Comprehensive Conservation Management Plan

Protecting what we value most about living in coastal Alabama

Year One
Fiscal Year 2013-2014

Respect The Connect™

Mobile Bay National Estuary Program
www.mobilebaynep.com
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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 watershed, developing Comprehensive Conservation and Management Plans (CCMPs) that list and describe actions to address those problems, and identify partners, including lead entities, to implement the actions. Locally, the Mobile Bay National Estuary Program (MBNEP), in existence for the 18 years, facilitates the creation of the CCMP and its updates through coordinating scientific assessment 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, protect those things that we value most about living in coastal Alabama.

Using the input of over 30 scientists, 1,000 citizens, 100 community leaders, and federal, state and local government agencies, the CCMP represents a strategic plan of action for the next five years (2013-2018). This Work Plan for Fiscal Year 2013-2014 identifies actions that will be initiated in support of the priorities laid out in that document.

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, fishermen, 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. **In order to have a healthy economy, we need to have a healthy environment that provides essential natural functions.**

Environmental Stewardship is interconnected - 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. **Coalitions that bring together a diversity of stakeholder interests are critical to comprehensively addressing the challenges of balancing economic development with environmental protection.**

It happens in the river, in the sea, and on the street - 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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PART ONE: MBNEP WORK PLAN FOR 2013-2014

MAJOR GOALS AND FOCUS FOR 2013-2014

In October of 2013, MBNEP will begin implementation of a Comprehensive Conservation Management Plan for 2013-2018. During the summer of 2013, the following plans will be produced to protect/Improve management of: **Access** to the water and open spaces (for recreation and vistas); **Beaches and Shorelines** (Protection, economy,beauty); **Fish** (Fish and wildlife habitats, abundance, livelihood); **Heritage and Culture** (Protecting the legacy); **Environmental Health/Resiliency** (Protecting); **Water quality** (drinking water quality and quantity, rivers, creeks, bay- fishable, swimmable, drinkable).

- *Science Advisory Committee* - Five year plan to **measure estuary status and trends** through research, needs assessment, and monitoring of access sites; beaches and shorelines; fish populations and habitats; heritage and cultural assets; community resiliency and environmental health; and water quality. Activities for the coming year include the development of biological and water quality parameters to include in a coastal biological monitoring program, analysis of sediment transport and disposition in the Fowl River watershed as a precursor to management planning; and identification of priority areas for development of citizen water quality monitoring programs.

- *Project Implementation Committee*- Five year plan to **conserve, restore, and protect priority habitats** to ensure access to our unique waters and landscapes; sustain our beaches and shorelines; stabilize and expand nurseries for fish and shellfish; safeguard areas of historic ecological and cultural significance; contribute to community resiliency; and restore/protect the quality of our estuarine waters (with a priority focus on fresh water wetlands, streams and rivers, and intertidal marshes and flats). Activities for the coming year include restoration of streams, freshwater wetlands and intertidal marshes and flats in the D'Olive, Eight Mile and Three Mile Creek watersheds.

- *Business Resources Committee*- Five year plan to **develop incentives for individuals, business and industry** to encourage good stewardship of access, beaches and shorelines, fish, heritage and culture, environmental health and resiliency, and water quality. Activities for the coming year include development of an incentive based program for reducing the amount of litter within the two county area using tools including but not limited to Estuary Corps, the Coastal Alabama Clean Water Partnership, Volunteer Field Observers, and community business, fishing and recreational groups. This committee may assist with recruiting private interests to participate in watershed planning.

- *Government Networks Committee*- Five year plan to **build cooperation between local, state, and federal agencies** and **identify regulatory modifications needed** to support access, beaches and shorelines, fish, heritage and culture, environmental health and resiliency, and water quality. Activities for the coming year include increased education and awareness of stormwater runoff, including but not limited to the regulatory environment, contaminant composition of runoff, alternatives for improving stormwater management on a local and regional scale.

- *Community Action Committee*- Five year plan to **promote citizen stewardship through outreach, education, and involvement** in identifying/supporting increased opportunities for access; monitoring

beaches and shorelines; increasing citizen understanding of the many factors that impact the health of our fishery; celebrating the coast's heritage and culture; improving community resiliency through individual actions; and actively engaging residents and visitors in activities that protect our area's water quality. Activities for the coming year include continued support for the "Create a Clean Water Future" campaign, citizen training for volunteer water quality monitoring, guidance on topics to showcase in ongoing video development activities, and promotion of interpretive signage throughout Mobile and Baldwin counties.

