI (2017)

This project would provide for engineering and design (E&D) work to evaluate the construction of a living shoreline and/or sandy beach along the Mobile Bay shoreline within the park. The E&D funding would also allow for the development of a plan

for additional signage and interpretive materials to promote environmental education at Bayfront Park.



Stephanie Pluscht

### **Bon Secour National Wildlife Refuge Trail Enhancement (87)**

Cost: \$545,110.00

Funding Source: NRDA Phase IV Early Restoration (2015)

This project will repair and enhance the existing Jeff Friend Trail located on the Bon Secour National Wildlife Refuge (NWR). The aged boardwalk and gravel trail will be repaired and improved to enhance access by persons with disabilities and the quality of visitor experience. Construction of an observation platform along the trail and the widening of two handicapped parking spaces to better accommodate visitors are also planned. The project is not expected to significantly increase visitation, but to provide a safe and enhanced experience for visitors to the refuge.

### **City of Mobile - Mobile Greenway Initiative (88)**

Cost: \$9,991,000.00

Funding Source: RESTORE B1 (2018) (Proposed)

This project would provide for engineering and design (E&D) work to evaluate the construction of a living shoreline and/or sandy beach along the Mobile Bay shoreline within the park. The E&D funding would also allow for the development of a plan for additional signage and interpretive materials to promote environmental education at Bayfront Park.

The Three Mile Creek Greenway Trail, once constructed, will provide a continuous, 12-mile path for runners, walkers, and cyclists immediately adjacent to Three Mile Creek in the City of Mobile. This phased project will re-connect neighborhoods with designated access along the trail and includes artwork which interprets the historical significance of Three Mile



Creek while providing the opportunity to combine recreation, commuting, and culture.

#### **Dauphin Island Eco-Tourism and Environmental Education Area (89)**

Cost: \$4,000,000.00

Funding Source: NRDA RPI (2018)

This project would acquire and develop amenities on approximately 100 acres on Dauphin Island, a barrier island at the mouth of Mobile Bay in south Mobile County, Alabama. The property includes coastal salt marsh, privately owned water bottom, and upland. The overall goal of the project is to improve access to and enjoyment of both the marsh and water, including the wetland habitats adjacent to Aloe Bay. The property would be owned and maintained by the Town of Dauphin Island.

#### **Fort Morgan Pier Rehabilitation (90)**

Cost: \$3,075,000.00

Funding Source: NRDA RPI (2017)

This project funds the restoration of the fishing pier located at the Fort Morgan State Historic Site that collapsed and closed in 2014. The proposed project would rehabilitate the pier on its existing foundations, increasing publicly available opportunities for pier-based fishing in Baldwin County.



#### **Gulf State Park Enhancements (91)**

Cost: \$29,221,713.00

Funding Source: NRDA Phase III Early Restoration (2014)

This project includes the construction of a hotel and conference center on the beach, along with a coastal ecosystems interpretive center, environmental research and education facility, trail construction, and dune restoration.

#### **Gulf State Park Lodge and Associated Public Access Amenities (92)**

Cost: \$56,300,000.00

Funding Source: NRDA RPI (2017)

This project would provide funding to use toward partial construction of the Gulf State Park Lodge in Baldwin County, Alabama, which was destroyed in 2004 by Hurricane Ivan and to develop a host of public access amenities such as public beach access, public restrooms, a bike share program, and other public goods. Overall, the project is designed to be an integral part of the restoration and public utilization of Gulf State Park, furthering the restoration efforts conducted as part of the Gulf State Park Engagement Project during Phase III of Early Restoration.

#### **Laguna Cove Little Lagoon Natural Resource Protection (93)**

Cost: \$4,400,000.00

Funding Source: NRDA RPI (2017)

The proposed project involves acquiring two underdeveloped tracts of land (53 acres total) and developing it for recreational use (boardwalk, kayak launch, parking, and restrooms). Public environmental awareness and stewardship would also be promoted through educational signage.

#### **Mid-Island Parks and Public Beach Improvements (Parcels B and C) (94)**

Cost: \$1,900,000.00

Funding Source: NRDA RPI

Project involves the acquisition of 2 acres of land and constructing access improvements on the property (such as public parking and restroom facilities). This project aims to enhance access to the Alabama shoreline, including gulf-facing beaches.

#### **Mobile County - Mobile County Blueway Trail Development (95)**

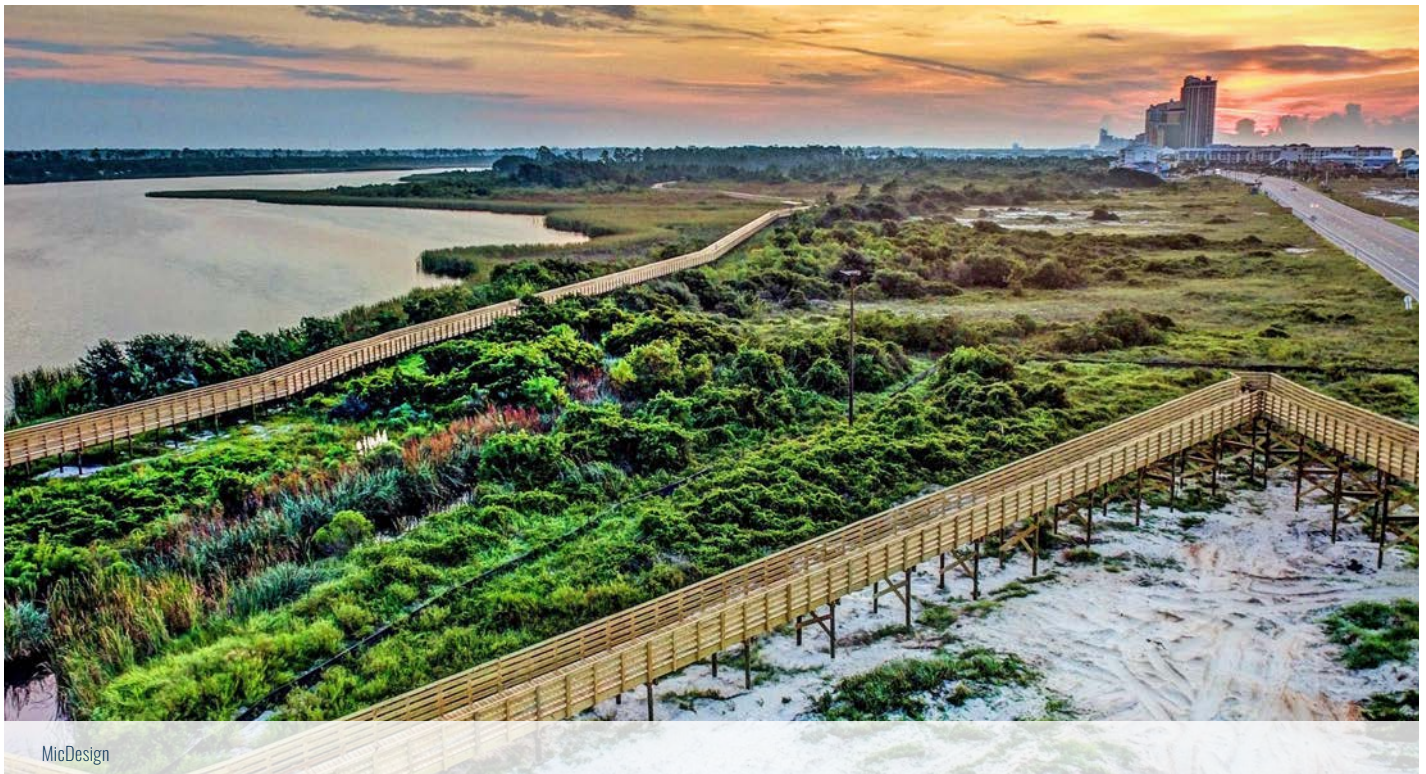
Cost: \$8,240,000.00

Funding Source: RESTORE B1 (2018) (Proposed)

