

Mobile Bay National Estuary Program Management Conference
CCMP Update, Year Two
Work Plan

October 1, 2019-September 30, 2020



Prepared by
Mobile Bay National Estuary Program
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PREFACE

In 1972, the Clean Water Act was created to restore and maintain the chemical and biological integrity of the nation's waters so they can *support the protection and propagation of fish, shellfish, wildlife and recreation in and on the water*. In 1987, the National Estuary Program (NEP) was created by the U.S. Congress via amendments to this Act to identify, restore, and protect nationally-significant estuaries. Authorized under Title 3, Section 320, Public Law 94-117, 33 U.S.C 466, the goal of this program is to protect and restore the water quality and living resources of estuaries and associated watersheds designated by the EPA Administrator as estuaries of national significance.

NEPs work to implement estuarine ecosystem-based management by characterizing the priority problems in their estuaries and surrounding watersheds, developing Comprehensive Conservation and Management Plans (CCMPs) that list and describe actions to address those problems, and identifying partners, including lead entities, to implement the actions. Locally, the Mobile Bay National Estuary Program (MBNEP), in existence for the last 24 years, facilitates the creation of the CCMP and its updates through coordinating scientific assessments of where and what stresses are impacting the health of our estuarine ecosystems, capturing the input of citizens throughout Mobile and Baldwin counties, and initiating the development of actions identified by community leaders, resource managers, and scientists to conserve, restore, and protect those things valued most about living in coastal Alabama.

Respect the Connect: A Comprehensive Conservation and Management Plan for Alabama's Estuaries and Coast was first published in 2013. Since its publication, many of the strategies for measuring ecosystem health, restoring watersheds, building community capacity, and expanding citizen education and involvement have been implemented, resulting in some noteworthy successes. However, implementation of this Plan is far from complete.

In 2018, the MBNEP began the process of updating the CCMP as a requirement of the **National Estuary Program Comprehensive Conservation and Management Plan Revision and Update Guidelines** (EPA, May 2016). This updated Implementation Plan will reaffirm the goals of the 2013-2018 Plan; acknowledge the strengths, weaknesses, opportunities, and threats of implementing the strategies in that Plan, identify barriers to implementation of the current strategies, and refine the objectives and suggested activities identified to accomplish the reaffirmed goals. The final outcome of this effort, soon to be published, will provide the MBNEP Management Conference with a road map for meeting the environmental needs of Mobile Bay, its surrounding watershed, and coastal Alabama for the next five years.

The following Annual Work Plan has been prepared using the draft updated strategies anticipated to be included in the CCMP Update for October 1, 2018- September 30, 2023.

INTRODUCTION

MBNEP's mission is to promote the wise stewardship of water quality and living resources of the Alabama's estuaries. MBNEP's purpose is to catalyze actions of estuary stakeholders, build community organizational capacity for sound resource management, and leverage commitment and investment to ensure the estuary's sustainability. MBNEP's objectives: Engage estuary stakeholders in the development of CCMPs; 2) expand resources and involvement in the implementation of these CCMPs; and 3) promote how to best protect this nationally-significant ecological, economic, and cultural resource to ensure its conservation for our lifetime and beyond. To maximize effectiveness in promoting estuary health, the program's guiding principles are:

Those that live it know it - Citizens, anglers, boaters, scientists, hunters, and others have a unique insight into the environmental challenges we face, what works, and what doesn't. **Stakeholder input is vital to developing long-term solutions to local challenges.**

Economic opportunities must be available - Our coast is an economic engine, creating significant wealth for our state each year through activities such as trade through the Port of Mobile, recreational and commercial fishing, tourism, hunting, and coastal construction. **Many jobs depend on coastal water quality, healthy populations of fish and wildlife, and a mosaic of habitats providing essential natural functions.**

It happens in the river, in the sea, and on the street - Residents, towns, cities, counties, business and industry, academia, community developers, and social services all have a vested interest in preserving the quality of life derived from Mobile Bay and coastal Alabama's estuaries. Involvement of citizens in carrying out activities aimed at improving the Bay and its watersheds is paramount to ensuring the long-term health and vitality of the Mobile estuary. **Citizens must be actively engaged in balancing the many uses of the Bay so that we can preserve its unique natural resources for all of our needs.**

Our vision: Alabama's estuaries (where the rivers meet the sea) are healthy and support ecological functions and human uses. Everyone deserves the opportunity to experience the beauty and bounty of Alabama's estuaries - its rivers, creeks, bays, and bayous; abounding diversity of fish and wildlife; productive wetlands; and forests, dunes, and beaches. Alabama's estuaries are integral to our common good.

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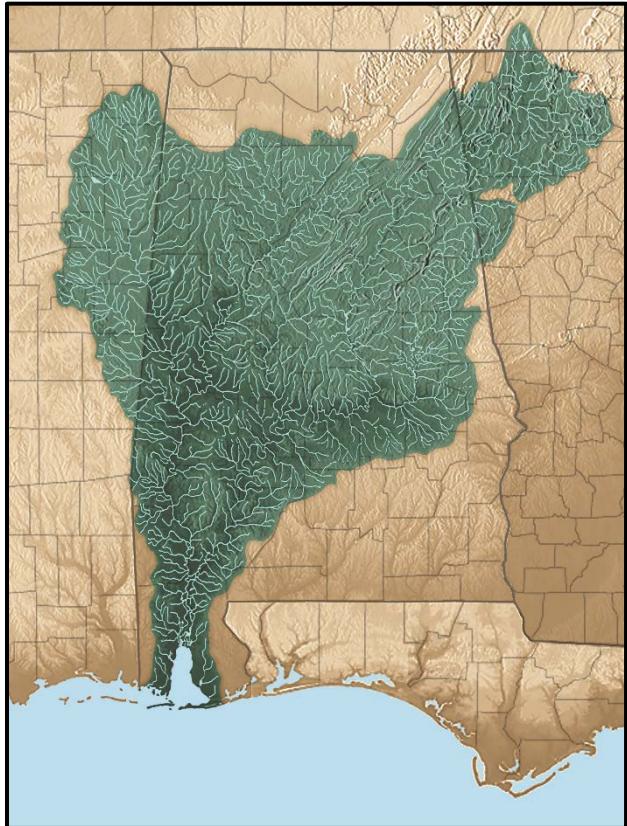
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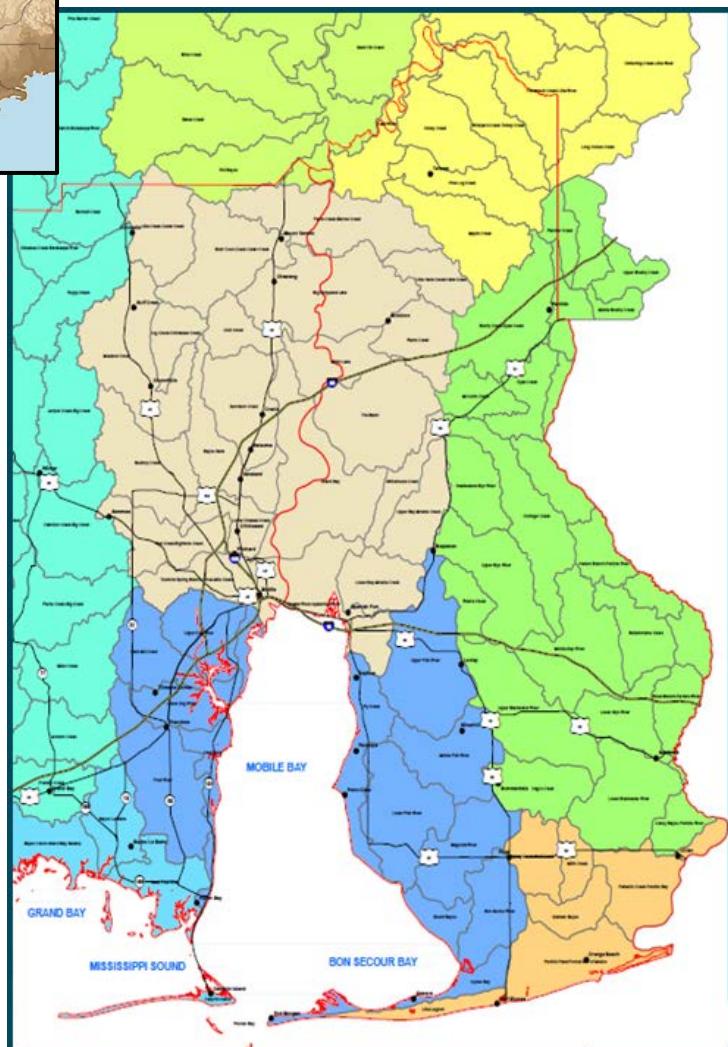
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GEOGRAPHIC DISTRIBUTION



Although the actual watershed for Mobile Bay encompasses more than two thirds of the State of Alabama and portions of Georgia, Mississippi, and Tennessee, MBNEP's primary target area is limited to southern Alabama, including all of Mobile and Baldwin counties from the Florida border west across coastal Alabama to its border with Mississippi. In addition, it extends seaward to the three-mile State jurisdictional limit. MBNEP's target area also includes Mississippi Sound, west to the Mississippi/Alabama border. Major waterways include the Tombigbee, Tensaw, Apalachee, Blakeley, Escatawpa, Mobile, Alabama, Dog, Fowl, Fish, Magnolia, Bon Secour and Perdido rivers; Chickasaw, Norton, Three Mile, and Eight Mile creeks; and the Intercoastal Waterway, Wolf and Perdido bays, and Little Lagoon.



PART ONE: 2019-2020 WORK PLAN EXECUTIVE SUMMARY

The following outline summarizes how the updated CCMP will be implemented in 2019-2020. The Action Areas of the CCMP are highlighted in light blue, the Goals are italicized, and the Objectives are indicated below Goals as numbers (e.g., 1.1). Please note: The objectives listed are for the five-year period. Activities planned for the coming year are then listed by their associated objective number.

Overall, key areas of focus for the coming year will center around strengthening how data is gathered and used at the watershed scale and how this data is aggregated to better understand the system as a whole; continued focus on comprehensive watershed planning and implementation- including habitat conservation and restoration activities; expanding public access to the water and open spaces; building capacity of businesses, government, and citizens to be better stewards of our coastal environment; and providing opportunities for all stakeholders to participate in reducing non-point source pollution throughout our two coastal counties.

For the program year of 2019-2020, the MBNEP Management Conference will focus on the issue of ***Trash*** - how to measure it; best practices for removing it from waterways; improvements in enforcement; incentivizing good behavior; and raising community awareness about the impacts trash has on our coastal quality of life.

EST ESTUARY STATUS AND TRENDS: GOALS/OBJECTIVES/SUGGESTED ACTIVITIES

EST-1: Expand data collection and use related to coastal ecosystem status and trends.

- 1.1 Establish a Data Management and Usage Strategy.
- 1.2 Maintain or improve existing level of monitoring and data analysis to assess trends in coastal ecosystem health at a watershed scale.
- 1.3 Promote consistent system-wide monitoring to assess trends in coastal ecosystem health.

2019-2020 Activities	
1.1	<i>Develop Data sharing agreement.</i>
1.2	<i>Establish baseline sediment and water quality data for Fly Creek, Bayou Sara/Cold Creek, Whitehouse/Bay Minette Creek, Palmetto Creek, Perdido/Gulf Frontal, Mobile Tensaw Apalachee, Lower Chasaw, Western Shore of Mobile Bay, and Dauphin Island watersheds.</i>
1.2	<i>Collect baseline and post construction monitoring of restoration project to measure success.</i>
1.3	<i>Develop a remote sensing strategy to augment monitoring.</i>
1.3	<i>Promote better coordination of testing methodologies and policies of State agencies related to fishery closures.</i>

EST-2: Establish a process for measuring, analyzing, and communicating change in marine, estuarine, and freshwater ecosystem condition.

- 2.1 Synthesize monitoring data to develop a watershed condition index to track and communicate trends in watershed restoration and management.

2019-2020 Activities	
2.1	<i>Integrate volunteer monitoring data into the Monitoring Framework.</i>
2.1	<i>Using D'Olive Watershed Index, determine the most cost-effective metrics for evaluating trends in habitat condition.</i>

EST-3: Model and predict connection between ecosystem condition and the ecosystem services people value.

3.1 Manage system for multiple services.

2019-2020 Activities	
3.1	<i>Develop a framework for assessing the economic impact of restoration activities on local capital improvement programs.</i>
3.1	<i>Quantify stressors such as sea surface temperatures, ocean acidification, hypoxia, and sea level rise.</i>

ERP ECOSYSTEM RESTORATION, PROTECTION: GOALS/OBJECTIVES/SUGGESTED ACTIVITIES

ERP-1: Improve trends in water quality in priority watersheds.

- 1.1 Develop 12 new coastal watershed management plans for those basins discharging into priority fishery nursery areas.
- 1.2 Prioritize watersheds/seek funding for watershed management plans in non-tidally-influenced watersheds.
- 1.3 Update existing watershed plans as needed to include new watershed planning criteria.

2019-2020 Activities	
1.1	<i>Watershed Plan Completion- Wolf Bay, Western Shore</i>
1.1	<i>Watershed Plans in Progress- Little Lagoon, Fly Creek, Mobile Tensaw Delta</i>
1.1	<i>Watershed Plan Initiation- Dauphin Island/Grand Bay, Bay Minette/Whitehouse Creek, Lower Chasaw/Bayou Sara</i>
1.3	<i>Watershed Plan Update- D'Olive, Joes Branch, Tiawasee Watersheds</i>

ERP-2: Focus watershed management activities on priority habitats.

- 2.1 Develop a Coastal Alabama Habitat Restoration Plan.
- 2.2 Conserve, restore, and enhance freshwater wetlands, starting in the headwaters of tidally-influenced watersheds or drainage basins.
- 2.3 Conserve, restore, and enhance streams, rivers, and riparian buffers.
- 2.4 Conserve, restore, and enhance nearshore and intertidal marshes and flats.
- 2.5 Protect uplands adjacent to coastal habitats to accommodate landward migration of marshes.
- 2.6 Develop a strategy to stabilize, conserve, and enhance beaches, dunes, and shorelines, where appropriate.
- 2.7 Promote Invasive Species Management in all watershed restoration activities.