- Finance Committee- Five year plan to **build resource development and partnership engagement** to implement the recommended actions in the Comprehensive Conservation Management Plan. Activities in the coming year include but are not limited to developing a funding plan that captures future RESTORE funding from each category (or pot); and determination of funding leads for action recommended in plan.

BUDGET OVERVIEW: 2013-2014

Each year the MBNEP receives an allocation from EPA to support activities geared toward achieving the objectives of the CCMP. 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. This match may be in the form of cash investments, donated property valuation, or in-kind equipment, professional, or volunteer services (see Match section). The 2013-2014 MBNEP EPA Budget below delineates anticipated sources of revenues, program expenditures and cash or in-kind match for the next year. Note: This budget is based on receipt of $597,750 from US EPA. In the event that this allocation is reduced, the budget lines in red will be reduced dependent on the amount of shortfall.

Mobile Bay National Estuary Program
CCMP Workplan: Year 1: 2013-2014
Approved Budget: Reduced to $512,000

Revenues	Year 1	Cash/In-kind Match	
EPA	512,000		
State			
State Appropriation		68,332	
ADCNR		70,000	
Local			
Baldwin County			
Mobile County		17,888	
City of Mobile		25,920	
City of Daphne		10,000	
City of Spanish Fort		5,000	
City of Fairhope		5,000	
Other Cities		3,000	***Total Funding***
Total Revenues	**512,000**	**205,140**	**717,140**

Expenses	Year 1	Cash/In-kind Match	Total
Estuary Status and Trends	**47,500**	**15,000**	**62,500**
Expenses	Year 1	Cash/In-kind Match	-
Ecosystem Restoration and Protection	**26,543**	**60,180**	**86,723**
Expenses	Year 1	Cash/In-kind Match	-
Technical Assistance and Capacity Building	**46,435**	**10,005**	**56,440**
Expenses	Year 1	Cash/In-kind Match	-
Education and Public Involvement	**33,435**	**66,557**	**99,992**
Expenses	Year 1	Cash/In-kind Match	-
Program Planning and Administration	**563,227**	**155,118**	**718,345**
	717,140	**306,860**	**1,024,000**
	(0)		-
Total EPA + Match Anticipated (Match $ + InKind)		**1,024,000**	

Detail within each of the expense categories follows.

Project Details: Estuary Status and Trends (EST)

Expenses	Year 1	Cash/In-kind Match	Total
Estuary Status and Trends	**47,500**	**15,000**	**62,500**
1. Coastal Biological/Water Quality Monitoring Program	30,000		30,000
2. Sediment Analysis (Fowl River)	17,500	15,000	32,500
3. Real Time Monitoring			-

What does biological integrity look like in the Mobile Bay estuary? What monitoring and research is needed to track environmental conditions through time? How do we reduce stressors and communicate resultant biological changes? One of the charges of the Science Advisory Committee (SAC) is to integrate science into the development of an environmental monitoring program that informs about the status of the biological condition of the Mobile Bay estuary. It will be imperative that this monitoring program be one that coincides with what citizens value and data is communicated to the public so that progress in improving/protecting biological conditions has widespread community support.

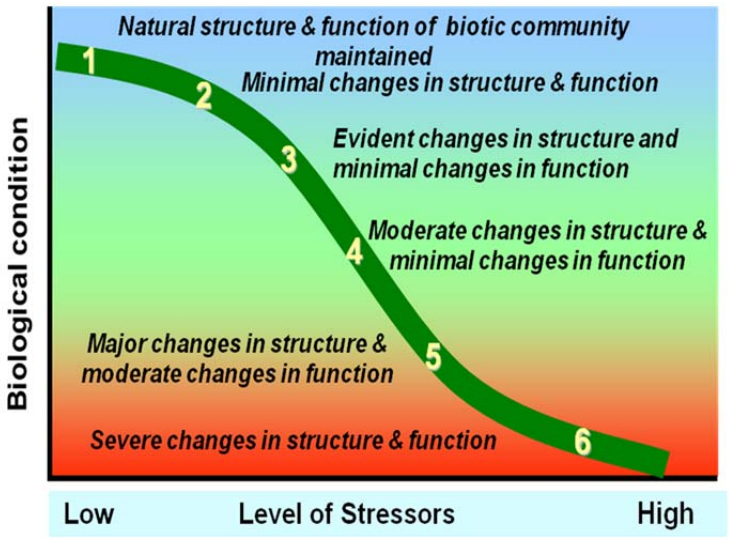
As part of building a robust monitoring program, the Science Advisory Committee is charged with developing recommendations for what research is needed to better understand our estuarine system; identifying what baseline gaps exist and developing those (particularly in the most and least stressed habitats/watersheds; determining what other needs exist in relation to the six things that citizens value most; and developing decision support tools to facilitate citizen to access these data sets.