Mobile County proposes to develop and implement a comprehensive Mobile County Blueway Trail Project that integrates conservation and protection of coastal resources into



increased public access for the entire county. Phase I of this project includes a planning process to inform the development of a Blueway Master Plan which will include a facility/infrastructure construction element. Phase II includes implementation of the trail construction and promotional media campaign.





# RESTORE WATER QUALITY

Improving water quality is an important issue in coastal Alabama. Water quality improvements can come from both direct implementation of restoration projects targeted at water quality improvement or indirectly from restoration actions targeted to improving living coastal marine resources, restoring and conserving habitat and other activities that enhance the conditions of our coastal environment. The conservation of habitats and the subsequent return of those habitats to their natural functions have indirect benefits to water quantity and water quality delivery to downstream ecosystems. For example, the implementation of oyster specific habitat projects can result in an increased filtering capacity in coastal waters, thus improving water quality. Water quality can also be directly targeted with restoration projects that are specifically tailored to address stormwater and wastewater infrastructure failures.

Alabama has invested in a number of conservation and habitat restoration projects that have indirect benefits to water quality. Additionally, ADCNR intends to invest significant restoration funding into specific water quality improvement projects, which are described in more detail below.

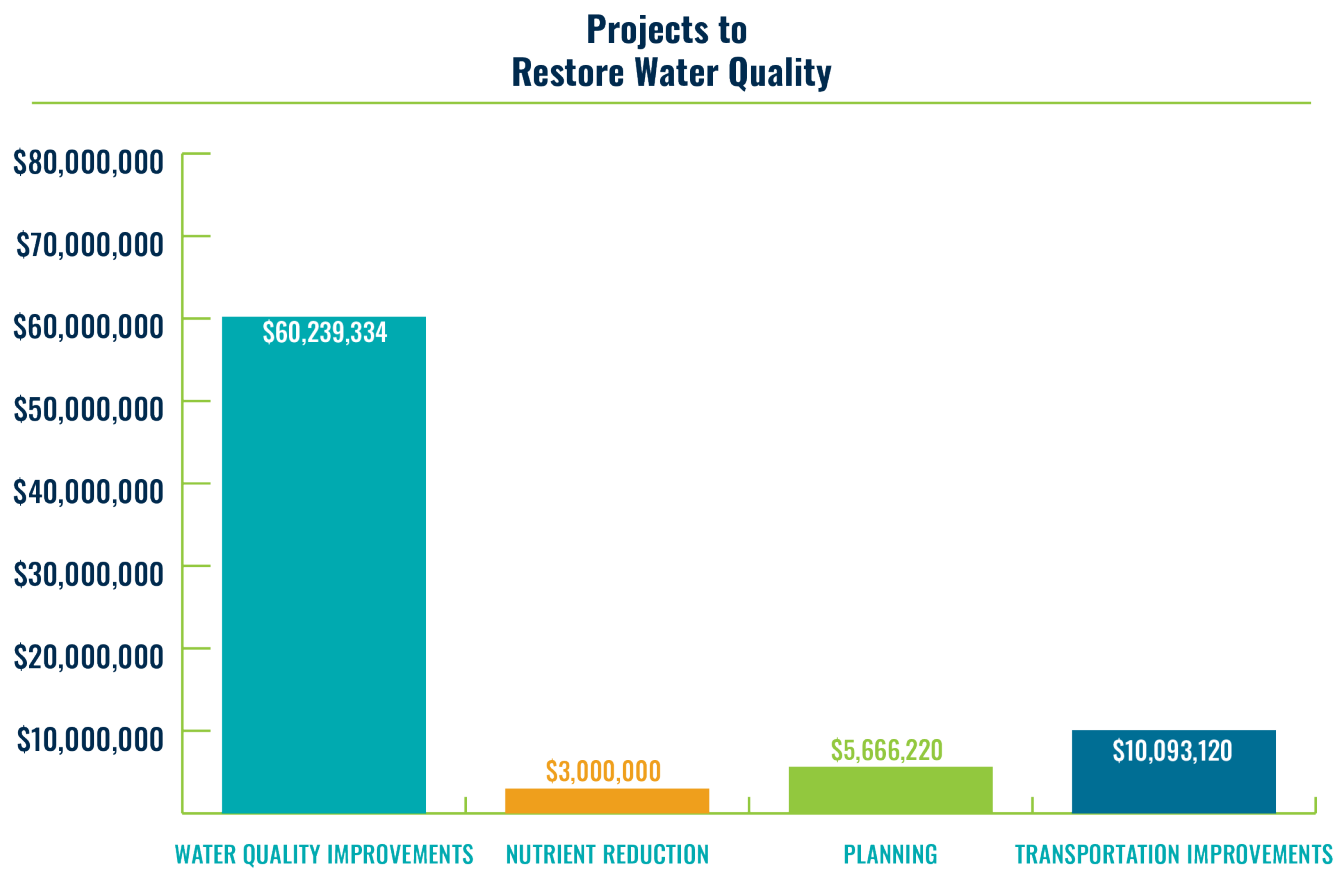
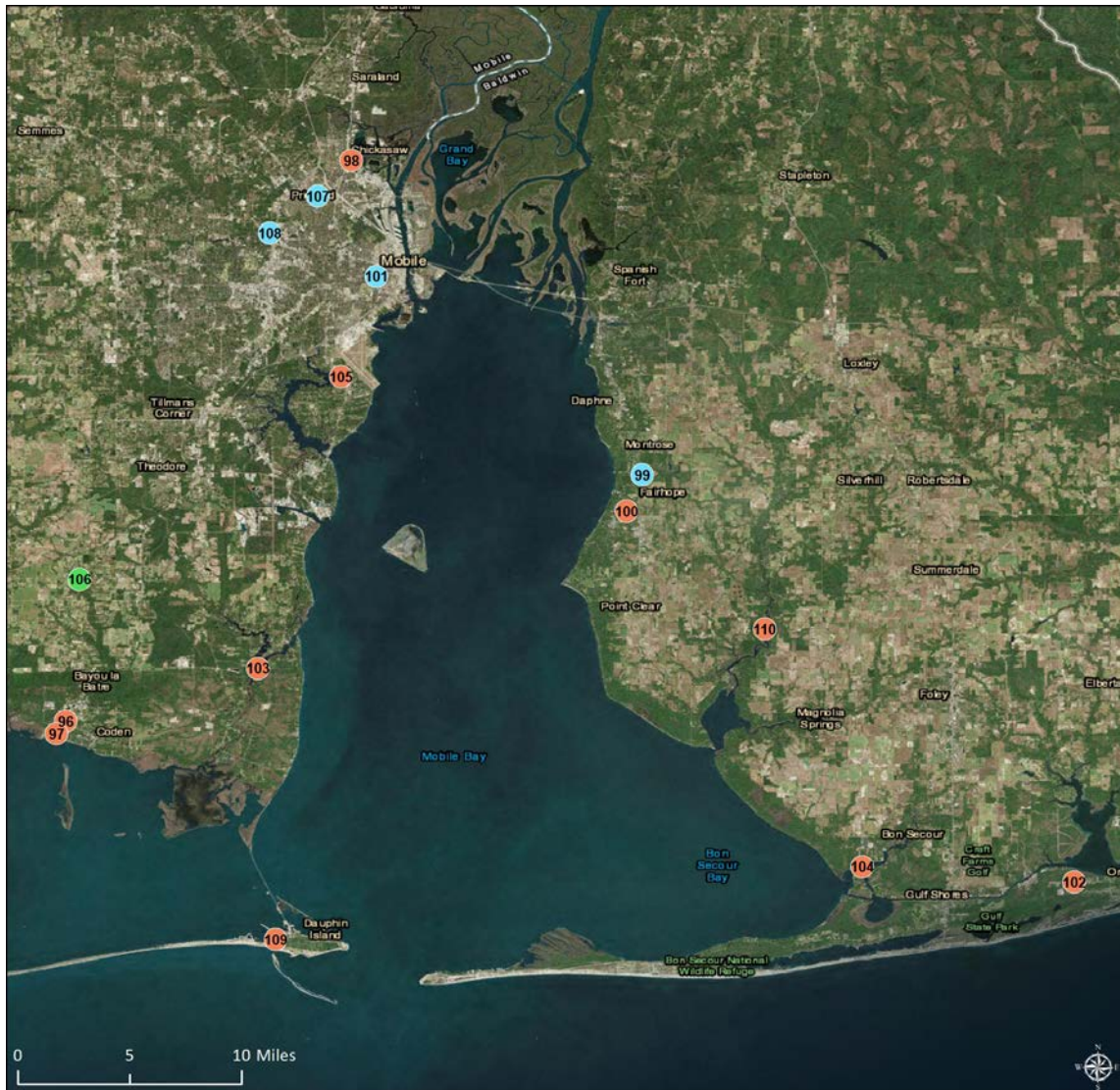