2019-2020 Activities	
2.1	<i>Complete online coastal Alabama Restoration Tool</i>
2.2	<i>Dog River Watershed - Acquisition of Harrison Tract</i>
2.2	<i>Fowl River Watershed- NRCS Conservation Easement of Canon Property</i>
2.3	<i>D'Olive Creek, Joes Branch, Tiawasee Watersheds- Adaptive Management: D4-D6</i>
2.3	<i>D'Olive Creek, Joes Branch, Tiawasee Watersheds- Construction Montclair</i>
2.3	<i>Three Mile Creek Watershed- 12 Mile Creek construction</i>
2.3	<i>Three Mile Creek Watershed- Historic streamway restoration</i>
2.3	<i>Weeks Bay Watershed- Marlow stream stabilization</i>
2.4	<i>Deer River Watershed- Shoreline stabilization and marsh creation</i>
2.4	<i>Dauphin Island - Causeway/Bayfront Park shoreline stabilization and marsh creation</i>
2.4	<i>Fowl River Watershed- Marine Zone Spits stabilization</i>

2.7	<i>D'Olive Watershed- Invasive species management</i>
2.7	<i>Three Mile Creek Watershed- Invasive species Management</i>
2.7	<i>Garrows Bend Watershed- Invasive species management- Helen Wood Park</i>
2.7	<i>Fowl River Watershed- Invasive species management - Helen Wood Park</i>

ERP-3: Restore and expand human connections to nature as a mechanism for improving environmental protection.

- 3.1 Protect and conserve priority habitats for public benefit and access by acquisition or easement.
- 3.2 Create seven new access points, at least five in Mobile County, incorporating environmental and cultural themes into each site's interpretive signage.

2019-2020 Activities	
3.1	<i>Mobile Bay Watershed- Habitat protection through conservation easement</i>
3.2	<i>Access creation: Three Mile Creek Greenway, Perch Creek Preserve, and North SaltAire</i>
3.2	<i>Access enhancements: Memories Fish Camp, Mobile County Parks Master Plan</i>

**TAC TECHNICAL ASSISTANCE AND CAPACITY BUILDING:
GOALS/OBJECTIVES/SUGGESTED ACTIVITIES**

TAC-1: Build capacity of water dependent industries to improve working waterfronts and preserve fishing communities.

- 1.1 Investigate potential locations for safe harbors to support commercial fishing fleets.
- 1.2 Pilot a peer lending program to support fishing business investment in best practices.
- 1.3 Promote the assessment, improvement, and designation of estuary ports as "Green Ports".
- 1.4 Develop planning tools to balance multiple uses of marine resources.

2019-2020 Activities	
1.2	<i>Support Auburn University Marine Extension and Research Center in Peer Lending program development.</i>
1.3	<i>Continue to support progress towards Green Marine certification and Green Port status.</i>
1.4	<i>Streamline data delivery for coastal marine planning (Shellfish Aquaculture Siting Tool and AL Coastal and Marine Planning Tool).</i>

TAC-2 Build Capacity of the business community to support ecosystem protection and restoration.

- 2.1 Engage the business community in supporting the program and CCMP implementation.
- 2.2 Engage businesses in influencing local resource management decision-making.
- 2.3 Engage the business community through the partnership with Partners for Environmental Progress to launch the Create a Clean Water Future (CCWF) campaign among its business members.

2019-2020 Activities	
2.1	<i>Develop a long-term plan for business support of the Program.</i>
2.2	<i>Recruit private sector support to advocate for more responsible stormwater management.</i>
2.2	<i>Promote State Revolving Fund to support Low Impact Development (LID), including green infrastructure and the Clean Marina Program.</i>
2.3	<i>Create training materials for CCWF business partners to educate their members and employees.</i>
2.3	<i>Establish a Create a Clean Water Future Annual Service Day.</i>

TAC-3 Build capacity of local governments to manage and enhance coastal environmental resources.

- 3.1 Improve elected officials', planning commissions', and other land-use decision-makers' understanding of the relationship between land-use, water resources management decisions, and environmental impacts.
- 3.2 Support implementation of eight coastal watershed management plans.
- 3.3 Support establishment and operation of watershed plan partnerships and task forces to ensure local ownership of implementation activities.
- 3.4 Establish the Coastal Alabama Stormwater Team to better coordinate stormwater management activities throughout the Mobile Bay Watershed to improve the quality of water flowing into coastal waters.
- 3.5 Improve regulatory framework to better protect coastal resources.
- 3.6 Support actions to protect and restore coastal habitats, increasing community and economic resilience.

2019-2020 Activities	
3.1	<i>Expand MBNEP contact list to include planning commission members and other land-use decision makers.</i>
3.1	<i>Build library of best practices for resource management short videos to inform elected officials and municipal staff.</i>
3.1	<i>Conduct local government training on the use of tools, funding, and datasets to support improved environmental management.</i>
3.2	<i>Facilitate adoption of resolutions to recognize watershed management plans at the local government level.</i>
3.2	<i>Promote creation of/long-term support for Watershed Management Coordinators for each county.</i>
3.2	<i>Promote use of and regulatory environment for low impact development (LID) practices for environmental, community, and economic resilience.</i>
3.3	<i>Support D'Olive Intergovernmental Task Force, 3MC Partnership, Fowl River Implementation Task Force, Dog River Task Force, and Weeks Bay PLAN.</i>
3.4	<i>Recruit communities in becoming members of the CCWF campaign.</i>
3.5	<i>Build inventory of best management practice model ordinances as required under Alabama Coastal Nonpoint Pollution Control Program (ACNPPC).</i>
3.5	<i>Facilitate adoption of policies by state agencies to use third party data focusing on Alabama Water Watch data.</i>
3.6	<i>Promote the adoption of a State of Alabama Water Plan that protects sufficient freshwater flows to the Mobile Bay estuary.</i>
3.6	<i>Integrate watershed planning and implementation into flood plain management and hazard mitigation planning.</i>
3.6	<i>Create and deliver outreach materials to local governments to educate them about climate change, sea level rise, resilience.</i>

TAC-4 Build capacity of citizens and grassroots groups to create more resilient and environmentally-responsible communities.

- 4.1 Support and promote opportunities to expand grassroots capacity development.
- 4.2 Develop comprehensive strategy for volunteer water quality monitoring, and expand citizen science and community engagement programs to inform status and trends.
- 4.3 Create a strategy for implementing the Create a Clean Water Future campaign at the community level.

2019-2020 Activities	
4.1	<i>Support at least one organizational development workshop for grassroots groups.</i>
4.2	<i>Assess volunteer monitor needs, including equipment.</i>
4.2	<i>Maintain directory of current water quality monitors.</i>

4.2	<i>Increase capacity of current volunteers testing for bacteria by 10%.</i>
4.2	<i>Increase number of users entering data on Water Rangers by 10%.</i>
4.2	<i>Increase number of water quality monitors/citizen scientists.</i>
4.2	<i>Promote the use of Water Rangers for other types of environmental monitoring needs (e.g., litter, invasive flora and fauna).</i>
4.2	<i>Establish volunteer recognition program.</i>
4.3	<i>Participate in a Create a Clean Water Future Annual Service Day.</i>

EPI EDUCATION AND PUBLIC INVOLVEMENT: GOALS/OBJECTIVES/SUGGESTED ACTIVITIES

EP1-1: Improve the business community's understanding of how coastal natural resources and estuaries contribute to economic, cultural, and community well-being.

- 1.1 Conduct 15 tours to introduce the private sector to watersheds.
- 1.2 Develop outreach to improve business community understanding of opportunities for environmental protection.

2019-2020 Activities	
1.1	<i>Lead four boat tours in watersheds under watershed management plan development or implementation.</i>

EPI-2: Improve community understanding of how estuaries and coasts support what people value about living in coastal Alabama.

- 2.1 Promote recreational and educational programs and events that connect more people to local waterways, fish, and wildlife.
- 2.2 Educate youth about watersheds, water quality, and environmental issues relevant to the six values.

2019-2020 Activities	
2.1	<i>Establish sponsorship policies and solicitation process for supporting community events connecting people to coastal heritage and culture, local waterways and fish and wildlife.</i>
2.1	<i>Include cultural and heritage signage at access points.</i>
2.2	<i>Inventory and evaluate existing formal and informal educational programs.</i>
2.2	<i>Promote coordination among diversity of environmental education programs to reduce duplication and achieve more robust learning opportunities.</i>
2.2	<i>Expand watershed education throughout Mobile and Baldwin counties.</i>

EPI-3: Increase the community's involvement in and support for protecting the estuary and coast.

- 3.1 Create a minimum of five service opportunities to engage business "teams" and citizens in participating in restoration or clean-up efforts.
- 3.2 Engage business, citizens, academia, and government in participating in initiatives aimed at reducing non-point source pollution.
- 3.3 Promote environmentally-friendly public events (e.g. parades, sporting events, fishing tournaments, etc.).

2019-2020 Activities	
3.1	<i>Continue Alabama Power/Soterra Partnership: Toulmins Spring Rain Barrels Initiative.</i>
3.1	<i>Initiate AM/NS Calvert Partnership: Invasive Species Management</i>

3.3	<i>Create a Management Conference-wide comprehensive initiative on Trash (include SAC, PIC, CRC, BRC, CAC, GNC).</i>
2.1	<i>Develop and implement master action plan for coordinating and promoting more environmentally-friendly public events.</i>

EPI-5: Advocate integration of environmental protection into community and economic development.

- 5.1 Advocate inclusion of watershed management plan recommendations into local policies, ordinances, and plans, accompanied by improved implementation and consistent enforcement.
- 5.2 Publicly support federal, state, and local regulatory changes to improve overall management and enforcement and to provide local government with authority needed to protect natural resources.
- 5.3 Advocate restoration and protection of most -stressed habitats to improve environmental and community resilience.
- 5.4 Advocate inclusion of better building practices in long-range planning to improve environmental and community resilience.

2019-2020 Activities	
4.1	<i>Promote environmentally-appropriate expansion and maintenance of wastewater infrastructure.</i>
4.1	<i>Promote environmentally-appropriate expansion and maintenance of stormwater infrastructure.</i>
4.1	<i>Promote environmentally-appropriate expansion and maintenance of transportation infrastructure</i>
4.2	<i>Provide public comment on new and updated regulations, ordinances, bills as they are developed.</i>
4.2	<i>Initiate action alerts to encourage locally elected officials to participate environmental rule and policy-making.</i>
4.3	<i>Promote outreach and education on the importance of dunes and protection of shoreline vegetation.</i>
4.3	<i>Promote the conservation of dune habitats.</i>
4.4	<i>Promote the use of Living Shorelines Manual to contractors about the value of and techniques for installing living shorelines.</i>

BUDGET OVERVIEW: 2019-2020

Each year the MBNEP receives an allocation from EPA to support activities geared toward achieving the objectives of the CCMP. The EPA requires that the funding provided as part of a “cooperative agreement” be matched with non-federal dollars in a 1:1 ratio, either in cash or in-kind valuation.

Work Plan 2019-2020 Revenues	Year U1: 2018-2019	Year U1: Actual	Year U2: 2019-2020	Total
EPA Annual Appropriation	625,000	625,000	600,000	1,225,000
Non-Federal Match	354,088	377,076	384,188	738,276
Surplus/(Deficit) from previous year			22,988	22,988
Total Available Budget	979,088	1,002,076	1,007,176	1,986,264
Surplus/(Deficit)		22,988		

Workplan 2019-2020 Expenses by CCMP Focus Area/Activities 2019-2020	Year One: 2018-2019 Budget	Year One: Available 5/31/2019	Year Two: 2019-2020 EPA Budget	External Funding Available	Total Funding Available
Ecosystem Status and Trends	45,000	30,716	-	462,656	493,372
<i>EST 1: Expand data collection and use related to coastal ecosystem status and trends</i>					
Coastal Monitoring	45,000	30,716		139,656	
Sediment Studies				323,000	
<i>EST 2: Measure, analyze, and communicate change in ecosystem condition</i>					
Watershed Condition Index development and application					
<i>EST 3: Model and predict connection between ecosystem condition and the ecosystem services</i>					
Quantification of stressors					
Ecosystem Restoration and Protection	20,000	10,650	23,000	5,569,232	5,602,882
<i>ERP 1: Improve trends in water quality in priority watersheds</i>					
Watershed Planning and Implementation	20,000	10,650	18,000	2,543,241	
<i>ERP 2: Focus watershed management activities on priority habitats</i>					
Habitat Restoration				3,025,991	
<i>ERP 3: Restore and expand human connections to nature to promote environmental protection</i>					
Development of Access to water and open spaces			5,000		
Technical Assistance and Capacity Building	7,500	21,784	-	-	21,784
<i>TAC 1: Support water dependent industries and working waterfronts to preserve fishing culture</i>					
<i>TAC 2: Build Capacity of business community to support ecosystem protection and restoration</i>					
<i>TAC 3: Build capacity of government to manage and enhance coastal environmental resources</i>					
Municipal Staff Training support	2,500	2,500			
<i>TAC 4: Build capacity of citizens to create environmentally-resilient communities</i>					
Citizen Science and Monitoring support	5,000	19,284			
Education and Public Involvement	74,541	35,895	94,452	94,452	224,799
<i>EPI 1: Improve business community understanding of how environment contributes</i>					
<i>EPI 2: Improve community understanding of how estuaries and coasts support what people value</i>					
Newsletter	8,000		8,000	6,956	
Interpretive Signage	5,000				
Social media, website, video production	30,000		19,952		
Special events and sponsorships	7,500		7,500		
<i>EPI 3: Increase the community's involvement in and support for protecting the estuary and coast</i>					
Management Conference support	4,000		54,000		
Public awareness campaigns	15,041				
Promotional/Outreach materials	5,000		5,000		
<i>EPI 4: Promote integration of environmental protection into community/economic</i>					
Management and Program Administration	147,041	99,045	117,452	6,126,340	6,342,837
Total EPA Year Two	832,047		889,724	215,994	1,105,717

PROJECT DETAILS: ECOSYSTEM STATUS AND TRENDS

Throughout the implementation of the Updated Comprehensive Conservation and Management Plan for 2018-2023, the MBNEP Science Advisory Committee (SAC) will build a Watershed Condition Index for coastal Alabama using products of efforts related to development of a biological condition gradient framework during the last five years of the 2013-2018 CCMP implementation. State and local resource managers will refine development of a long-term monitoring program. In addition, the SAC will pursue opportunities to establish baselines and other scientific data necessary to support comprehensive watershed planning and restoration.