In the next five years, the Science Advisory Committee will work with State and Federal agencies to develop answers to the above questions. By participating in the Healthy Watersheds Initiative being coordinated by US EPA and building a Biological Condition Gradient framework for the coastal Alabama with assistance with US EPA Gulf Breeze Lab, both State and local resource managers will establish a long term monitoring program based on a set of ecosystem service indicators to be developed in July, 2013. In addition, the SAC will provide guidance in developing baselines and other science related issues necessary for conducting comprehensive watershed planning.

EST: 1. COASTAL ECOSYSTEM MONITORING PROGRAM

Project Number	EST1301
Title	Coastal Monitoring Program
Values Supported	*Access, Shorelines, Fish, Heritage, Resiliency, Water Quality*
Purpose	Using ongoing research, and Healthy Watersheds/Biological Condition Gradient Frameworks- Increase understanding of how to monitor estuary health; identify biological indicators; and incorporate into a coastal biological monitoring program.
Outputs/Deliverables	Coastal Ecosystem Monitoring Protocol; a framework for establishing a "Score card of Estuary Health"
Outcomes	Increase knowledge about science, monitoring, habitat management, and restoration of the Mobile Bay estuarine environment; Increase community ownership and involvement in local environmental protection activities
Clean Water Act Relevance	Improve water quality monitoring, support TMDL implementation, improve monitoring of wetland function and coverage
Year 1 (2013-2014)	30,000
Other Funding	$ 0
Total Funding Available	$ 30,000
Match/Leverage	US EPA, ADEM, Science Advisory Committee
Lead/Partners	ADEM/MBNEP SAC, US EPA

Biological integrity is commonly defined as "the ability to support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity and functional organization comparable to those of natural habitats within a region" (Karr and Dudley, 1981). It is equated with pristine conditions, or those conditions with minimal or no disturbance.



Using a BCG framework to develop environmental goals includes: 1) defining biological condition of a minimally disturbed area or what the natural condition in the area would be, 2) defining biological attributes that change based on the level of stressors to that condition, 3) associating those changes with specific human impacts, and 4) identifying management practices for

improving conditions and, therefore, biological integrity. In assessing how a BCG framework could be used to measure status and trends of the Mobile Bay estuarine system, the SAC is modifying it by looking at the relationship between the amount of stressor impacts and changes to different ecosystem services.

During the fall of 2011, a group of 30 Scientists completed an exercise to rate the level of stress on the ecosystem services provided by a suite of habitats. The stresses, ecosystem services and habitats evaluated are found below:

The Stresses

- Chemical Contamination
- Land Use Change
  - *Dredging and Filling*
  - *Fragmentation*
  - *Sedimentation*
  - *Fire Suppression*
- Invasive Species
- Nutrient Enrichment
- Pathogens
- Freshwater Discharge
- Sea Level Rise
- Climate Variability
- Resource Extraction

The Ecosystem Services

- Primary production
- Sediment / nutrient retention and export
- Storm buffer/hazard protection
- Water quality enhancement
- Wildlife habitat
- Biodiversity
- Carbon Sequestration
- Fisheries habitat
- Flood control
- Groundwater replenishment
- Nesting habitat for birds and turtles
- Oyster production
- Primary production

The Habitats

- Beaches and Dunes
- Freshwater Wetlands
- Intertidal Marshes and Flats
- Subtidal Habitats
- Submerged Aquatic Vegetation
- Oyster Reef
- Maritime Forests
- Pine Savannah Forests
- Long Leaf Pine Forests
- Streams and Rivers
- Riparian Buffers

The preliminary results of this exercise identified the following high ranking stresses, ecosystem services and habitats:

Habitat	**Ecosystem Services Most Stressed within Habitats**	**Top Stressors within Habitat**
Freshwater Wetlands	Nesting for birds and turtles Biodiversity Wildlife Fisheries	Land Use Change Fragmentation Dredging and Filling
Intertidal Marshes and Flats	Biodiversity Fisheries Wildlife Water Quality	Sediment Sea Level Rise Fragmentation
Streams and Rivers (Riparian Buffers)	Fish Biodiversity Water Quality Sediment	Freshwater discharge Land Use Change Sediments

Mobile Bay provides a wealth of ecosystem services that benefit Alabama citizens including water purification, nutrient cycling, carbon storage and recreational opportunities. The provision of these valuable services depends on the ecological integrity of the Bay watershed. The water quality and ecological health of Mobile Bay cannot be adequately protected through efforts focused solely adjacent the Bay. While restoration activities in Mobile and Baldwin Counties are very important, these activities often only provide partial fixes because they do not address the sources of impairments and can only focus on restoring components of the ecosystem. Improving environmental conditions by managing anthropogenic stressors in Mobile Bay requires that they be viewed in a broader, systems context. The health of Mobile Bay depends upon the health of its supporting upstream watersheds.