Figure 9. Funding Approved to Restore Water Quality, 2011-2018

## Project Locations: Restore Water Quality



### PROJECT NAME

- |  |  |
|--|--|
| 96) City of Bayou La Batre - Collection System /Lift Station Upgrades (3)                  | 103) Fowl River Nutrient Reduction (R)   |
| 97) City of Bayou La Batre - Extension of Effluent Force Main from Bayou La Batre WWTF (3) | 104) Longevity, Stability, & Water Quality Improvements, Bon Secour DMDA (3)   |
| 98) City of Chickasaw Sewer Rehabilitation Project (3)                                     | 105) MAWSS - Perch Creek Area Sanitary Sewer Trunk Line CIPP (3)   |
| 99) City of Fairhope - Eastern Shore Sanitary Sewer Overflows (SSOs) Prevention Plan (3)   | 106) Mobile County - Dirt Road Paving (Sediment Reduction) Program (3)   |
| 100) City of Fairhope - Fairhope Sewer Upgrade Phase I (3)                                 | 107) Mobile County - Implementing Storm Water Management Improvements for Toulmin Springs Branch and Gum Tree Branch (3) |
| 101) City of Mobile - Mobile Area Storm Water Mapping & Resiliency Planning(3)             | 108) Toulmin Spring Branch (E&D) (R)   |
| 102) City of Orange Beach - Orange Beach North Sewer Force Main Upgrade (3)                | 109) Town of Dauphin Island - Aloe Bay/MS Sound Water Quality Enhancement Project (3)                                    |
|  | 110) Weeks Bay Nutrient Reduction (R)  |

### Project Type

- Planning
- Transportation Improvements
- Water Quality Improvements

### Funding Source Code:

- RESTORE Bucket 1 (1)
- RESTORE Bucket 2 (2)
- RESTORE Bucket 3 (3)
- NFWF (F)
- NRDA (R)



## Spotlight on: Bayou La Batre Water Quality Improvements

Restoration of water quality has been identified as a major restoration goal by the Gulf Coast Ecosystem Restoration Council and in several focused stakeholder engagement forums within the State of Alabama.

There are two water quality improvement projects proposed for funding by the Alabama Gulf Coast Recovery Council via the RESTORE State Expenditure Plan:

- *City of Bayou La Batre – Extension of Effluent Force Main for Bayou La Batre WWTF– 2018 - \$15,600,000*
- *City of Bayou La Batre – Collection System / Lift Station Upgrades – 2018 - \$12,805,000*

### *Extension of Effluent Force Main for Bayou La Batre*

This phased project would design, permit, construct, and extension of the Bayou La Batre Wastewater Treatment Facility's (WWTF) outfall line to promote better mixing and to reduce shellfish closures when flow rates are exceeded. Implementation of this project to prevent shellfish closures will benefit the overall economy of south Mobile County.

### *Collection System/Lift Station Upgrades*

This phased project would replace 15 miles of outdated and leaking sewer pipe with new, reliable materials to prevent sewer leaks and upgrade 16 major pump stations in the Bayou La Batre area. Implementation of this project will result in fewer overflows and an overall reduction of contaminants into local soils and water.

Collectively, both projects would significantly improve water quality entering waters surrounding Bayou La Batre, which is important for the oyster industry, the oyster off-bottom aquaculture industry, as well as other seafood industries.

### **Summary:**

- Multiple projects are being proposed by the Alabama Gulf Coast Recovery Council to enhance water quality in the Bayou La Batre area.
- Both projects will have multiple indirect benefits to seafood and off-bottom oyster aquaculture industry.

## Spotlight on: Satsuma Sewer Improvements

One of the key restoration techniques for improving water quality is the conversion and connectivity of existing septic systems to main sewer systems. The City of Satsuma is a coastal community located at the southern extent of the Mobile-Tensaw Delta in Mobile County. The city distributes potable water and collects centralized sanitary sewer to most businesses and residences within the city limits, except for the area west of Interstate 65, in the northwestern quadrant of the city.

The Alabama Gulf Coast Recovery Council proposes to fund a water quality improvement project under the RESTORE Multi-Year Implementation Plan:

- *Northwest Satsuma Water and Sewer Project – 2018 - \$1,813,521*

There are approximately 100 homes in the Satsuma area that depend on individual wells and on-site septic tanks for potable water and sanitary sewer. Private wells in this area have reported high concentrations of iron and on-site septic tanks have to be pumped frequently due the low-lying conditions and poor soils. In addition, this area lacks fire hydrants for fire protection, forcing the City of Satsuma Fire Department to truck water for fires to this area, resulting in higher residential insurance rates. The septic tanks in

this area frequently malfunction during rain events, resulting in exposed raw sewage in yards and homes. Further, because the city is surrounded by other incorporated communities, this area is critical to future growth and expansion.