EST: COASTAL MONITORING PROGRAM

Title	Coastal Monitoring Program
Values Supported	     
Purpose	Increase understanding of estuary health; identify biological indicators; and incorporate into a coastal biological monitoring program.
Outputs/Deliverables	Baseline monitoring data; restoration monitoring data; watershed condition index support
Outcomes	Increased knowledge about environmental status and trends and environmental response to restoration activities; and increased community participation in environmental monitoring activities
Clean Water Act Relevance	Improve water quality monitoring, support TMDL implementation, and improve monitoring of wetland function and coverage.
Year 1	\$ 30,716
Year 2	\$ 0
EPA Total	\$ 30,716 (45,000 less reprogram of 14,284)
External Funding	\$139,656
Lead/Partners	ADEM, MBNEP SAC, U. S. EPA, NFWF, GOMP

Progress to Date:

During the five years of RESPECT THE CONNECT implementation, the SAC created a monitoring framework to evaluate individual subwatersheds of the Mobile Bay Watershed in standardizing restoration monitoring to answer these questions: What, if any, changes occurred in the water quality, sedimentation, flow, biology, and habitat quantity and quality as a result of restoration efforts and management plan implementation? How are potential ecosystem health indicators related to stressors and ecosystem functions/services? What is the long-term status of the biological condition in the Mobile Bay watershed?

The recommended protocols in this framework will result in standardized data collection for restoration efforts throughout Mobile and Baldwin counties, allowing comparisons both temporally and spatially and improved decision making and data preservation for future use. The monitoring program outlined within this framework is incorporated into all watershed management plans (WMPs) and restoration proposals and contracts. Ensuring utilization of this framework uniformly across all restorations and watersheds in Mobile and Baldwin counties will allow an interconnected network of data that can improve understanding of the processes of Mobile Bay as a whole. The Mobile Bay Subwatershed Monitoring Framework is a living document and is continually reviewed and refined to ensure consistency with larger regional networks, including those developed by the Gulf of Mexico Alliance, the National Oceanic and Atmospheric

Administration, and the Gulf of Mexico Coastal Ocean Observing System. The monitoring framework is implemented as follows:

- 1) Baseline data is collected as part of comprehensive watershed planning;
- 2) The framework is referenced and implemented as applicable to the objectives of all restoration projects;
- 3) Long-term monitoring recommendations in each WMP conform with the framework;
- 4) MBNEP coordinates the periodic reporting of monitoring data in outreach products to communicate status and trends both at the watershed scale as well as estuary-wide; and
- 5) MBNEP coordinates data synthesis to develop tools and products for assessment of restoration success, adaptive resource management, and baseline establishment.

Accomplishments for the past year:

Fowl River Marsh Health Study- Marsh Health Study Engineering for Shoreline Stabilization of Four Spits. With restoration of four erosion-impacted, salt marsh-covered spits a priority recommendation, MBNEP secured NFWF Gulf Environmental Benefit Fund grants to conduct a marsh health study to investigate why salt marshes in the transitional zone between brackish and fresh water-dominated areas appear to be degrading from interior to exterior portions of the marsh. This recently completed marsh study, which investigated ecologic, hydrologic, sedimentologic factors will inform future restoration and shoreline stabilization efforts of transition-zone marsh spits and elsewhere.

A public meeting was held with Fowl River stakeholders to review the results of the marsh health study with some discussion of potential restoration measures. The results of the marsh health study are expected to steer restoration toward the areas which will benefit most from long-term stabilization.

D’Olive Watershed Condition Index- Within the next couple of months, using nearly four years of data collected coincidental to implementation of stream restoration in the D’Olive Creek Watershed, a Watershed Condition Index incorporating a Biological Condition Gradient (BCG) with anthropogenic actions will be developed to measure overall effectiveness of the restoration effort.

Site-specific data used in this analysis includes information from the baseline and restoration monitoring studies as well as field assessments including:

- Geological Survey of Alabama (GSA) sediment load monitoring;
- Cities of Daphne and Spanish Fort water quality data via Sondes strategically placed throughout watershed (conductivity, temperature, pressure/depth, and dissolved oxygen);
- ADEM/USGS water quality data via two stream gauges (Flow, conductivity, temperature, pressure/depth, and dissolved oxygen);
- DISL monitoring in D’Olive Bay (TSS, chlorophyll a, CDOM, DO, temperature, and salinity);
- Riparian Buffers - Habitat Health Level Evaluation (RipHLE); and
- Wetlands - Wetland Rapid Assessment Procedure (WRAP) and Floristic Quality Index (FQI)

One of the ultimate goals of the extensive restoration work occurring throughout the D’Olive Creek Watershed is to remove its streams for the State’s 303(d) List of impaired waterbodies. To accomplish this goal, the Alabama Department of Environmental Management requires sufficient core indicator (based on impairments) sampling frequencies to meet data quantity and quality requirements as outlined in Alabama’s Listing and Assessment Methodology to facilitate waterbody listing/delisting decisions. In 2016, ADEM began collecting water quality data to test its methodology for using reference streams as indicators of “natural” sediment transport for stream delisting purposes. ADEM is monitoring suspended sediment utilizing FTS automatic samplers installed in conjunction

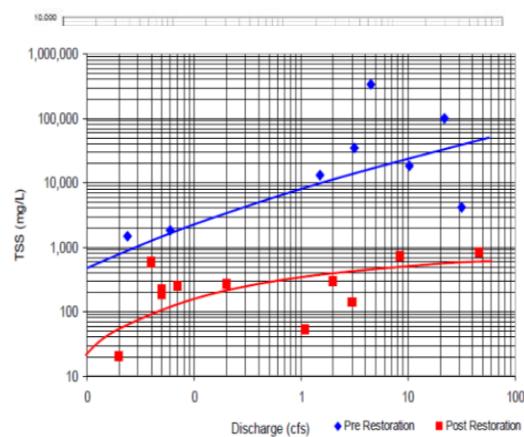


Figure 9.—Measured total suspended solids and stream discharge during the pre- and post-restoration monitoring period at Joes Branch site JB6.

with a USGS gauging station at D’Olive Creek at Bayview (site of current YSI X2 Sonde), and Tiawasee Creek at Bayview (site of current YSI X2. Due to excessive “noise” associated with ongoing, upstream restoration efforts and the additional monitoring ongoing through ADEM, downstream monitoring by the MBNEP and City of Daphne has been reduced but is ongoing.

Mon Louis Island Post Restoration Monitoring As part of the Fowl River watershed restoration effort, the tip of Mon Louis Island was restored in 2016. Monitoring of vegetation, shoreline, and bathymetry up to 1,800 feet offshore is ongoing and will continue for the next two years to measure this project success. Based on monitoring results, funding has been kept in reserve for additional project monitoring to meet permit requirements.

Plans for the Coming year:

EST-1: Increase availability/use of data related to coastal ecosystems and their services’ responses to man-made stresses.

1.1	<i>Develop Data sharing agreement.</i>
1.2	<i>Integrate volunteer monitoring data into the Monitoring Framework.</i>
1.2	<i>Continue restoration monitoring- D’Olive, 12 Mile Creek, Mon Louis Island</i>
1.3	<i>Develop a remote sensing strategy to augment monitoring.</i>
1.3	<i>Promote better coordination of testing methodologies and policies of State agencies related to fishery closures.</i>

EST: SEDIMENT STUDIES

Title	Comprehensive Coastal Sediment Loading Analysis Initiative
Values Supported	
Purpose	Establish quantitative baselines of sediment transport and water quality in coastal watersheds to inform and measure progress in planning and restoration.
Outputs/Deliverables	Sediment Baseline studies for Fly Creek, Deer River and Little Lagoon
Outcomes	Improved understanding of sources of sedimentation and water quality in tributaries of the Alabama estuarine systems
Clean Water Act Relevance	Improve water quality monitoring, and support TMDL implementation.
Year 1	\$ 0
Year 2	\$ 0
EPA Total	\$ 0
External Funding	\$ 323,000
Lead/Partners	MBNEP, SAC

Progress to date:

Historically, the MBNEP has led, with the assistance of the Geological Survey of Alabama, the characterization of land use, erosion, and sedimentation in coastal watersheds to identify sources of sediment and establish baseline data and sedimentation rating curves useful in watershed planning. Investigators utilized modeling techniques to determine bed and suspended sediment loads and identify sources of sediment, including man-made and natural drainage ways. Monitoring is based on precipitation and resulting stream discharge and includes basic field-acquired physical and water-quality parameters. These data have been used to determine impacts of land-use change and to focus resources in areas of greatest need for remedial action. MBNEP develops this data for all coastal intertidal watersheds as a precursor to comprehensive watershed planning. At present baseline sediment studies have been completed for the D'Olive Creek, Fowl River, Dog River, Bayou La Batre, West Fowl River, Bon Secour River, Weeks Bay, and Wolf Bay watersheds.

Accomplishments for the past year:

Sediment Studies Completed- Wolf Bay Watershed; A Valuation of Pre and Post Restoration Sediment Loads in Joes Branch, AL.

Plans for the coming year:

EST-2: Measure, analyze, and communicate change in ecosystem condition.	
2.1	<i>Establish baseline sediment and water quality data for Fly Creek, Bayou Sara/Cold Creek, Whitehouse/Bay Minette Creek, Palmetto Creek, Perdido/Gulf Frontal, Mobile Tensaw Apalachee, Lower Chasaw, Western Shore of Mobile Bay, and Dauphin Island watersheds.</i>
2.1	<i>Using D'Olive Watershed Index, determine the most cost-effective metrics for evaluating trends in habitat condition.</i>

PROJECT DETAILS: ECOSYSTEM RESTORATION AND PROTECTION

Ecosystem restoration refers to returning a damaged ecological system to a stable, healthy, and sustainable state. Although it is impossible to return an ecosystem to the exact same condition as prior to disturbance, restoration to improve ecosystem function and service delivery will contribute to community health and well-being, protection against sea level rise, economic sustainability, recreation, and community quality of life.

The conservation, restoration, and/or protection of coastal watersheds with a focus on freshwater wetlands; streams, rivers and associated riparian buffers; and intertidal marshes and flats continues to be the focus of the Updated CCMP for 2019-2023. To ensure all restoration efforts are based in sound science and are part of an overall management program, a precursor to restoration efforts will be the creation of comprehensive watershed management plans (WMPs) at the 12-digit Hydrologic Unit Code scale. All WMPs will be based on U. S. EPA guidance, addressing the following key elements:

- Identification of causes of impairment.
- Estimation of pollutant load reductions expected from restoration/management measures.
- Description of non-point source reduction measures/critical areas where those measures will take place.
- Estimation of the amount of financial support needed to implement plan recommendations, including monitoring.
- Creation of an outreach and education plan to increase residents' understanding of restoration measures and to engage them in long-term implementation of the plan.
- Schedule for implementation, key implementation milestones, and implementation evaluation criteria.

The State of Alabama has prioritized funding from the NFWF Gulf Environmental Benefits Fund and federal RESTORE dollars to develop of WMPs for all the State's tidally-influenced watersheds. MBNEP has recruited assistance from its Project Implementation Committee (PIC) partner agencies and municipalities funded by the MBNEP to manage WMP development and assist in the development and evaluation of Requests for Qualifications to select engineering/planning contractors.

In addition to watershed planning and restoration, the PIC has identified priorities for increasing the installation of living shorelines throughout our two coastal counties and the number of public access points to facilitate connections to our coastal waters and open spaces.

ERP: WATERSHED PLANNING AND IMPLEMENTATION

Title	Watershed Planning and Implementation Fund
Values Supported	
Purpose	Support watershed management planning (WMP) and implementation activities.
Outputs/Deliverables	Technical assistance, project development, signage, other
Outcomes	Improved watershed management at local scale
Clean Water Act Relevance	Improve water quality monitoring, support TMDL implementation, and improve wetland function
Year 1	\$ 20,000
Year 2	\$ 3,000
EPA Total	\$ 23,000
External Funding	\$ 3,985,381
Lead/Partners	MBNEP, Municipalities

Progress to date:

With intensive watershed management planning ongoing, MBNP is committed to WMP development and implementation. Typically, once the WMP is published, implementation technical assistance and program development require start-up costs as plans move from the page to implementation. This fund supports both watershed planning activities and initial plan implementation costs.

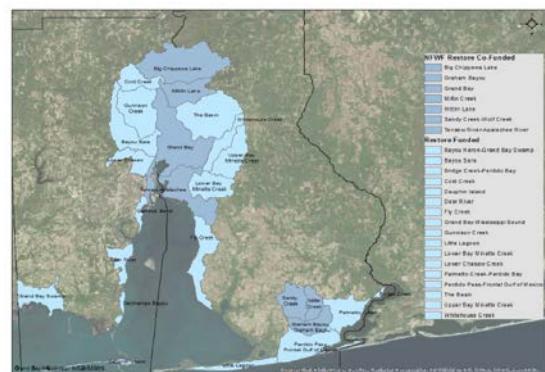
To date the following plans have been completed and have begun implementation: D'Olive Watershed, Three Mile Creek Watershed, Fowl River Watershed, Dog River Watershed Complex, Bon Secour Watershed Complex, Weeks Bay Watershed Complex.

Accomplishments this past year:

The Bayou la Batre watershed plan was completed in 2018. The West Fowl River watershed management plan is in final draft, and includes a pollutant loading model for Portersville Bay. Implementation of the Three Mile Creek Watershed Plan is ongoing, and support has been provided for community outreach and education in underserved neighborhoods of the watershed. In addition, planning is ongoing to undertake an update of the D’Olive Watershed Plan.

Plans for coming year:

ERP-1: Improve trends in water quality in priority watersheds.	
1.1	<i>Watershed Plan Completion- Wolf Bay, Western Shore</i>
1.1	<i>Watershed Plans in Progress- Little Lagoon, Fly Creek, Mobile Tensaw Delta</i>
1.1	<i>Watershed Plan Initiation- Dauphin Island/Grand Bay, Bay Minette/Whitehouse Creek, Lower Chasaw/Bayou Sara</i>
1.3	<i>Watershed Plan Update- D’Olive, Joes Branch, Tiawasee Watersheds</i>



ERP: D'OLIVE WATERSHED PLANNING AND IMPLEMENTATION

Title	D'Olive Watershed Restoration
Values Supported	
Purpose	Continue restoration of D'Olive Watershed with goal of removal from the State's 303(d) List and reduction in sedimentation being transported downstream to D'Olive Bay.
Outputs/Deliverables	Stabilization/restoration of degraded stream segments, riparian zones, and downstream wetlands in the D'Olive Watershed
Outcomes	Improved ecosystem function and protection; and improved community management of ecosystem restoration and protection activities
Clean Water Act Relevance	Improve water quality monitoring, support TMDL implementation, and improve monitoring of wetland function and coverage.
Year 1	\$ 0
Year 2	\$ 0
EPA Total	\$ 0
External Funding	\$ 2,102,227
Lead/Partners	NFWF, MBNEP/ Baldwin County, City of Spanish Fort, City of Daphne, Alabama Department of Transportation, Alabama Department of Conservation and Natural Resources, Geological Survey of Alabama, and private property owners

Restoration of the D'Olive Watershed began in 2012 and continues today. The status of MBNEP contracted work follows:

D'Olive Watershed Restoration					Floodplain Reconnected (acres)	Erosion Reduction (tons/year)
Task	Project	Engineer	Contractor	Stream Length (ft)		
1.1	JB SWMF	Thompson	Southern Exc		1	
1.2	J SWMF	Thompson	Southern Exc		1	
1.3	J4-1	Thompson	Southern Exc	700	2	
1.4	J4-2	Thompson	Southern Exc	400	1	100
1.5	JA	Thompson	Southern Exc	600	1	200
1.6	JB	Thompson	North State Enviro	1,600	4	400
2.1	SWMF - Lake	ISE				
2.2	D10-1	Terminated				
2.3	D4-D6	GMC	North State Enviro	2,680	10	1,800
2.4	DA3	Volkert	North State Enviro	1,000	7	600
2.5	DAE	ISE	Southern Exc	420	4	300
2.6	DAF	Mott		360	1	100
2.7	DAF-1	Mott		200	1	100
2.7	DAF-1A	GMC	North State Enviro	490	2	250
	Tiawassee	Volkert		900	4	400
3.1	TC1	GMC	North State Enviro	600	2	200
3.2	TC2	GMC	North State Enviro	550	2	200
3.2	TC2-Trib	GMC	North State Enviro	570	1	100
Total				11,070	44	5,050



Greater D'Olive Creek restoration partners include the National Fish and Wildlife Foundation, the cities of Daphne and Spanish Fort, Baldwin County, GSA, Alabama Department of Environmental Management, Alabama Department of Conservation and Natural Resources, Auburn University/Alabama Cooperative Extension System, MBNEP, the Dauphin Island Sea Lab, and property owners.

Accomplishments for the past year:

The restorations known as DAF, DAF-1 and DAF-1A, located in Lake Forest subdivision were completed and a project located in Tiawasee Creek were completed (see above for details).

Plans for the coming year:

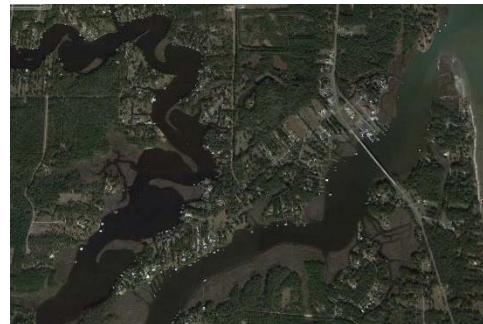
ERP-2: Focus watershed management activities on priority habitats.	
2.3	<i>D'Olive Creek, Joes Branch, Tiawasee Watersheds- Adaptive Management: D4-D6</i>
2.3	<i>D'Olive Creek, Joes Branch, Tiawasee Watersheds- Construction: Montclair</i>
2.7	<i>D'Olive Watershed- Invasive species management</i>

ERP: FOWL RIVER WATERSHED RESTORATION

Title	Fowl River Watershed Restoration
Values Supported	     
Purpose	Stabilize spits in the transition zone of the river to mitigate routine impacts, including, but not limited to, boat wakes, maintenance of hydrologic flow, and re-establishment of critical fisheries habitat and storm protection measure for Fowl River.
Outputs/Deliverables	Project in planning- deliverables will be based on recommendations from the Fowl River Marsh health study.
Outcomes	Improved ecosystem function and protection; and improved community understanding of ecosystem restoration and protection activities
Clean Water Act Relevance	Improve monitoring of wetland function and coverage; and support water quality standards.
Year 1	\$ 0
Year 2	\$ 0
EPA Total	\$ 0
External Funding	\$ 589,670
Lead/Partners	MBNEP, private property owners

Progress to date:

With Fowl River Watershed sediment analysis, WMP, and the restoration of the erosion-impacted northern tip of Mon Louis Island complete, attention turns to monitoring the northern tip restoration and implementing WMP recommendations. With the



marsh spit study completed, the project will be advanced into engineering and design phases, which will include a feasibility study and engineering plans for stabilization of shorelines around the transitional zone spits by a qualified coastal engineering and planning firms to develop until a hydrodynamic model is developed to inform locations of future restoration. In addition, MBNEP NFWF funding will be used to leverage funding from NRCS to execute a wetland easement on the Canon property, identified in the WMP for conservation and restoration.

Accomplishments this past year:

Ongoing Mon Louis Island Tip restoration monitoring

Plans for coming year:

ERP-2: Focus watershed management activities on priority habitats	
2.2	<i>Fowl River Watershed- NRCS Conservation Easement of Canon Property</i>
2.4	<i>Fowl River Watershed- Marine Zone Spits stabilization</i>
2.7	<i>Fowl River Watershed- Invasive species management Mon Louis Island</i>

ERP: THREE MILE CREEK WATERSHED RESTORATION

Title	Three Mile Creek Restoration
Values Supported	    
Purpose	Improve water quality and provide public access to watershed including a unique backwater environment within a highly urbanized, traditionally underserved area of the City of Mobile.
Outputs/Deliverables	Drainage area delineation- Toulmins Spring Branch; Drainage Improvement plan- Toulmins Spring Branch; 10 Conservation Corps members; Baseline monitoring data- Twelve Mile Creek
Outcomes	Improved ecosystem function and protection; and improved community understanding of ecosystem restoration and protection activities
Clean Water Act Relevance	Assist with TMDL implementation and improve monitoring of wetland function and coverage.
Year 1	\$ 0
Year 2	\$ 15,000
EPA Total	\$ 15,000
External Funding	\$ 41,000 (balance of multi-year GOMP grant)
Lead/Partners	MAWSS, Mobile County, City of Mobile, Waterkeeper Alliance, U. S. Army Corps of Engineers, U. S. Fish and Wildlife Service, U. S. EPA-Climate Ready Estuaries, NY Hudson River Trust

Progress to date:

Three Mile Creek was first placed on the State's 303(d) List of Impaired Water Bodies in 1996 for organic enrichment (OE) and low dissolved oxygen (DO) and added for pathogens in 2004. A Total Maximum Daily Load (TMDL) for OE/DO was then developed and approved in 2008. Municipal collection system failures and urban stormwater runoff were identified in the TMDL as the primary sources of impairment within the watershed.

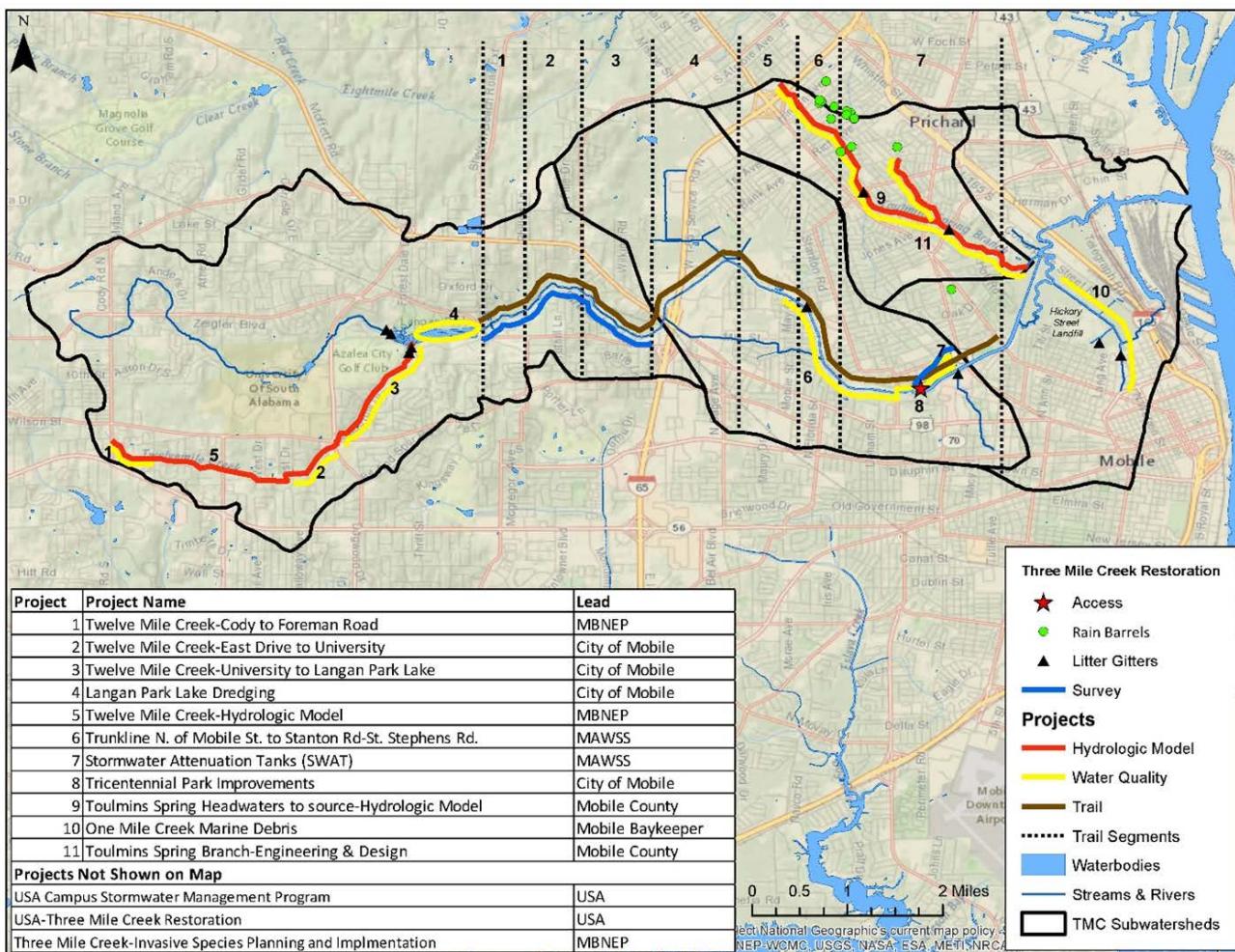
A decade ago, urban development and decaying sewer infrastructure led to increased sanitary sewer overflows throughout the watershed. Since that time MAWSS has significantly improved the sanitary sewer lines and lift stations in the watershed, leading to its release from a Federal Consent Decree. The Creek is currently listed for pathogens downstream of Mobile Street, an unnamed (midtown) tributary is listed for nutrients, and Toulmin Springs Branch remains listed for nutrients and ammonia.

The Three Mile Creek Watershed Plan includes the following objectives:

- Improve water quality by reducing nonpoint source pollution (including stormwater runoff and associated trash, nutrients, pathogens, erosion, and sedimentation), reducing outgoing pollutant loads into Mobile Bay, and remediating and restoring past effects of waste disposal;
- Address sediment sources by restoring eroded stream banks and ensuring best management practice utilization at construction sites;
- Reduce the incidence and impacts of invasive species, including the island apple snails and Chinese tallow trees;
- Recommend/prioritize restoration opportunities (within strategies for implementation);
- Provide opportunities for increased public access, recreation, and ecotourism;
- Ensure equitable distribution of environmental burdens and assets in this diversely populated watershed;

- Identify vulnerabilities in the watershed from increased sea level rise, storm surge, and precipitation events related to climate change; and
 - Identify opportunities to mitigate future impacts of development in the watershed, where feasible.

The implementation of the Three Mile Creek watershed management plan can be divided into three different overarching programs- Environmental restoration; expanding access to the water and open spaces along the creek through the creation of 10 miles of trail; and a comprehensive program of community engagement to ensure each program learns from and listens to effected residents, businesses, churches, schools and other entities to the greatest extent feasible to ensure projects undertaken meet the needs of the communities who live closest to the creek and its tributaries.



Accomplishments this past year:

In 2018, the City of Mobile designated the MBNEP designated as the coordinator of watershed restoration. In this capacity the MBNEP has held three project coordination meetings and three outreach coordination meetings. All projects have been mapped to better understand overlapping priorities, and a timeline is kept to keep track of different construction activities and inform outreach efforts.

Three Mile Creek Trail

In public outreach meetings related to development of the Three Mile Creek WMP, a commonly-expressed desire across the watershed was establishment of a Greenway/Bicycle Trail to connect communities from west of the University of South Alabama east to downtown Mobile and offer recreational and transportation opportunities. In 2014, MBNEP developed a National Park Service Outdoor Recreation Legacy Program proposal to establish the first mile leg of the Greenway near Lakeside/Tricentennial Park.

With \$386,000 secured from this funder to design and construct this section of the Greenway began. Construction of the first leg of the trail is now complete as is the installation of a kayak launch at Tricentennial park, thanks to the Mobile County Health Department and funding it received through a Sybil Smith Trust Grant.