The City of Satsuma is not a member of the Alabama Recovery Council; however, this project is still being proposed to receive restoration funding from the Council, highlighting the Council's desires to see improvements across the coast to further improve water quality in its downstream receiving waters, bays, and coastal waters.

**Summary:**

- Connect 100 homes to main sewer infrastructure.
- Significantly reduce septic system failure with new infrastructure.

## Spotlight on: Eastern Shore Sewer Plan

Restoration of water quality requires significant planning to understand where the best return on investment lies in order to benefit downstream environmental health while accommodating an expanding infrastructure base of growing cities.

The City of Fairhope is proposing an Eastern Shore Sanitary Sewer Overflows prevention plan that will help guide future investments in stormwater, sewer, and wastewater infrastructure upgrades. This project is proposed for funding on the Alabama Gulf Recovery Councils' State Expenditure Plan:

- *City of Fairhope – Eastern Shore Sanitary Sewer Overflows (SSO) Prevention Plan – 2018 - \$1,000,000*

The purpose of this project is to minimize, or eliminate altogether, sanitary sewer overflows on the Eastern Shore resulting from insufficient capacity and inflow and infiltration from excess stormwater. In addition, the project aims to improve the overall water quality of Mobile Bay by protecting runoff to the bay from sanitary sewer and sediment from stormwater erosion. The objective of the project is to map and model projected growth patterns along the Eastern Shore, identify areas of wastewater and stormwater needs to address this anticipated growth, and develop short-term strategies for dealing with current capacity issues related to growth and long-term plans for capacity improvements.

**Summary:**

- Significant planning effort to understand ROI on wastewater upgrades.
- Project will identify strategies for dealing with current and future wastewater capacity issues on the Eastern Shore.



## Projects to Restore Water Quality

### **City of Bayou La Batre - Collection System/Lift Station Upgrades (96)**

Cost: \$12,805,000.00

Funding Source: RESTOREB3 (2018) (Proposed)

This phased project will replace 15 miles of outdated and leaking sewer pipe with new, reliable materials to prevent sewer leaks and upgrade 16 major pump stations in the Bayou La Batre area. Implementation of this project will result in fewer overflows and an overall reduction of contaminants into local soils and water.

### **City of Bayou La Batre - Extension of Effluent Force Main from Bayou La Batre WWTF (97)**

Cost: \$15,600,000.00

Funding Source: RESTOREB3 (2018) (Proposed)

This phased project will design, permit, and construct and extension of the Bayou La Batre Wastewater Treatment Facility's (WWTF) outfall line to promote better mixing and to reduce shellfish closures when flow rates are exceeded. Implementation of this project to prevent shellfish closures will benefit the overall economy of south Mobile County.



### **City of Chickasaw Sewer Rehabilitation Project (98)**

Cost: \$1,250,000.00

Funding Source: RESTOREB3 (2018) (Proposed)

This project proposes to rehabilitate aged and deteriorated gravity sewers to reduce inflow and infiltration resulting from wet weather events. Implementation of the phased project will include closed-circuit television (CCTV) inspection of the gravity sewers, evaluation of the physical condition of the

pipe, and identification of the most cost-effective rehabilitation method. The implementation of this project will protect the water quality of Chickasaw Creek, Mobile River, and Mobile Bay Estuary system.

### **City of Fairhope - Eastern Shore Sanitary Sewer Overflows (SSOs) Prevention Plan (99)**

Cost: \$1,000,000.00

Funding Source: RESTOREB3 (2018) (Proposed)

The purpose of this project is to minimize, or eliminate altogether, sanitary sewer overflows on the Eastern Shore resulting from insufficient capacity and inflow and infiltration from excess stormwater. In addition, the project aims to improve the overall water quality of Mobile Bay by protecting runoff to the bay from sanitary sewer and sediment from stormwater erosion. The objective of the project is to map and model projected growth patterns along the Eastern Shore; identify areas of wastewater and stormwater needs to address this anticipated growth; and develop short-term strategies for dealing with current capacity issues related to growth and long-term plans for capacity improvements.

### **City of Fairhope - Fairhope Sewer Upgrade Phase I (100)**

Cost: \$10,000,000.00

Funding Source: RESTOREB3 (2018) (Proposed)

The project proposed in Phase I will address the most urgent needs within the sewer system by instituting major rehabilitation measures for the complete replacement of 4 main pump stations and rehabilitation of the major gravity outfall lines utilizing cost-effective and environmentally sensitive engineering solutions. The implementation of this project will protect the water quality of Mobile Bay by reducing the frequency of Sanitary Sewer Overflows (SSO's) that occur within the City of Fairhope's public sewer system.

### **City of Mobile - Mobile Area Storm Water Mapping & Resiliency Planning (101)**

Cost: \$3,000,000.00

Funding Source: RESTORE B3 (2018) (Proposed)

The Project's purpose is to develop the information and tools necessary to successfully plan and cost-effectively manage communities and economies in the Mobile region that are resilient in the face of flooding, extreme weather events, climate hazards, and changing ocean conditions. This project will complete a GPS digital inventory/database and map of storm water infrastructure that flow through the City of Mobile into

Mobile Bay; identify properties within the City of Mobile that are subject to repetitive flood loss; and develop a strategy to address and effectively remedy prospective losses.

**City of Orange Beach - Orange Beach North Sewer Force Main Upgrade (VMap ID#89) (102)**

Cost: \$5,195,000.00

Funding Source: RESTOREB3 (2018) (Proposed)

This project consists of the replacement of approximately 8 miles of sewer force main from a point on Highway 180 in Orange Beach to an existing lift station on County Road 12. The areas benefited by this upgrade will include areas north and east of Wolf Bay to Josephine as well as areas directly served by the force main. Implementation of this project will improve water quality in Wolf Bay by preventing failures in the exiting main and decreasing the use of on-site septic systems.

**Fowl River Nutrient Reduction (103)**

Cost: \$1,000,000.00

Funding Source: NRDA RPII (2018) (Proposed)

This project seeks to improve water quality in the Fowl River watershed through improved land management practices that reduce nutrient and sediment runoff.

**Longevity, Stability, & Water Quality Improvements, Bon Secour DMDA Dredge Material Disposal Area (104)**

Cost: \$340,744.00

Funding Source: RESTOREB3 (2018) (Proposed)

This submittal seeks funding to replace an aging and structurally failing weir structure at the Bon Secour Dredge Material Disposal Area (DMDA) used by the US Corps of Engineers to dispose of dredged material from the Bon Secour River. The DMDA outlet structure will be designed and constructed in accordance with engineering best practices acceptable for similar structures and in common use by the Corps of Engineers.

**MAWSS - Perch Creek Area Sanitary Sewer Trunk Line CIPP (105)**

Cost: \$3,548,590.00

Funding Source: RESTOREB3 (2018) (Proposed)

This project will address sanitary sewer inflow and infiltration in the City of Mobile's Perch Creek area through innovative trenchless technology called Cured-In-Place Pipe (CIPP). CIPP is an efficient way to extend the useful life of existing infrastructure while decreasing treatment costs due to the elimination of inflow and infiltration with minimal damage to

the environment. Implementation of this project will lead to a reduction of sanitary sewer overflows improving overall water quality in the Perch Creek area.