Toulmins Spring Branch Drainage Improvements

The Coastal Alabama Conservation Corps, created to provide job opportunities to young adults from underserved communities with a focus on those living in the Three Mile Creek Watershed, began implementation of a rain barrel program to reduce stormwater runoff in the Toulmins Spring Branch (TSB) Subwatershed. Increase use of low impact development measures was recommended in the 2016 *Prichard Drainage Study*, funded by MBNEP for the Mobile County Commission, and a 2016 Master's Thesis by Enis Baltaci, *Flood Control in Toulmins Spring Branch through LID Practices*. With Conservation Corps activities completed, the project has been continued through an MBNEP partnership with Greif/Soterra and Alabama Power, installing 110-gallon, dual-rain barrel systems at the homes approximately 100 low-to-moderate income TSB residents.

Twelve Mile Creek

The MBNEP has secured a grant from the U. S. Environmental Protection Agency through the Gulf Coast Ecosystem Restoration Council and the RESTORE Act to fund stream restoration projects within the Twelve Mile Creek tributary. Twelve Mile Creek, one of six main tributaries within the Three Mile Creek Watershed, originates in the extreme southwestern portion of the watershed and flows through concrete armored channels, concrete culverts, and natural channels over three miles north and east from its headwaters to its confluence with Three Mile Creek at Municipal/Langan Park. The concrete armored channels prevent natural infiltration of stormwater to groundwater, resulting in increased water volume, flow velocity, and flooding in the stream channel. A major issue in unarmored reaches within the upper portions of Twelve Mile Creek tributary is stream-bank erosion. Sediment from channel and bank erosion has accumulated downstream, reducing creek water depth and the cross-sectional flow area, resulting in higher water flow velocities during storm events. This has led to further channel erosion and sediment transport to downstream lakes at Municipal/Langan Park, reducing its retention volume and carrying pollutants including oxygen-demanding substances and nutrients. Engineering and design have been advanced to 60% and a USACE Nationwide Permit has been secured for construction/restoration.

Three Mile Creek Invasive Species Control Plan

Also funded by the EPA through the Gulf Coast Ecosystem Restoration Council and the RESTORE Act, an Invasive Species Control Plan for the Three Mile Creek Watershed was delivered in April 2019. This plan will provide a roadmap for controlling invasive, exotic nuisance species of plants and animals to conserve or restore the Watershed and improve water and habitat quality. Of particular importance, the Plan provides a prescription for the elimination of the Watershed's iconic invasive animal, the island apple snail, with both mechanical removal of eggs around the lakes and a chelated copper drip system to eliminate snails from TMC downstream in advance of the City of Mobile's plans to restore the Langan Park Lakes through a dredging effort.

Trash-Free Waters in the Three Mile Creek Watershed

In November 2016, the first Litter Gitter, an inexpensive, highly portable trash capture device constructed of pool noodle-lined cables and a wire basket, was installed downstream of stormwater outfalls at the Maple Street dead end as a pilot project and test in the Maple Street Tributary to One Mile Creek, one of the most trash-impacted and infested urban waters in the TMC Watershed. This prototype was installed after a MBNEP Business Resources Committee (BRC) waterfront cleanup of the Maple Street Tributary netting over 200 30-gallon bags of legacy trash. From installation through June 30, 2017, more than 220 lbs/90 ft³, of litter was removed from this single litter device and a maintenance protocol was established. Vegetative debris was discarded and not included in monitored quantities, and a secondary boom was installed immediately downstream of the collector to gauge effectiveness.

In 2017, funding was secured from the EPA Gulf of Mexico Program to hire professional contractors to remove existing legacy trash, install 10 Litter Gitters at strategically-located stormwater outfalls in the TMC Watershed, and implement a trash and volunteer monitoring program at each Litter Gitter site to assess the condition of water quality and habitat and analyze constituent materials in collected trash and litter to determine weight, volume, and probable sources. Upon request by the EPA's Trash-Free Waters Program, Osprey Initiative (the contractor) incorporated the EPA's Escaped Trash Assessment Protocol (ETAP) into the constituent material analysis. Osprey is also involved in Litter Gitter installation and maintenance in both the Dog River and Bon Secour River watersheds.



Plans for the coming year:

ERP-2: Focus watershed management activities on priority habitats	
2.3	<i>Three Mile Creek Watershed- 12 Mile Creek construction</i>
2.3	<i>Three Mile Creek Watershed- Toulmins Spring Rain Barrels Initiative</i>
2.3	<i>Three Mile Creek Watershed- Historic streamway restoration</i>

ERP: DOG RIVER WATERSHED RESTORATION

Title	Harrison Tract Acquisition
Values Supported	    
Purpose	Protect water quality and bottomland hardwoods for marsh migration.
Outputs/Deliverables	Up to 300 acres of bottomland hardwood preserved in an urban environment
Outcomes	Improved ecosystem function and protection; and improved community understanding of ecosystem restoration and protection activities
Clean Water Act Relevance	Improve monitoring of wetland function and coverage.
Year 1	\$ 0
Year 2	\$ 0
EPA Total	\$ TBD
External Funding	APPLICATION TO NFWF
Lead/Partners	Mobile County

Progress to Date:

The Lower Halls Mill Creek Bottomland Hardwoods Protection Project aims to permanently preserve nearly 300 acres of undisturbed, high quality, palustrine, riverine wetlands in the Dog River Watershed. The fee-simple interest of the property would be acquired from a willing seller. A perpetual conservation easement would be placed on the acquired tract to ensure a double layer of permanent protection to the conserved property. This parcel, identified as a priority wetland preservation area in the Dog River Watershed Management Plan (WMP), comprises one of the largest and most pristine, contiguous, undeveloped acreages of bottomland hardwood wetlands remaining in the greater Dog River Watershed.

Preservation of this property protects critical habitat for threatened and endangered species, including the West Indian manatee (*Trichechus manatus*) and the American Bald Eagle (*Haliaeetus leucocephalus*), while ensuring the long-term health of the Dog River estuary by preserving the ecological function of this system. Restoration and preservation of wetlands are top priorities listed in both the Mobile Bay National Estuary Program's Comprehensive Conservation Management Plan and the WMP. Conservation of this little-known area of extreme biodiversity is critical to the future health of Dog River.

This proposed project would ensure the preservation and long-term sustainability of nearly 300 acres of pristine bottomland hardwood wetland habitat in the Halls Mill Creek subwatershed, an area projected to experience the greatest population growth in the greater Dog River Watershed over the next 20 years. As stated in the WMP, protection of these natural wetland areas will help to ensure that water quality and habitat conditions do not continue to degrade, and the ecological benefits currently provided by these areas are not lost.

This wetland tract protects the immediate downstream, tidally-influenced marshes that make up the Dog River estuary of the type which were directly impacted by the oil spill. They support many species of shellfish, finfish, birds, and other wildlife also impacted by the spill. This project will help protect, restore,

and enhance the function of critical wetland habitat to improve water quality in the estuarine areas of the Dog River Watershed.

Accomplishments to Date:

MBNEP submitted a pre-proposal for this project to the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund. This project was selected to submit a full proposal and Mobile County has agreed to be the lead.

Plans for the coming year:

Mobile County will submit a full proposal for acquisition of the site and begin due diligence including, but not limited to, consultation with property owners, appraisals, survey.

ERP: DEER RIVER WATERSHED RESTORATION

Title	Western Shoreline Restoration- Deer River
Values Supported	    
Purpose	Stabilize shorelines and restore intertidal marshes and flats.
Outputs/Deliverables	Engineering and design plans to restore one-mile shoreline and tidal creeks in the Deer River wetlands system.
Outcomes	Improved water quality; and enhanced fishery and saltwater habitats.
Clean Water Act Relevance	Improve water quality; and improve monitoring of wetland function and coverage.
Year 1	\$ 0
Year 2	\$ 0
EPA Total	\$ 0
External Funding	\$687,753
Lead/Partners	MBNEP/Baldwin County

Progress to Date:

An otherwise healthy tract of wetlands surrounding Deer River and bordered by Mobile Bay to the east and the Theodore Industrial Canal to the north is experiencing significant recession along its Mobile Bay shoreline and siltation impacting Deer River tidal creeks. Thought to result from wave activity, tidal action, and wakes from cargo ships passing through the Industrial Canal, nine acres of productive marsh habitat and shoreline have been lost since 1997 with a gaping breach penetrating the creek's eastern-most oxbow coincidental with impacts from Hurricane Katrina in 2005. The breach allows sediments and gross pollutants from the eroding shoreline and Mobile Bay to enter the wetlands tract, degrading water and habitat quality and threatening the long-term sustainability of ecological services provided by the fisheries nursery habitats of this system.

Accomplishments to Date:

MBNEP received funding for this project, has put out a Request for Qualifications and is in the process of selecting an engineering team to oversee the project design and environmental permitting.

Plans for the coming year:

MBNEP plans to have the shoreline project designed to 100% with environmental permitting in place and construction dollars received.

ERP: WEEKS BAY WATERSHED RESTORATION

Title	Marlow Stream Stabilization
Values Supported	    
Purpose	Stabilize streambanks and reduce sediment loading into Fish River.
Outputs/Deliverables	Approximately 1000 Linear feet of streambed and stream banks to be stabilized with green infrastructure re-establishing ecological function
Outcomes	Improved water quality; and reduced sediment loading in Fish River and Weeks Bay
Clean Water Act Relevance	Improve water quality; and improve monitoring of wetland function and coverage.
Year 1	\$ 0
Year 2	\$ 0
EPA Total	\$ TBD
External Funding	APPLICATION TO NFWF
Lead/Partners	MBNEP/Baldwin County

Progress to Date:

Located in the southeast corner of the Lower Fish River Watershed (HUC 031602050204), an unnamed tributary to Fish River is experiencing significant bank and channel erosion and contributing substantial quantities of sediment to downstream wetlands and ultimately the main channel of Lower Fish River. The proposed project site currently presents as a deeply incised, ephemeral, tidally-influenced tributary with unstable stream banks. The head cut is approximately 30 feet deep and side cuts also range from 20 to 30 feet deep in places. Active and on-going erosion have resulted in unstable stream banks, as evidenced by downstream deposits of sediments, and large, fallen trees that have toppled due to active erosion, undermining of root structures, and mass wasting in the riparian area.

This project consists of clearing the riparian zone of vegetation, excavation of riparian area to reconnect incised stream to its floodplain, and construction of step pools or other similar drop structures to dissipate stormwater energy as it flows downstream to Fish River. Construction would also include the installation of erosion control structures and planting of native vegetation to stabilize stream banks. The project would conclude with implementation of a long-term maintenance and monitoring plan to include an invasive species control plan.

The purpose of the proposed stream restoration project is to restore environmental health and resilience to water quality and wetlands downstream of this unnamed tributary to Lower Fish River and Weeks Bay. The goal is to restore the streambanks of this tidally-influenced tributary stream and improve the health of the Lower Fish River and the Mobile Bay estuary and their provision of ecosystem services. To achieve this goal, the following objectives have been developed: 1) Reduce the amount of sediment carried into Lower Fish River and Weeks Bay; 2) restore past impacts created by excessive sediment loads by stabilizing this severely-degraded tributary; and 3) mitigate future impacts of development.

While the Lower Fish River Watershed, located in the greater Weeks Bay Watershed in the southwestern portion of Baldwin County, did not suffer direct impacts of the Deepwater Horizon event (DWH).

stabilization of this stream segment will reduce sediment loading in Weeks Bay, improving the quality and clarity of the water necessary, for re-establishing submerged aquatic vegetation (SAV) beds in the Bay. Although this area did not fall within the geological nexus of DWH impacts, there is an ecological nexus between harmed natural resources and these degraded SAV beds, which support benthic and pelagic communities, including but not limited to, red fish, speckled trout, shrimp, blue crabs, and manatees.

ERP: DAUPHIN ISLAND WATERSHED RESTORATION

Title	Dauphin Island Causeway Shoreline and Marsh Restoration
Values Supported	    
Purpose	Stabilize shoreline and create marsh and shellfish habitat along the erosion-impacted Dauphin Island Causeway.
Outputs/Deliverables	Engineering and design plans for 10,900 linear feet of shoreline stabilization, marsh creation, and wave-attenuating oyster habitat.
Outcomes	Stabilized shoreline; and enhanced salt marsh and oyster habitat.
Clean Water Act Relevance	Improve water quality; and improve monitoring of wetland function and coverage.
Year 1	\$ 0
Year 2	\$ 0
EPA Total	\$ 0
External Funding	\$ 500,000
Lead/Partners	MBNEP/Baldwin County

Progress to Date:

State Route 193, or Dauphin Island Parkway (DIP), provides the primary vehicular access to south Mobile County and Dauphin Island, Alabama's only barrier island, and the single emergency/hurricane evacuation route from the island to the mainland. The 10,090-ft (1.91-mi) Dauphin Island (DI) Causeway, between the Heron Bay Cutoff Bridge and the Gordon Persons/Dauphin Island Bridge and lying only four feet above sea level, forms the border between the Bon Secour Bay Watershed (HUC 031602050104) to the east and the Grand Bay/Mississippi Sound Watershed (HUC 031700090201) to the west. The project area includes northern parcels owned by Mobile County with the southern balance owned by the Cedar Point Fishing Pier, Inc. Approximately 280 acres of healthy, productive salt marsh habitat, comprising both black needle rush (*Juncus roemerianus*) and smooth cord grass (*Spartina alterniflora*), lie on the western, or leeward, side of the Causeway, but the eastern or windward side is devoid of vegetative habitat. Only sparse patches of persistent common reed (*Phragmites australis*) remain along the roadway. Many of the State's commercially and recreationally-significant fish and shellfish populations rely upon salt marshes for critical nursery habitat. Additionally, it lies landward of the State's most active oyster harvest area, where production has been compromised in part by salinity fluctuations and oyster drills, whose populations explode when salinities rise during periods of drought. The proposed project will employ scientific inquiry to develop an effective design to enhance resilience related to fisheries by employing best management practices providing optimum habitat opportunities for fish, shellfish, and oysters, while buffering the energy of wind and waves affecting habitats.

This project consists of clearing the riparian zone of vegetation, excavation of riparian area to reconnect incised stream to its floodplain, and construction of step pools or other similar drop structures to dissipate stormwater energy as it flows downstream to Fish River. Construction would also include the installation of erosion control structures and planting of native vegetation to stabilize stream banks. The project would conclude with implementation of a long-term maintenance and monitoring plan to include an invasive species control plan.

Accomplishments to Date:

MBNEP received funding for this project from the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund and its Community Resilience Fund. MBNEP will partner with Mobile County who has agreed to act as a subrecipient for this project.

Plans for the coming year:

Mobile County will lead a contractor selection process and the coordination of a project team to undertake a feasibility assessment and engineering and design of this project.

ERP: MOBILE BAY WATERSHED CONSERVATION (HWC)

Title	Mobile Bay Watershed Conservation
Values Supported	    
Purpose	Promote the wise stewardship of the Tensaw Delta and foster improved fish and shellfish productivity in coastal estuaries.
Outputs/Deliverables	Acquisition of 10,000 acres of headwater habitats upstream of the Tensaw Delta
Outcomes	Improved ecosystem function and protection; improved community management of ecosystem restoration and protection activities;
Clean Water Act Relevance	Support water quality standards; and improve wetland function and coverage.
Year 1	\$ 0
Year 2	\$ 0
EPA Total	\$ 300,000
External Funding	\$ 300,000
Lead/Partners	MBNEP/AWF/AFRC

Progress to Date:

The Alabama & Mobile Bay Basin Integrated Assessment of Watershed Health shows Mobile Bay Basin catchments not along large river corridors, in urbanized regions, or across the Black Belt display high connectivity to Mobile Bay and/or high Watershed Health Index scores (based on catchment land cover and physical, chemical, and biological attributes of stream ecosystems gathered from geospatial data sets and predictive modeling results). Headwater catchments in the Mobile-Tombigbee and Alabama basins, with total area of 20,022,518 acres, are important to maintaining hydrological integrity and comprise 75% of these basins, whose waters support the highest species diversity of states east of the Mississippi, second largest intact river delta in US, and ecosystem services provided by the Mobile Bay estuary.

MBNEP secured \$150,000 annually for two years from the Healthy Watersheds Consortium to advance strategic protection of healthy habitat parcels in Mobile-Tombigbee and Alabama River basins, where 75% of catchments drain first and second order streams, key to the ecological health of the Mobile Bay estuary. A land protection atlas is being developed to identify priority parcels and possible funding sources for acquisition and protection, and then support Alabama Forest Resources Center efforts to secure upstream acreage. They have already secured the initial target of 10,000 acres in the first year of the grant.

Plans for the coming year:

1. Development of a Mobile Basin Habitat Atlas identifying healthy, headwater habitat parcels in AL portions of HUCs 0315 and 0316, vetted by forestry resource manager to identify landowners amenable to selling or conservation easement, with a matrix of potential funding mechanisms.
2. Ten thousand acres of identified priority headwater habitats placed in conservation easement before conclusion of the grant period.

In addition to these projects, MBNEP will support invasive species management at all restoration projects; improved access to beaches as part of Americans with Disabilities Act requirements, and multi-use trail developments to provide greater opportunities for residents and visitors to connect to Alabama's coastal resources.

ERP: PROVISION OF ACCESS FOR PEOPLE WITH DISABILITIES

Title	Expanding connections to nature for physically-challenged individuals
Values Supported	    
Purpose	Promote the wise stewardship of the Tensaw Delta for people whose disabilities preclude many access opportunities.
Outputs/Deliverables	Acquisition of wheelchair-accessible beach mat to provide access from handicap parking onto the beach
Outcomes	Increased public awareness, community understanding, and ownership for individuals confined to wheelchairs
Clean Water Act Relevance	
Year 1	\$ 0
Year 2	\$ 5,000
EPA Total	\$ 5,000
External Funding	\$ 0
Lead/Partners	MBNEP

Progress to Date:

Management Conference partners concerned over beach access for physically-challenged individuals confined to wheelchairs have created a non-profit organization, in part to ensure that individuals reliant upon the Americans for Disabilities Act have access to Alabama beaches. The Krewe of Kindness has already raised funds to purchase the first ADA-compliant beach mat, extending 100 feet onto the beach and installed at Dauphin Island's West End Beach with a ribbon-cutting ceremony on Friday, May 24, 2019.

Plans for the coming year:

MBNEP will purchase an additional ADA-compliant beach mat and facilitate installation to provide access from parking areas over sand to beaches or shoreline resources

PROJECT DETAILS: TECHNICAL ASSISTANCE/ CAPACITY BUILDING

Watershed-based, grassroots organizations are the cornerstone of community-based efforts to promote the wise stewardship of the water quality and living resources of Mobile Bay's estuarine waters. The mission of MBNEP is to provide the necessary tools to support those efforts, accomplished through the delivery of technical assistance, the building of capacity through development of outreach and decision support materials for their use, provision of specialized training and education opportunities, and engagement of volunteers in hands-on learning experiences that cultivate stewardship while improving the quality of Alabama's coastal resources. During the next fiscal year, MBNEP will support and help build capacity of these critical groups and other partners to successfully address our mission.

MBNEP will support a program that provides data while cultivating stewardship in volunteer monitors from grassroots organizations. Facilitation of the Coastal Alabama Clean Water Partnership will provide a neutral forum for bringing all stakeholders to the table to ensure that sources and impacts of non-point source pollution are addressed.

Outcomes from these activities will include increased knowledge about science, monitoring, habitat management, and restoration of the Mobile Bay estuarine environment and increased community ownership and involvement in local environmental protection activities.

TAC: CITIZEN SCIENCE/VOLUNTEER MONITORING

Title	Citizen Science/Volunteer Monitoring
Values Supported	 
Purpose	Expand citizen stewardship of the estuary through voluntary water quality monitoring activities.
Outputs/Deliverables	Train 20 Water Quality Monitoring volunteer monitors.
Outcomes	Increased knowledge about science, monitoring, habitat management, and restoration of the Mobile Bay estuarine environment; and increased community ownership and involvement in local environmental protection activities
Clean Water Act Relevance	Improve water quality monitoring.
Year 1	\$ 19,284 (\$5,000 plus reprogram of \$14,284)
Year 2	\$ 0
EPA Total	\$ 19,284
External Funding	\$ 0
Lead/Partners	AWW/MBNEP, CAC

Progress to date:

Alabama Water Watch (AWW) is a citizen volunteer, water quality monitoring program covering all of the major river basins of the state. The mission of AWW is to improve both water quality and water policy through citizen monitoring and action. Established in 1992, AWW is a national model for citizen involvement in watershed stewardship, largely because of its three interrelated components: citizen monitoring groups, a university-based program, and a non-profit association.

AWW uses EPA-approved monitoring plans with a community-based approach to train citizens to monitor conditions and trends of their local waterbodies. With a “data-to-action” focus, AWW helps volunteers collect, analyze, and understand their data to make positive impacts. The AWW vision is to have a citizen monitor on every waterbody in Alabama. The goal of AWW is to foster the development of statewide water quality monitoring by:

- Educating citizens about water issues in Alabama and the world.
- Training citizens to use standardized equipment and techniques to gather credible water information.
- Empowering citizens to use their data to protect and restore their local waters.

In the coming year, MBNEP will improve community ability to participate in ecosystem-based management actions by engaging grassroots groups in collecting water quality and biological data that supports watershed planning through expanded participation in Alabama Water Watch activities. The MBNEP Community Action Committee has identified a need for training opportunities to provide citizens with the knowledge and skills necessary for effectively participating in resource management decisions at the local, state, and federal levels. AWW workshops are envisioned as a likely component in this strategy.

Plans for the coming year:

In the coming year, MBNEP and the CAC will hold AWW workshops to train or recertify at least **20 volunteer water monitors**. Monitors will learn the principles of Alabama Water Watch and how to monitor and evaluate physical, chemical, and biological features of water. Workshops will be offered free of charge

to coastal residents and qualify for continuing education units with Auburn University. Volunteer water monitor training will concentrate in the following areas:

- **Bacteriological monitoring:** Detect levels of E. coli and other coliform bacteria in water as indicators of contamination. Determine if water is safe for drinking, swimming, and aquatic life.
- **Water chemistry monitoring:** Test physical and chemical characteristics of water to determine pollution sources and long-term trends in water quality. Six parameters are measured and results can be compared with standards that define conditions for healthy waterbodies.

To further expand volunteer water quality monitoring efforts, the CAC has identified a need to develop a volunteer water quality monitoring strategy which would assess volunteer monitor needs, determining agreed upon methodology, strategies to increase the number of volunteer monitors testing for bacteria, and promoting better coordination and policy changes related to testing methodologies with ADEM and ADPH.

In addition, the CAC has identified a need for training opportunities to provide citizens with the knowledge and skills necessary for effectively participating in resource management decisions at the local, state, and federal levels. The CAC has identified training priorities as follows:

- Watershed Education;
- Stormwater runoff education, including how the MS4 permit works;
- Volunteer water quality monitoring;
- Volunteer biological monitoring;
- Volunteer shoreline monitoring; and
- Create a Clean Water Future Implementation.

Objectives 2019-2020:

1. Creation of a Comprehensive Volunteer Water Quality Monitoring Strategy
2. Train 20 citizens to undertake volunteer water quality monitoring.
3. Continue to support development of “Water Rangers” online data portal for volunteer data entry.

TAC: MUNICIPAL STAFF SUPPORT/TRAINING

Title	Municipal Staff Support/Training
Values Supported	     
Purpose	Build the capacity of municipal staff to better plan for and manage natural resources within the government setting.
Outputs/Deliverables	20 municipal staff trained in use of hydrologic models
Outcomes	Improved management of coastal resources
Clean Water Act Relevance	Improve management of water resources and quality
Year 1	\$ 2,500
Year 2	\$ 0
EPA Total	\$ 2,500
External Funding	\$ 0
Lead/Partners	MBNEP

Progress to date:

As watershed planning continues and hydrologic models are developed for all tidally influenced watersheds, it is imperative that these plans are institutionalized within local government to inform resource management decisions. To ensure these tools are used to the greatest extent possible, MBNEP will engage in a training program for local municipal staff.

Plans for the coming year:

One hands-on hydrologic model usage training with provision of subsequent modeling support

PROJECT DETAILS: EDUCATION AND PUBLIC INVOLVEMENT

Watershed-based, grassroots organizations are the cornerstone of community-based efforts to promote the wise stewardship of the water quality and living resources of Mobile Bay's estuarine waters. The mission of MBNEP is to provide the necessary tools to support those efforts, accomplished through the delivery of:

- Field Trips that highlight coastal issues, possibilities
- outreach and decision support materials,
- specialized training and education opportunities, and
- volunteer engagement in hands-on learning experiences

These activities cultivate stewardship while improving the quality of Alabama's coastal resources. During the next fiscal year, MBNEP will support and help build capacity of these critical groups and other partners to successfully *"promote the wise stewardship of the water quality and living resources of coastal Alabama."*

EPI: MANAGEMENT CONFERENCE SUPPORT/CULTIVATION

Title	Management Conference Support
Values Supported	     
Purpose	Sustain and expand stakeholder involvement in the implementation of the CCMP 2018-2023.
Outputs/Deliverables	Comprehensive trash campaign encompassing monitoring of debris, waterway restoration, incentive programming, and community outreach
Outcomes	Improved community understanding about the issue of trash and how to improve management of this waterway impairment
Clean Water Act Relevance	Support water quality standards; improve water quality monitoring, Support TMDL implementation, and improve monitoring of wetland function and coverage.
Year 1	\$ 4,000
Year 2	\$ 54,000
EPA Total	\$ 58,000
External Funding	
Lead/Partners	MBNEP/All members of the Management Conference

Progress to date:

Education and involvement of the business community is key for the MBNEP in reaching its goals and objectives in the CCMP. Efforts to engage and inform key stakeholders of past efforts and future projects of the MBNEP are accomplished in various ways:

- Incorporate the “Create A Clean Water Future” (CCWF) branding broadly in local business practices to have those businesses become identifiable with that brand;
- Host breakfast meetings and “Lunch and Learn” presentations for civic organizations, business leaders, municipalities, and local media outlets to share scientific data and identify areas of concern, and introduce specific projects and priorities tailored to the individual groups;
- Conduct tours of critical areas of interest or concern to educate the private sector on the value of our coastal resources and the economic impact on our community;
- Motivate constituents to adjust current behaviors and practices to help preserve working waterfronts and fishing communities. Share watershed management plans and strategies to help ensure community commitment to the environment; and
- Encourage and facilitate employee involvement in service opportunities to support the CCWF campaign. Facilitate strong communication among business leaders and environmental partners.

Plans for the coming year:

Education, encouragement, and marketing campaigns are all part of the plan to build strong relationships and “buy-in” from local business leaders. These efforts will prove effective in providing the tools to support community-based efforts to promote wise stewardship of the water quality and living resources of the Mobile Bay and Delta.

Develop and implement a comprehensive **Trash** campaign engaging each of the Management Conference Committees to highlight and educate the challenges related to reducing trash and promoting awareness in creative and non-traditional ways.

EPI: SEMI-ANNUAL NEWSLETTER

Title	Semi Annual Newsletter
Values Supported	     
Purpose	Publish semi-annual newsletter to highlight emerging issues, project progress and other issues of interest
Outputs/Deliverables	Two Newsletters
Outcomes	Increased public awareness of environmental issues; increased knowledge of environmental issues and stressors; and increased knowledge of activities being undertaken to protect estuarine resources
Clean Water Act Relevance	
Year 1	\$ 8,000
Year 2	\$ 8,000
EPA Total	\$16,000
External Funds	\$16,000
Lead/Partners	MBNEP, ADCNR State Lands Division

Raising environmental awareness involves translating the technical language of a natural science or related field into terms and ideas that a non-scientist can readily understand. It also involves doing it in a way that is entertaining and interesting to the public. The *Alabama Current Connection* is a joint newsletter published by the ADCNR State Lands Division - Coastal Section and the MBNEP to highlight current projects, management conference activities, and other issues of interest to coastal residents.