**Mobile County - Dirt Road Paving (Sediment Reduction) Program (106)**

Cost: \$10,093,120.00

Funding Source: RESTOREB3 (2018) (Proposed)

This phased project intends to develop and implement a dirt road paving program to reduce the number of unpaved roads in environmentally sensitive areas of Mobile County which will reduce sedimentation and result in improved water quality. Implementation, scheduled to occur over an 8-year period, involves engineering/design, permitting, right-of-way acquisition, and construction.

**Mobile County - Implementing Storm Water Management Improvements for Toulmin Springs Branch and Gum Tree Branch (107)**

Cost: \$1,187,130.00

Funding Source: RESTOREB3 (2018) (Proposed)

The Mobile County Commission proposes to undertake an engineering & design planning effort to define the scope of work and to develop construction documents for restoration and improvement of drainage and streams in Toulmin Springs Branch and Gum Tree Branch. This planning project will identify specific projects/activities to address stressors affecting water quality, localized flooding, and stream/riparian habitats degradation in the Toulmin Springs Branch and Gum Tree Branch sub-watersheds, contributing to healthier and sustainable ecosystem service delivery.

**Toulmin Spring Branch E&D (E&D) (108)**

Cost: \$479,090.00

Funding Source: NRDA RPII (2018)

The project would include a watershed assessment and a conceptual plan for the entire length of Toulmin Spring Branch that details opportunities for erosion and sedimentation reduction, nutrient and pathogen reduction, and flooding and stormwater management.



### **Town of Dauphin Island - Aloe Bay/Mississippi Sound Water Quality Enhancement Project (109)**

Cost: \$11,500,000.00

Funding Source: RESTOREB3 (2018) (Proposed)

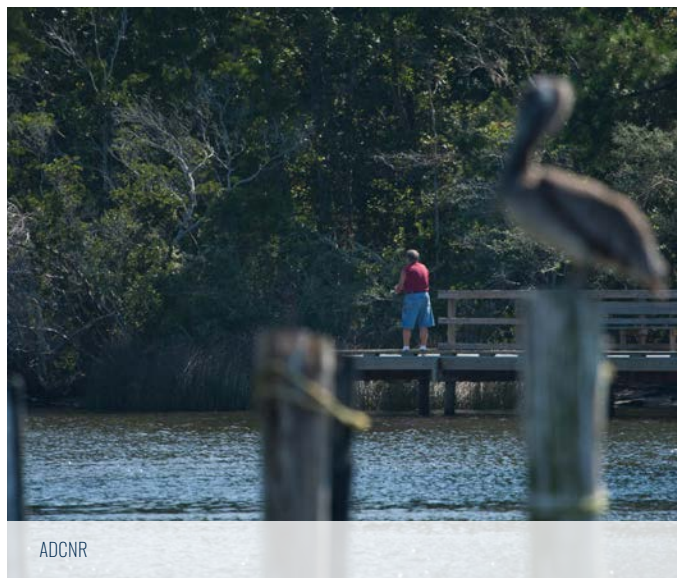
This project proposes the construction of a new water reclamation facility (WRF) to replace the existing facility currently providing sewer treatment to Dauphin Island residents and visitors. Implementation of this project will significantly enhance water quality discharge into Aloe Bay.

### **Weeks Bay Nutrient Reduction (110)**

Cost: \$2,000,000.00

Funding Source: NRDA RPII (2018)

This project seeks to improve water quality in the Weeks Bay watershed through improved land management practices that reduce nutrient and sediment runoff.



## PROVIDE PLANNING SUPPORT

In order to effectively implement restoration activities across coastal Alabama, the state has invested in planning efforts for the Alabama Recovery Council for RESTORE Bucket 1 and Bucket 3 implementation. Additionally, the state, in partnership with the Mobile Bay National Estuary Program, has invested in comprehensive watershed planning utilizing NFWF GEBF and RESTORE Bucket 2 funding in order to understand threats and stressors in several priority watersheds as well as to strategize prioritization of restoration actions for subsequent funding and implementation.

### Projects to Provide Planning Support

#### **ADCNR - Planning Grant to Amend Multiyear Implementation Plan**

Cost: \$300,000.00

Funding Source: RESTORE B1 (2018)

This purpose of this planning grant is to develop an amended Multiyear Implementation Plan that prioritizes eligible activities for Direct Component funds and to obtain broad-based participation from individuals, businesses, and organizations in the Gulf Coast Region of Alabama.

#### **ADCNR - Planning Grant to Amend State Expenditure Plan**

Cost: \$300,000.00

Funding Source: RESTOREB3 (2018)

This purpose of this planning grant is to develop an amended State Expenditure Plan that prioritizes eligible activities for Spill Impact Component funds and to obtain broad-based participation from individuals, businesses, and organizations in the Gulf Coast Region of Alabama.

#### **Coastal Alabama Partnership - Development for a Regional Strategic Plan for the Coastal Alabama Region**

Cost: \$562,500.00

Funding Source: RESTOREB3 (2018)

This project proposes to develop a regional brand and marketing effort focused on ecotourism; identity and develop an online resource directory; and advertise and publicize the brand developed with online marketing and paid advertising. Phase I and II of this effort have been funded by other sources. This project funds Phase II of this planning effort.





## PROJECT STATUS

Project Name	Funding Source	Restoration Plan/Phase	Project Status as of 10/01/2018
Replenish and Protect Living Coastal and Marine Resources			
Alabama Estuarine Bottlenose Dolphin Protection: Enhancement and Education	NRDA	RPII	Approved for Funding
Assessment of Alabama Estuarine Bottlenose Dolphin Populations and Health	NRDA	RPII	Approved for Funding
Coastal Alabama Sea Turtle (CAST) Habitat Usage and Population Dynamics	NRDA	RPII	Approved for Funding
Coastal Alabama Sea Turtle (CAST) Protection: Enhancement and Education	NRDA	RPII	Approved for Funding
Coastal Alabama Sea Turtle (CAST) Triage	NRDA	RPII	Approved for Funding
Coastal Alabama Sea Turtle (CAST) Conservation Program	NRDA	RPII	Approved for Funding
Colonial Nesting Wading Bird Tracking and Habitat Use Assessment—Two Species	NRDA	RPII	Approved for Funding
Enhancing Capacity for the Alabama Marine Mammal Stranding Network	NRDA	RPII	Approved for Funding
Oyster Cultch Relief and Reef Configuration	NRDA	RPII	Approved for Funding
Oyster Grow-Out and Restoration Reef Placement	NRDA	RPII	Approved for Funding
Oyster Hatchery at Claude Peteet Mariculture Center—High Spat Production with Study	NRDA	RPII	Approved for Funding
Restoring the Night Sky—Assessment, Training, and Outreach (E&D)	NRDA	RPII	Approved for Funding
Side-scan Mapping of Mobile Bay Relic Oyster Reefs (E&D)	NRDA	RPII	Approved for Funding
Southwestern Coffee Island Habitat Restoration Project—Phase I	NRDA	RPII	Approved for Funding
Multifaceted Fisheries and Ecosystem Monitoring in Alabama's Marine Waters and the Gulf of Mexico – Phase II	NFWF	NFWF 2015	Complete
Multifaceted Fisheries and Ecosystem Monitoring in Alabama's Marine Waters and the Gulf of Mexico – Phase III	NFWF	NFWF 2016	Complete
Comprehensive Program for Enhanced Management of Avian Breeding Habitat Injured by Response in the Florida Panhandle, Alabama, and Mississippi	NRDA	Phase II ER	Complete
Alabama Coastal Bird Stewardship Program	NFWF	NFWF 2016	In Progress
Alabama Marine Mammal Conservation and Recovery Program	NFWF	NFWF 2014	In Progress
Restoration and Enhancement of Oyster Reefs in Alabama	NFWF	NFWF 2013	In Progress
Improving Habitat Injured by Spill Response: Restoring the Night Sky	NRDA	Phase II ER	In Progress

Project Name	Funding Source	Restoration Plan/Phase	Project Status as of 10/01/2018
Alabama Oyster Cultch Restoration	NRDA	Phase III ER	Operations, Maintenance and Monitoring
Osprey Restoration in Coastal Alabama	NRDA	Phase IV ER	Operations, Maintenance and Monitoring
Expansion of the Orange Beach Wildlife Rehabilitation and Education Center/Gulf Coast Wildlife Recovery and Interpretative Center: Feasibility, Planning & Preliminary Design	RESTOREB3	SEP2018	Proposed for funding
Enhanced Fisheries Monitoring in Alabama's Marine Waters	NFWF	NFWF 2014	In Progress

Support and Enhance Community Resilience			
City of Bayou LaBatre - Redevelop City Docks	RESTORE B1	MIP2018	Proposed for funding
City of Fairhope - Working Waterfront and Greenspace Restoration Project	RESTORE B1	MIP2018	Proposed for funding
ADCNR - Alabama Gulf Seafood Marketing Program	RESTOREB3	SEP2018	Proposed for funding
ADEM - Replacement of Sustandard Facilities at the ADEM Coastal Office & Mobile Field Office	RESTOREB3	SEP2018	Proposed for funding
Auburn University - Gulf Coast Engineering Research Station	RESTOREB3	SEP2018	Proposed for funding
City of Fairhope - Fairhope Area Community-Based Comprehensive Land Use Plan	RESTOREB3	SEP2018	Proposed for funding
City of Mobile - One Mobile: Reconnecting People, Work and Play through Complete Streets	RESTOREB3	SEP2018	Proposed for funding
City of Orange Beach - Alabama Point Seawall Repair	RESTOREB3	SEP2018	Proposed for funding
Geological Survey of Alabama - Characterization and Delineation of Significant Sand Resource Areas Essential for Beach Restoration, Offshore Alabama	RESTOREB3	SEP2018	Proposed for funding

Provide and Enhance Economic Development and Infrastructure			
Alabama State Port Authority - Automotive Logistics /RO-RO Terminal	RESTORE B1	MIP2018	Proposed for funding
Baldwin Beach Express I-10 to I-65 Extension Right-of-Way Acquisition	RESTORE B1	MIP2018	Proposed for funding
Baldwin County ALDOT Capacity Improvements	RESTORE B1	MIP2018	Proposed for funding



Project Name	Funding Source	Restoration Plan/Phase	Project Status as of 10/01/2018
City of Bayou La Batre - Water Distribution System Upgrades	RESTORE B1	MIP2018	Proposed for funding
City of Gulf Shores - Ambassadors of the Environment	RESTORE B1	MIP2018	Proposed for funding
City of Mobile - Innovating St. Louis Street: Mobile's Technology Corridor	RESTORE B1	MIP2018	Proposed for funding
City of Satsuma - Northwest Satsuma Water and Sewer Project	RESTORE B1	MIP2018	Proposed for funding
Historic Africatown Welcome Center	RESTORE B1	MIP2018	Proposed for Funding
Town of Dauphin Island - Aloe Bay Harbour Town, Phase I, II, III	RESTORE B1	MIP2018	Proposed for Funding
Town of Mount Vernon - Mount Vernon Water Treatment Plant	RESTORE B1	MIP2018	Proposed for Funding
City of Orange Beach - Canal Road Improvements East of State Road 161	RESTOREB3	SEP2018	Proposed for Funding

Restore, Conserve and Enhance Habitat			
Little Lagoon Living Shoreline	NRDA	RPII	Approved for Funding
Lower Perdido Islands Restoration Phase I (E&D)	NRDA	RPII	Approved for Funding
Magnolia River Land Acquisition (Holmes Tract)	NRDA	RPII	Approved for Funding
Weeks Bay Land Acquisition East Gateway Tract	NRDA	RPII	Approved for Funding
Weeks Bay Land Acquisition Harrod Tract	NRDA	RPII	Approved for Funding
Alabama Living Shorelines Program	RESTOREB2	FPL 1	Approved for Funding
Alabama Submerged Aquatic Vegetation Restoration and Monitoring Program	RESTOREB2	FPL 1	Approved for Funding
Coastal Alabama Comprehensive Watershed Restoration Planning Project	RESTOREB2	FPL1	Approved for Funding
Comprehensive Living Shoreline Monitoring	RESTOREB2	FPL1	Approved for Funding
Enhancing Opportunities for Beneficial Use of Dredge Sediments	RESTOREB2	FPL1	Approved for Funding
Marsh Restoration in Fish River, Weeks Bay, Oyster Bay and Meadows Tract	RESTOREB2	FPL1	Approved for Funding
Mobile Bay National Estuary Program-12 Mile Creek	RESTOREB2	FPL1	Approved for Funding

Project Name	Funding Source	Restoration Plan/Phase	Project Status as of 10/01/2018
Upper Mobile Bay Beneficial Use Wetland Creation Site	RESTOREB2	FPL1	Approved for Funding
Bon Secour National Wildlife Refuge Acquisition	NFWF	NFWF 2017	Complete
Mobile County Conservation Acquisition and Salt Aire Shoreline Restoration	NFWF	NFWF 2015	Complete
Alabama Artificial Reef and Habitat Enhancement	NFWF	NFWF 2015	In Progress
Alabama Barrier Island Restoration Assessment	NFWF	NFWF 2014	In Progress
Bon Secour - Oyster Bay Wetland Acquisition Project	NFWF	NFWF 2016	In Progress
Coastal Habitat Restoration Planning Initiative	NFWF	NFWF 2014	In Progress
Dauphin Island Bird Habitat Acquisition and Enhancement Program	NFWF	NFWF 2017	In Progress
Dauphin Island Conservation Acquisition	NFWF	NFWF 2016	In Progress
D'Olive Watershed Restoration	NFWF	NFWF 2013	In Progress
Fowl River Watershed Restoration	NFWF	NFWF 2013	In Progress
Fowl River Watershed Restoration: Coastal Spits and Wetlands Project – Phase I	NFWF	NFWF 2016	In Progress
Grand Bay Acquisition	NFWF	NFWF 2015	In Progress
Gulf Highlands Conservation Acquisition	NFWF	NFWF 2016	In Progress
Lightning Point Acquisition and Restoration Project – Phase I	NFWF	NFWF 2016	In Progress
Little Dauphin Island Restoration Assessment	NFWF	NFWF 2017	In Progress
Mobile Bay Shore Habitat Conservation Acquisition Initiative - Phase II	NFWF	NFWF 2017	In Progress
Mobile Bay Shore Habitat Conservation and Acquisition Initiative – Phase I	NFWF	NFWF 2015	In Progress
Mobile County Conservation Acquisition and Salt Aire Shoreline Restoration	NFWF	NFWF 2017	In Progress
Point aux Pins Living Shoreline Project	NRDA	Phase IV ER	In Progress
Alabama Dune Restoration Cooperative Project	NRDA	Phase I ER	Operations, Maintenance and Monitoring
Marsh Island (Portersville Bay) Marsh Creation	NRDA	Phase I ER	Operations, Maintenance and Monitoring