Plans for the coming year:

1. Produce two newsletter magazines.

EPI: EDUCATIONAL/INFORMATIVE SIGNAGE

Title	Educational/Informative Signage
Values Supported	     
Purpose	Educate community about watershed, ecosystem characteristics and project components.
Outputs/Deliverables	Educational/Informative Signage at public locations adjacent to project sites
Outcomes	Increased public awareness of environmental issues
Clean Water Act Relevance	
Year 1	\$ 5,000
Year 2	\$ 0
EPA Total	\$ 5,000
External Funding	\$ 0
Lead/Partners	MBNEP

Progress to date:

As part of initial watershed plan implementation, MBNEP works with appropriate municipalities and counties to install street signage to educate people about what watershed they are currently in and how the watershed connects to the bay. To date these signs have been installed in the following watersheds:

- Three Mile Creek
- Fowl River
- Eight Mile Creek
- D’Olive Creek

In addition, MBNEP develops and installs interpretive signage at restoration sites where appropriate to educate visitors about where they are in the watershed, what makes up the surrounding ecosystem, and what types of restoration activity occurred. These signs have been installed at Helen Wood Park, Alligator Alley, Steele Creek Lodge, Dog River Park, and Brooks Park.

Plans for the coming year:

1. Install watershed signage in Bayou La Batre, Weeks Bay, Bon Secour watersheds.
2. Promote cultural/heritage signage opportunistically as a component of each project.

EPI: PUBLIC OUTREACH: CLEAN WATER FUTURE CAMPAIGN

Title	Public Outreach: Clean Water Future Campaign
Values Supported	
Purpose	Educate the residents of Baldwin and Mobile counties about ways to decrease harmful stormwater runoff.
Outputs/Deliverables	Marketing campaign involving production of educational materials available on a website (www.CreateACleanWaterFuture.com) or distributed at community meetings and events
Outcomes	Increased public awareness of environmental issues; and increased knowledge of environmental issues and stressors
Clean Water Act Relevance	
Year 1	\$ 15,041
Year 2	\$ 0
EPA Total	\$ 15,041
External Funding	\$ 0
Lead/Partners	MBNEP

Progress to date:

With stormwater runoff providing the number one source of pollution to American waters, MBNEP will continue to work with a Coastal Alabama Stormwater Team (CAST) to conduct a stormwater media campaign, Create a Clean Water Future, to encourage wise stewardship of our estuarine waters and raise awareness of the importance of clean water to the recreational and commercial uses of our waters, the economic consequences of poor stormwater management and the ensuing damage to our environments, the cost of prevention versus the cost of restoration. During the summer of 2018, a short video is being developed, through the auspices of the Trash Free Waters program, to highlight the effectiveness of Litter Gitters in reducing the amount of trash floating downstream after a rain event or in instances of high flow.

Plans for the coming year:

The Create a Clean Water Future web site is actively maintained and updated to provide information about pollutants and resources to avoid or mitigate them, along with tips for children, teens, adults, retail businesses, restaurants, and schools to ensure healthy waters for generations to come. Phase I of the CCWF campaign, falling under EPI strategies, involves raising awareness. Phase II of the CCWF campaign involves building capacity to make appropriate decisions that result in cleaner, less-impaired coastal Alabama waters.

Objectives for 2019-2020 year:

1. MBNEP will create service opportunities to engage business “teams” in participating in restoration of cleanup work.
2. Educate non-environmental organizations and the public on community stewardship programs and educational opportunities through social media.
3. Incorporate a calendar of stewardship events on the Create a Clean Water Future website (www.CreateACleanWaterFuture.com).

EPI: PUBLIC OUTREACH: SOCIAL MEDIA, WEBSITE, VIDEO

Title	Public Outreach: Social Media, Website, Video
Values Supported	     
Purpose	Educate the public about the things that are valued most about living in coastal Alabama.
Outputs/Deliverables	
Outcomes	Increased public awareness of environmental issues; and increased knowledge of environmental issues and stressors
Clean Water Act Relevance	
Year 1	\$ 30,000
Year 2	\$ 19,952
EPA Total	\$ 49,952
External Funding	\$ 0
Lead/Partner	Community groups, Management Conference members

Progress to date:

MBNEP will continue to reach out to stakeholders through available social media fora (Facebook, Instagram, Twitter, etc.). With social media occupying increasingly significant presence in people's lives, an active, thoughtful, and strategic social media presence will facilitate access to an audience unavailable through more traditional means.

Plans for the coming year:

MBNEP will also continue to create videos to document local heritage and culture for using in educating communities and the general public about how best to protect what is valued most.

Objectives for 2019-2020 year:

1. Strategically follow a regular schedule of posts on available social media fora to build citizen stewardship and educate stakeholders about issues and human impacts threatening the water quality, living resources, habitats.
2. Compile the Heritage and Culture sections of watershed plans to identify video story lines, produce video content, and evaluate reach and knowledge gained through surveys.

EPI: SPECIAL EVENTS

Title	Special Events
Values Supported	     
Purpose	Educate the public about the things that are valued most about living in coastal Alabama.
Outputs/Deliverables	Sponsorships and outreach materials for at least 5 community events
Outcomes	Increased public awareness of environmental issues; and increased knowledge of environmental issues and stressors
Clean Water Act Relevance	
Year 1	\$ 7,500
Year 2	\$ 7,500
EPA Total	\$ 15,000
External Funding	\$0
Lead/Partner	Community groups, Management Conference members

Progress to date:

Special events like the Dauphin Island Sea Lab's Discovery Day, the Alabama Coastal Birdfest, (Three Mile) Creek Fest, and Earth Day provide positive and engaging opportunities to educate the public about protecting the things most valued about living in Coastal Alabama. MBNEP will continue to provide a presence and a credible source of information at local environmental events in the two coastal counties.

Plans for the coming year:

1. Maintain an annual calendar of festivals to coordinate support and participation.
2. Incorporate environmental themes into Bayou La Batre's Blessing of the Fleet.

EPI: COMMUNITY OUTREACH PROMOTIONAL MATERIALS

Title	Community Outreach Promotional Materials
Values Supported	     
Purpose	Promote messages related to protecting the Mobile Bay estuary.
Outputs/Deliverables	Assorted items (SWAG) with estuary messages
Outcomes	Increased public awareness of environmental issues; and increased knowledge of environmental issues and stressors
Clean Water Act Relevance	
Year 1	\$ 5,000
Year 2	\$ 5,000
EPA Total	\$10,000
External Funding	\$ 0
Lead/Partner	MBNEP

Progress to date:

MBNEP's purpose is to provide tools and support community-based efforts to promote wise stewardship of the water quality and living resource base of Mobile Bay, its tributaries, and the Mobile-Tensaw Delta. Public education is essential to raising environmental awareness and promoting behaviors that will lead to sustainability of the resources that draw people to the coast. In the next fiscal year, MBNEP will continue development of materials for use in a multi-pronged community outreach program that includes an updated communication plan establishing goals, identifying target audiences, determining what information should be disseminated and how, implementing actions, and evaluating results.

Plans for the coming year:

1. Purchase promotional items to support outreach at local events.

MPA: PROGRAM IMPLEMENTATION

The MBNEP Program Office works closely with all of the MBNEP Management Conference members on initiatives related to the CCMP. The Management Planning and Administration (MPA) budget provides resources for the Program Office to continue program planning, development, implementation, evaluation, and reporting. The staff provides organizational and logistical support for all of the Management Conference committee meetings and coordinates/communicates as necessary with appropriate groups, including user groups, State, local, and Federal agencies, and professional groups relevant to CCMP development and implementation. Staff will provide overall coordination for implementation of the CCMP; prepare EPA-required documents; develop and administer grants/contracts; monitor projects including coordination of work plans, progress reports, and draft/final reports with project leads; coordinate project work plans and activities with other local, State and Federal agencies; and provide for overall program coordination. This amount includes all the necessary items for program administration including salaries, benefits, supplies, equipment, etc.

The Dauphin Island Sea Lab is the administrative sponsor of the MBNEP and has a federally approved indirect rate of 43.2%. The cost of DISL administrative support is discounted for the MBNEP to 15% of all expenditures related to the U. S. EPA grant and any other small external grants awarded to the MBNEP. Based on a 15% indirect charge, the MBNEP is able to capture the 28.2 % unrecovered costs as additional match for the program. For all large external grants, the DISL follows federal regulations of charging 43.2% indirect costs to all direct activities and to the first \$25,000 of each contract executed as part of each external grant.

A hallmark of the National Estuary Program is the convening of a “Management Conference” to guide the **assessment of trends** in water quality, natural resources, and uses of estuary; **identification of causes** of environmental problems; **development of relationships** between pollutant loadings to the estuary and potential uses and quality of the estuary; **development of the CCMP** and other action plans for restoring and maintaining the chemical, physical, and biological integrity of the estuary; and **coordination of the collective implementation** of the CCMP. At its annual retreats, MBNEP’s Executive Committee (EC) evaluates the functioning of the current Management Conference structure and assesses progress on implementation of the CCMP.

Vision: Alabama’s estuaries, where rivers meet the sea, are healthy and support ecological functions and human uses.

Purpose: The MBNEP brings together an engaged and diverse community committed to integrating environmental health with community and economy to develop consensus on what our ecosystem priorities are, how to achieve them, and how to facilitate/promote their implementation.

Mission: To provide the necessary tools and to support community-based efforts to promote the wise stewardship of the water quality and living resources of the Mobile Bay estuary and the Mobile-Tensaw Delta.

Goals:

- Water that is fishable, swimmable, and drinkable (“meeting or exceeding State’s designated uses)
- Conservation, restoration, and protection of critical habitats
- Community who understands and supports the value of our coastal resources
- Integration of environmental health with a balanced economy

During the 2012 Executive Committee Retreat, the purpose, goals and objectives were refined into a Balanced Scorecard, a [strategic planning and management system](#) that is used extensively in business and industry, government, and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals.

Mobile Bay NEP strategy map

Mission: The mission of the MBNEP is to promote wise stewardship of the water quality characteristics and living resource base of the Mobile Bay estuarine system.

2015 Map

Constituents: Citizens, Government, Business and Industry, Academia, and Nonprofits



Internal Processes: (what do we need to do well)

Align around areas of concern

Identify areas of concern

Utilize stakeholder input

Use science to identify key stresses

Execute with/through Partners

Develop watershed /habitat management plans

Manage and execute projects

Develop and foster key partnerships

Communicate and engage

Share scientific data and NEP priorities tailored to individual audiences

Educate, motivate, advocate constituents to change behaviors

Build regional capacity in the community and our partners

Our foundation for success (skills, capabilities, finances)

Scientific credibility

Community commitment to the environment

Financial stability

Transparency and accountability

Clear and effective communications

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During the next fiscal year, MBNEP will continue to promote greater coordination and participation of Management Conference members in implementing the Updated CCMP 2018-2023 through improving program transparency, communications, and community awareness. This will be done by the development of a communications plan for promoting the updated CCMP, coordination of special events to expand MBNEP partnerships, and continuously improving and expanding our website to provide more interactivity and highlight management conference efforts.

Expected outcomes related to these activities include an increased understanding of activities undertaken by MBNEP and its partners to protect and conserve the water quality, living resources, habitats and human uses of the Mobile Bay estuary, increased recognition of the activities of the MBNEP, increased knowledge about the issues impacting the health of the Mobile Bay estuary, and improved financial planning and tracking.

STAFFING PLAN

Position	Employee	Responsibilities
Director	Roberta Arena Swann	Generates financial and political support for program; participates in regional and national initiatives associated with program; engages in project identification and design; builds collaborative teams for accomplishing objectives; liaison between program and local governments and other public agency leaders; spokesperson for estuary related activities and needs; and oversees program activities.
Deputy Director	Sherry-Lea Bloodworth Botop	Assists with overall management of program priorities, project development; cultivation of stakeholders; communications, outreach, and resource development.
Restoration Program Manager	Katie Dylewski	Oversight of all restoration-related projects including project design, implementation, coordination and monitoring; and develops, initiates and coordinates baseline data collection.
Watershed Protection Coordinator	Tom Herder	Conducts technical writing and preparation of grant applications; develops watershed implementation program projects; conducts educational programs in schools and to community groups; and facilitates the transfer of technical information.
Contracts and Grants Manager	Tiffany England	Maintains budget, project files, financial record keeping, grant reporting; coordinates logistics and promotional materials for educational outreach and special events.
Restoration, Science & Monitoring Coordinator	Jason Kudulis	Coordinates activities of Science Advisory Committee in their development of a watershed monitoring framework to measure ecosystem health and the citizen science program.
Community Outreach Coordinator	Kelley Barfoot	Manages distribution of public information including press, website, social media, outreach materials; prepares program activity reports for grantors/public; other
Community Relations Manager	Vacant	Cultivates relationships with a focus on the business community; builds and supports the Business Resources Committee through recruitment of key individuals; enlists local business community participation in watershed management planning and implementation; communicates the value of MBNEP through special events and media.
Watershed Management Coordinator	Christian Miller	Works with communities to develop watershed management plans and implement initiatives of the Alabama Clean Marina Program and the Alabama Clean Water Partnership.
Program Administrator	Bethany Dickey	Provides services associated with office manager as well as technical editing, social media strategies.
Program Coordinator	Madison Blanchard	Supports projects using GIS, logistical support; coordinator of Rain Barrels Initiative

TRAVEL

The administration amount includes \$15,000 for travel related to outreach and technology and information transfer. Program staff will participate in regional, state, and national conferences and meetings relevant to estuarine management. Attendance at Association of National Estuary Programs workshops and EPA workshops / meetings will be stressed.

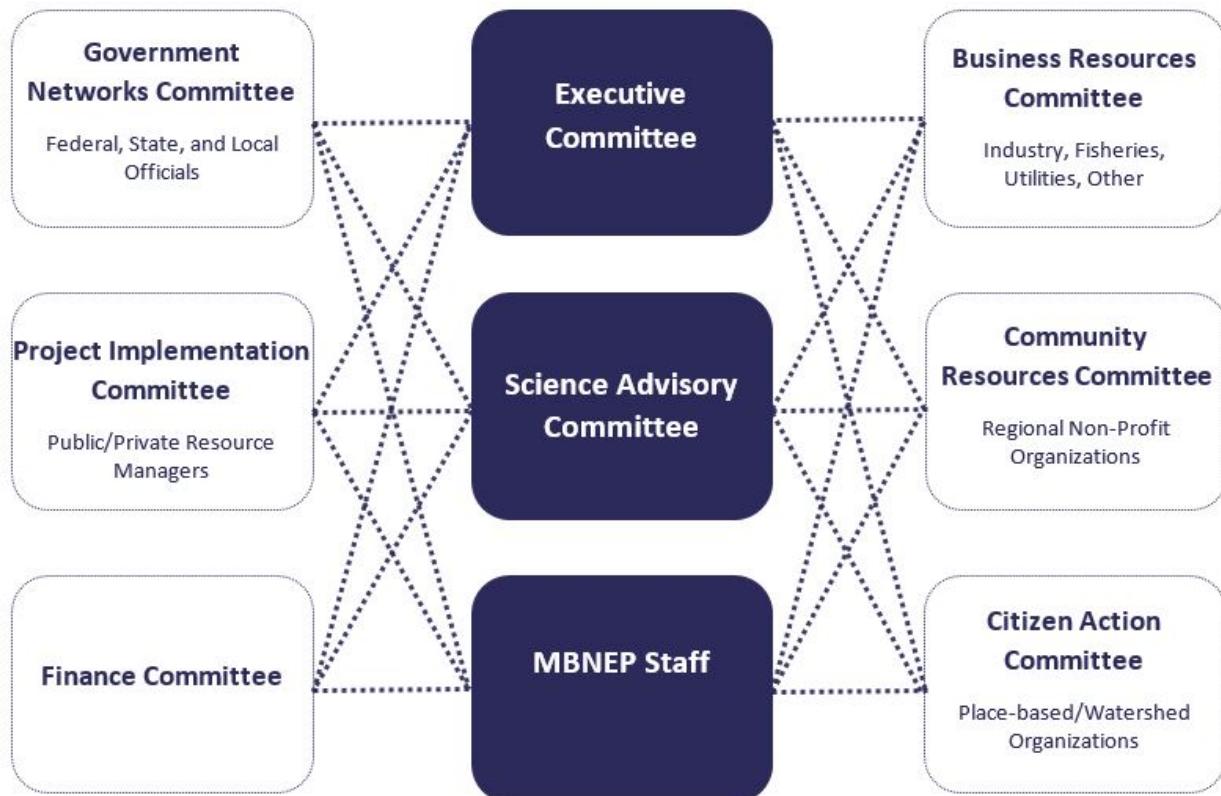
INDIRECT COST RATES

Indirect Costs are charged at a rate of 15% on all cash expenditures (grant and matching funds) of the MBNEP by the Dauphin Island Sea Lab. DISL allowable Indirect Cost negotiated rate with Federal Government is 43.2%. The unrecovered indirect of 28.2% is provided to the MBNEP by DISL/MESC as an in-kind matching contribution. Additional in-kind and support services not covered by indirect costs are also provided to the MBNEP by DISL on a case by case basis.

PARTNERS

THE MANAGEMENT CONFERENCE

MBNEP initiated a reorganization of the Management Conference in 2006. The structure was revised to better provide a mix of Policy Makers (both public and private), Implementers (both public and private), and Grassroots (community groups and citizens) to ensure expanding support for CCMP implementation and identification and engagement of emerging issues related to CCMP objectives. The ultimate goal is an increased ability to function as a community capacity builder and provide improved public services in the environmental area to our coastal communities. The Mobile Bay NEP Management Conference now consists of six main committees: Community Action, Community Resources, Government Networks, Science Advisory, Business Resources and Project Implementation Committees.



- **The Community Action Committee** is composed of representatives of environmental grassroots organizations who work together to network, share information, develop issues, and provides cooperative training.
- **The Business Resources Committee** brings together a balance of interested community leaders from industry, business, environmental services, fishing, tourism and other professional fields to identify commonalities among sectors to resolve coastal issues that impact their interests and develop resources and funding.
- **The Government Networks Committee** is made up of State agency heads, regional government administrators, and local officials of southern Alabama area. The goal of this committee is to educate local officials about State priorities and programs and provide a venue for local officials to more effectively communicate local needs.
- **The Project Implementation Committee** includes representatives of resource management agencies and organizations that undertake projects related to CCMP objectives and goals.

- **The Science Advisory Committee** includes experts from the various scientific disciplines who provide insights, research and a sound basis to be used by the other committees in their decision-making processes.
- **Community Resources Committee** is made up of regional and local non-profit organizations who are able to provide training, advocacy and educational opportunities to community members and grassroots groups.
- **The Finance Committee** includes community leaders that are committed to assisting in the development of non-Federal matching dollars to implement activities of the CCMP.
- **The Executive Committee** is made up of representatives from each of the four main committees, EPA, the Science Advisory Committee, the Finance Committee and three at-large members – develops policies on issues and funding, reviews/approves work plans and budgets, evaluates the performance of the Director, and sets financial goals.

A key principle of the Management Conference is to coordinate and cooperate with other ongoing resource management activities to avoid unnecessary duplication. In this regard, the program office plays a major role in coordinating estuary projects and outreach activities, thus providing a more far-reaching benefit than that of simply CCMP project management. During the next program year, MBNEP will continue to promote this management structure as a mechanism for garnering stakeholder ownership in implementing the CCMP.

FEDERAL PARTNERS



EPA Allocation and Non-Federal Matching Share

Each year the MBNEP receives an allocation from EPA to support activities geared toward achieving the objectives of the CCMP. These funds require a one to one match. Our current program is being supported by 2.9 million in federal dollars with more than 16 million dollars in match.



Gulf of Mexico Program (GOMP)

The Gulf of Mexico Program facilitates collaborative actions to protect, maintain, and restore the health and productivity of the Gulf of Mexico in ways consistent with the economic well-being of the Region. At present, MBNEP is the recipient of a \$488,711 grant to implement a comprehensive trash abatement program in the Three Mile Creek Watershed.



Mississippi Alabama Sea Grant Consortium (MASGC)

The Mississippi Alabama Sea Grant Consortium is dedicated to activities that foster the conservation and sustainable development of coastal and marine resources in Mississippi and Alabama. Sea Grant is NOAA's primary university-based program in support of coastal resource use and conservation. The MASGC is an important partner to MBNEP in implementing many CCMP actions. MASGC provides technical expertise, program development assistance, and valuable research and is a leader of many initiatives related to CCMP objectives. At present, MBNEP is a member of the MASGC Advisory Council and the Director sits on the MBNEP Executive Committee.



U. S. Army Corps of Engineers Participation (USACE)

The US Army Corps of Engineers (USACE) actively participates in the implementation of many of the actions of the CCMP. At present, the Corps is a member of the City of Mobile Mayor's Task Force to coordinate implementation of the Three Mile Creek Watershed Plan. In addition, MBNEP works closely with the corps to coordinate permitting and environmental project planning.

STATE RESOURCES



AL Department of Conservation and Natural Resources State Lands (ADCNR)

Because ADCNR has a long term interest in Alabama's Coastal Resources and the statutory responsibility for the conservation, management, and protection of these resources through its State Lands Division, Marine Resources Division, Wildlife and Fresh Water Fisheries Division, State Parks Division and particularly through the Alabama Coastal Area Management Program, it has entered into a memorandum of agreement to provide annual funding to MBNEP as part of its non-Federal match requirement, as an investment toward implementation of the CCMP. MBNEP has received over \$750,000 over the past nine per year and additional NOAA related grants, which are used to produce *Alabama Current Connection*. *Alabama Current Connection* is a joint newsletter published by the ADCNR State Lands Division Coastal Section and the MBNEP to highlight current projects, management conference activities, and other issues of interest to coastal residents.



State of Alabama

MBNEP met with the head of ADECA on March 17, 2006 to request additional State funding support for the program. After much discussion and initial support by ADECA, MBNEP decided on pursuing other opportunities within State government for ongoing support. In 2007, MBNEP was added as a line item in the State budget through the auspices of the Dauphin Island Sea Lab for a designated amount of \$250,000 in 2007.

Funding Year	State Amount	ADCNR Amount
2013-2014	\$76,088	\$88,000
2014-2015	\$76,088	\$88,000
2015-2016	\$76,088	\$98,000
2016-2017	\$76,088	\$98,000
2017-2018	\$76,088	\$98,000
2018-2019	\$76,888	\$98,000
Total State Funding	\$456,528	\$568,000

LOCAL RESOURCES

The following local governmental entities provide continuing financial assistance to the MBNEP on an annual basis to support the implementation of the CCMP. Although these communities only allocate funding annually, MBNEP anticipates expanded support from these and other coastal communities in the future. MBNEP will reach out to Satsuma, Chickasaw, Bayou La Batre, Spanish Fort, Dauphin Island, Gulf Shores and Foley for additional investment. Past annual investment from municipalities includes:

Revenues	Year Two 2019-2020
EPA	625,000.00
State Appropriation	76,088.00
ADCNR	98,000.00
Baldwin County	50,000.00
Mobile County	25,000.00
City of Mobile	20,000.00
City of Daphne	50,000.00
City of Spanish Fort	5,000.00
City of Fairhope	5,000.00
City of Foley	10,000.00
City of Gulf Shores	5,000.00
Other Small Cities	10,000.00
Total Revenues	979,088.00
Total Match	354,088.00

IN-KIND CONTRIBUTIONS

MBNEP depends on volunteer support and local contributions or other in-kind services to achieve program success. On a yearly basis, in-kind environmental contributions account for over half of the non-federal share of match that MBNEP is required to raise as investment in implementing the CCMP. This in-kind support is generated from volunteer labor hours related to activities including but not limited to oyster gardening, crab monitoring, trap removals, and participation in area events. Other in-kind services include use of city-owned machinery, the value of land donated for conservation purposes, and private donations to cover expenses incurred for events and activities carried out by local grassroots organizations and sponsored by MBNEP.

PART TWO: PAST YEAR ACCOMPLISHMENTS

Mobile Bay National Estuary Program Semi Annual Report 2019-2020

The mission of the Mobile Bay National Estuary Program (MBNEP) is to promote wise stewardship of the water quality and living resources of Alabama's estuarine systems. Funded in part by the U. S. EPA and administratively sponsored by the DISL, MBNEP is a non-regulatory program, bringing together citizens; local, state, and federal government agencies; businesses and industries; conservation and environmental organizations; and academic institutions to meet the environmental challenges that face the unique and imperiled resources that characterize our coastal estuaries. The MBNEP is part of the Sea Lab's Coastal Policy Program.

THE CCMP

In the first year of the updated *Comprehensive Conservation and Management Plan for Protecting Alabama's Estuaries and Coast 2019-2023*, the draft CCMP, nearing completion and submission, is already under implementation. This road map to protection of Alabama's coastal resources was produced to support what people along the coast value most: *Access to the Water and Open Spaces, Beaches and Shorelines, Fish and Wildlife, Heritage and Culture, Environmental Health/Resilience, and Water Quality*. The CCMP is organized into five sections: Ecosystem Status and Trends, Ecosystem Restoration/Protection, Technical Assistance and Capacity Building, Community Stewardship, and Program Implementation. What follows is an overview of accomplishments by a Management Conference that includes community leaders, academia, businesses and industry, government entities, and grassroots and environmental groups in their efforts to implement strategies of the CCMP.

Mobile Bay National Estuary Program Project Status		
CCMP Update Year 1, 2018 to current		
Project/Activities	Funding	Status 3/31/2019
Ecosystem Status and Trends		
Coastal Monitoring		
Coastal Monitoring Program	EPA	Ongoing post-restoration monitoring in D'Olive and Fowl Creek watersheds.
Sediment Studies/Data Development		
Habitat Mapping	ADCNR	Additional wetlands and trends analysis yet to be completed.
Ecosystem Restoration and Protection		
Watershed Restoration		
Watershed Planning (Funds Available)	EPA	In progress
Coastal AL Comprehensive WMP	Restore	In progress
D'Olive, Tiawasee, Joes Branch,		
D'olive WMP Update/Stormwater Impl	ADCNR	On-going stormwater implementation with D'Olive WMP update yet to be initiated
Tiaswasee Creek Restoration	ADEM	Engineering and design for Tiawasee-Montclair Restoration in progress.
Bayou La Batre, West Fowl, DI		
Dauphin Island Causeway Study and E & D	NFWF	RFQ distributed to potential contractors; anticipated start in summer 2019.
Deer River	NFWF	RFQ distributed to potential contractors; anticipated start in summer 2019.
Technical Assistance and Capacity Building		In progress
Volunteer Monitoring	EPA	In progress
Volunteer Monitoring Coordination	EPA	MBNEP continues to equip and reimburse volunteers for AWW reagents and supplies. We continue to foster better coordination between ADEM and AWW.
Citizen Science	EPA	In progress
Education and Public Involvement		
Management Conference	EPA	In progress
Current Connections Newsletter	EPA	In progress
Current Connections Newsletter/Bays and Bayous	ADCNR	2018 Bays and Bayous was held in November 2018
Interpretive Signage	EPA	In progress
Video Production& Web Services	EPA	MBNEP continues to participate in local events to encourage the wise stewardship of the water quality and living resources of Alabama's estuaries.
Special Events	EPA	MBNEP continues to provide promotional materials to engage stakeholders in wise stewardship of Alabama's Estuaries.
Promotional Materials	EPA	With a website developed and actively maintained, MBNEP continues to encourage businesses, schools, and other stakeholder organizations in managing impacts of stormwater and nonpoint source pollution.
Create a Clean Water Future Campaign	EPA	
Program Planning and Administration		
EPA Program Management and General Expenses	EPA	In progress
ADCNR Coastal AL Comp WMP General Expenses	ADCNR	In progress
Disl Indirect Charge	EPA/ADC	In progress
DISL Indirect Charge- External Grants	EXTIDC	In progress