Project Name	Funding Source	Restoration Plan/Phase	Project Status as of 10/01/2018
Swift Tract Living Shoreline Project	NRDA	Phase III ER	Operations, Maintenance and Monitoring
City of Gulf Shores - Little Lagoon Restoration Project	RESTOREB3	SEP2018	Proposed for Funding
City of Mobile - Three Mile Creek Watershed Restoration	RESTOREB3	SEP2018	Proposed for Funding
Lillian Park Beach Habitat and Shoreline Protection	RESTOREB3	SEP2018	Proposed for Funding

#### Provide and Enhance Recreation and Public Access

Bayfront Park Restoration and Improvements (engineering and design only)	NRDA	NRDA RPI	In Progress
Dauphin Island Eco-Tourism and Environmental Education Area	NRDA	NRDA RPI	In Progress
Fort Morgan Pier Rehabilitation	NRDA	NRDA RPI	In Progress
Gulf State Park Enhancements	NRDA	Phase III ER	In Progress
Gulf State Park Lodge and Associated Public Access Amenities	NRDA	NRDA RPI	In Progress
Laguna Cove Little Lagoon Natural Resource Protection	NRDA	NRDA RPI	In Progress
Mid-Island Parks and Public Beach Improvements (Parcels B and C)	NRDA	NRDA RPI	In Progress
Bon Secour National Wildlife Refuge Trail Enhancement	NRDA	Phase IV ER	Operations, Maintenance and Monitoring
City of Mobile - Mobile Greenway Initiative	RESTORE B1	MIP2018	Proposed for Funding
Mobile County - Mobile County Blueway Trail Development	RESTORE B1	MIP2018	Proposed for Funding
ADCNR, State Parks - Fort Morgan Parkway Trail Extension	RESTOREB3	SEP2018	Proposed for Funding
ADCNR, State Parks - Meaher Park Improvements	RESTOREB3	SEP2018	Proposed for Funding

#### Restore Water Quality

Toulmins Spring Branch E&D (E&D)	NRDA	RPII	Approved for Funding
Weeks Bay Nutrient Reduction	NRDA	RPII	Approved for Funding

Project Name	Funding Source	Restoration Plan/Phase	Project Status as of 10/01/2018
City of Bayou La Batre - Collection System/Lift Station Upgrades	RESTOREB3	SEP2018	Proposed for Funding
City of Bayou La Batre - Extension of Effluent Force Main from Bayou La Batre WWTF	RESTOREB3	SEP2018	Proposed for Funding
City of Chickasaw Sewer Rehabilitation Project	RESTOREB3	SEP2018	Proposed for Funding
City of Fairhope - Eastern Shore Sanitary Sewer Overflows (SSOs) Prevention Plan	RESTOREB3	SEP2018	Proposed for Funding
City of Fairhope - Fairhope Sewer Upgrade Phase I	RESTOREB3	SEP2018	Proposed for Funding
City of Orange Beach - Orange Beach North Sewer Force Main Upgrade	RESTOREB3	SEP2018	Proposed for Funding
Longevity, Stability, & Water Quality Improvements, Bon Secour DMDA	RESTOREB3	SEP2018	Proposed for Funding
MAWSS - Perch Creek Area Sanitary Sewer Trunk Line CIPP	RESTOREB3	SEP2018	Proposed for Funding
Mobile County - Dirt Road Paving (Sediment Reduction) Program	RESTOREB3	SEP2018	Proposed for Funding
Mobile County - Implementing Storm Water Management Improvements for Toulmin Springs Branch and Gum Tree Branch	RESTOREB3	SEP2018	Proposed for Funding
Town of Dauphin Island - Aloe Bay/Mississippi Sound Water Quality Enhancement Project	RESTOREB3	SEP2018	Proposed for Funding
City of Mobile - Mobile Area Storm Water Mapping & Resiliency Planning	RESTOREB3	SEP2033	Proposed for Funding
Fowl River Nutrient Reduction	NRDA	RP11	Approved for Funding

Provide Planning Support			
ADCNR - Planning Grant to Amend Multiyear Implementation Plan	RESTORE B1	MIP2018	Proposed for Funding
ADCNR - Planning Grant to Amend State Expenditure Plan	RESTOREB3	SEP2018	Proposed for Funding
Coastal Alabama Partnership - Development for a Regional Strategic Plan for the Coastal Alabama Region	RESTOREB3	SEP2018	Proposed for Funding



## LOOKING TO THE FUTURE

Even as the restoration projects described in this document are underway, Alabama continues to plan and prioritize restoration priorities for upcoming project phases and plans under RESTORE, NFWF and NRDA. What to expect in 2019 and how to engage:

### **Gulf Coast Ecosystem Restoration Council (RESTORE Council)**

In 2019 and early 2020, the State will begin to develop restoration priorities for consideration by the Gulf Coast Ecosystem Restoration Council for its next round of funding, known as Funded Priorities List (FPL) 3.

The State of Alabama has received a Collaborative Planning Support (CPS) Grant from the Council to prepare for the development of proposals for FPL 3. During the first year of the CPS Grant, the State of Alabama will focus on collaboration, outreach, and identification of priorities and potential project concepts for future FPLs. This will include meetings with stakeholders to identify priorities and cultivate new/reaffirm existing partnerships to leverage Council-Selected Restoration Component project funding. The State will utilize existing outreach mechanisms for engagement including, but not limited to, the Mobile Bay National Estuary Program's Management Conference.

### **Natural Resource Damage Assessment (NRDA)**

The Alabama TIG recently finalized Restoration Plan II and in 2019 will focus on implementing the projects contained in this plan. Project ideas are always welcome, and can be submitted at:

<https://www.alabamacoastalrestoration.org/> or <http://www.gulfspillrestoration.noaa.gov/>

### **Alabama Gulf Coast Recovery Council (Alabama Council)**

The Alabama Gulf Coast Recovery Council is in the process of developing plans and grant applications to fund projects from the Direct Component and Spill Impact Component of the RESTORE Act. Activities in 2019 will center around obtaining grant awards and beginning project implementation activities. For more information, visit:

<https://www.restorealabama.org/>

### **National Fish and Wildlife Foundation Gulf Environmental Benefit Fund**

ADCNR in coordination with NFWF GEBF submits projects for consideration of funding on an annual funding cycle. To submit a project idea for consideration, visit:

<https://www.alabamacoastalrestoration.org/>

### **To submit a project idea for consideration, visit:**

[www.alabamacoastalrestoration.org](http://www.alabamacoastalrestoration.org)

## MORE INFORMATION ON DWH RESTORATION PROCESSES IN ALABAMA

### Alabama Gulf Coast Recovery Council

118 N. Royal Street, Suite 603  
Mobile, AL 36602  
251-380-7944  
Email: [AGCRC@dcnr.alabama.gov](mailto:AGCRC@dcnr.alabama.gov)  
[www.restorealabama.org](http://www.restorealabama.org)

**Eliska Morgan, Executive Director**

#### Members:

According to the RESTORE Act, the Alabama Gulf Coast Recovery Council shall be comprised of only the following:

- The Governor of Alabama (Kay Ivey), who shall also serve as Chairperson and preside over the meetings of the Alabama Gulf Coast Recovery Council
- The Director of the Alabama State Port Authority (James K. Lyons), who shall also serve as Vice Chairperson and preside over the meetings of the Alabama Gulf Coast Recovery Council in the absence of the Chairperson.
- The Chairman of the Baldwin County Commission (Charles F. “Skip” Gruber)
- The President of the Mobile County Commission (Connie Hudson)
- The Mayor of the City of Bayou La Batre (Terry Downey)
- The Mayor of the Town of Dauphin Island (Jeff Collier)
- The Mayor of the City of Fairhope (Karin Wilson)
- The Mayor of the City of Gulf Shores (Robert Craft)
- The Mayor of the City of Mobile (Sandy Stimpson)
- The Mayor of the City of Orange Beach (Tony Kennon)

### Natural Resource Damage Assessment (NRDA) Alabama Trustee Implementation Group (ALTIG)

Email: [altig@dcnr.alabama.gov](mailto:altig@dcnr.alabama.gov)  
<http://www.gulfspillrestoration.noaa.gov/restoration-areas/alabama>

#### ALTIG Trustee Representation:

- Alabama Department of Conservation and Natural Resources (Chris Blankenship)
- Geological Survey of Alabama (Nick Tew)
- U.S. Department of the Interior (Kevin Reynolds)
- National Oceanic and Atmospheric Administration (Chris Doley)
- U.S. Department of Agriculture (Homer Wilkes)
- U.S. Environmental Protection Agency (Gale Bonano)



## Gulf Coast Ecosystem Restoration Council (RESTORE Council)

500 Poydras Street  
Suite 1117  
New Orleans, LA 70130  
Email: [restorecouncil@restorethegulf.gov](mailto:restorecouncil@restorethegulf.gov)  
[www.restorethegulf.gov](http://www.restorethegulf.gov)  
**Ben Scaggs, Executive Director**

### Alabama Council Member:

Governor Kay Ivey  
Designee: Chris Blankenship, Commissioner ADCNR

### Other Council Members:

- State of Texas
- State of Louisiana
- State of Mississippi
- State of Florida
- U.S. Environmental Protection Agency (Chair)
- U.S. Department of the Interior
- U.S. Department of Commerce
- U.S. Department of Agriculture
- U.S. Department of the Army
- U.S. Department of Homeland Security

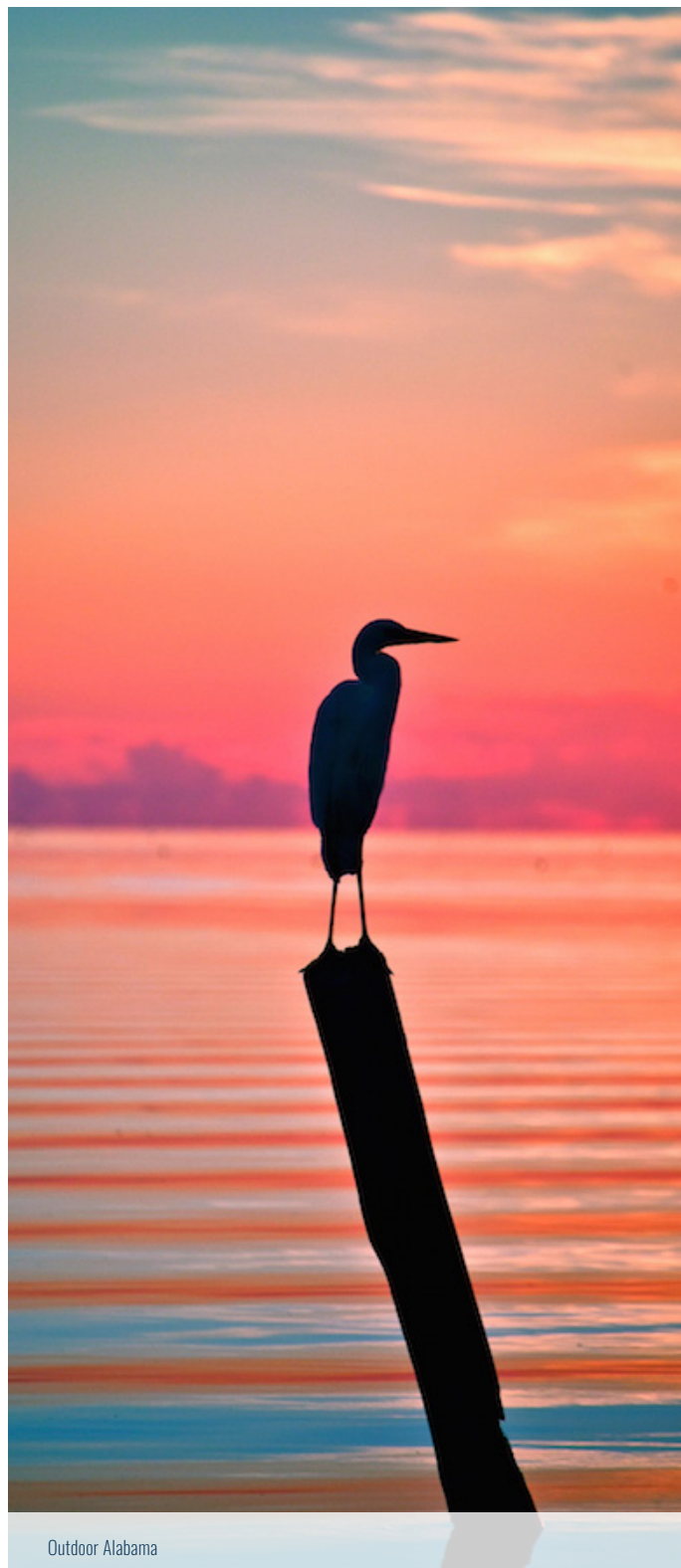
## National Fish and Wildlife Foundation Gulf Environmental Benefit Fund (NFWF GEBF)

1133 Fifteenth St. NW, Suite 1000  
Washington, DC 20005  
[www.nfwf.org/gulf/Pages/home](http://www.nfwf.org/gulf/Pages/home)

**Mike Sharp, Director (MS, AL, FL)**  
Eliska Morgan, NFWF Coordinator, ADCNR

**For more information on restoration in Alabama,  
visit:**

[www.alabamacoastalrestoration.org](http://www.alabamacoastalrestoration.org)



Outdoor Alabama