An integrated watershed health assessment allows natural resource managers to look at ecological health from a systems perspective, rather than in isolated ecosystem components. The assessment process moves beyond relating information about water quality in and around the bay. It could potentially be used to identify important ecological hubs and corridors in the watershed; healthy intact forests, headwaters or wetlands; critical habitat areas; and other important landscape features that may be designated as having increased protection or are relatively undisturbed. Identifying the healthiest areas within the Bay watershed combined with other regional ecological health data is the first step toward developing a strategy for targeting areas for protection, pollution prevention and restoration actions. Targeting management actions collaboratively across agencies and organizations will develop opportunities to leverage funding and most effectively reach environmental results.

During the next program year, the SAC will oversee the completion of research to evaluate improvement of two ecosystem goods that result from habitat restoration. These goods will be 1) abundance and diversity of shellfish and finfish (including species with commercial and recreational value) and 2) filtration of pollutants and water clarity. These improvements will continue to be evaluated at three restoration sites: Helen Wood Park, Dog River Park, and Mon Louis Island. At each of these sites a control (non-restored) has been compared to restored locations. Samples will continue to be taken periodically for another year along transects running from the upper intertidal to the subtidal. The objectives of these activities are to measure the amount of ecosystem enhancement in intertidal marsh, riverine, and intertidal flat restorations and to determine the relationship between stressor and ecosystem service losses over time. In addition, datasets have been compiled from Mobile Bay to inspect whether relationships exist between habitat loss through modifications and targeted goods and services of the Mobile Bay ecosystem, such as fisheries productivity and removal of nutrient pollution. This information will be instrumental in ascertaining human impacts on the health of the Mobile Bay ecosystem and help devise management strategies and monitoring parameters for the Mobile Bay estuary.

To compliment this research, MBNEP will partner with US EPA, ADEM and others to undertake a Healthy Watersheds Assessment of the estuary, the watershed, and the State of Alabama. This exercise will inform the development, in conjunction with use of the Biological Condition Gradient Framework, of a coastal biological monitoring program.

Objectives for this year: Increase understanding of how to monitor estuary health; identify biological indicators; incorporate into a coastal biological monitoring program; create outline for **a Scorecard of Estuary Health** using Healthy Watersheds/Biological Condition Gradient Frameworks.

EST: 2. WATERSHED SEDIMENT STUDIES

Project Number	EST1302
Title	Comprehensive Sediment Loading Analysis for Fowl River
Values Supported	*Access, Shorelines, Fish, Heritage, Resiliency, Water Quality*
Purpose	Establish quantitative baselines of sediment transport in the Fowl River Watershed to inform and measure progress in planning.
Outputs/Deliverables	Technical Report that Identifies significant sources of sediment loading within the Fowl River Watershed
Outcomes	Improve understanding of sources of sedimentation in tributaries of the Mobile Bay estuarine system
Clean Water Act Relevance	Improve water quality monitoring, support TMDL implementation
Year 1 (2013-2014)	$17,500
Other Funding	$
Total Available	$ 17,500
Match/Leverage	$17,500 (GSA)
Lead/Partners	Geological Survey of Alabama/MBNEP

Fowl River drains much of southern Mobile County. Its headwaters are located near the Mobile suburb of Theodore, AL, and it splits just south of Bellingrath Gardens into East Fowl River, which flows northeasterly into Mobile Bay, and West Fowl River, which flows south into Mississippi Sound. Land use in the Fowl River Watershed is varied and characterized as urban, residential, and rural. Thirteen percent of the watershed area is classified as urban, 16% as crop or pasture land, and 28% is forested. Stakeholder concerns include loss of wetlands and shoreline erosion, frequently related to recreational boat. Increasing development and continuing erosion and sedimentation threaten water and habitat quality and the quality of life enjoyed by the residents of the watershed.

During the next program year, the Geological Survey of Alabama will characterize land use, erosion, and sedimentation in the watershed to identify sources of sediment and to establish baseline data and sedimentation rating curves useful in evaluating future changes in erosion and sediment load transport. The project will utilize modeling techniques to determine bed and suspended sediment loads and identify point sources of sediment, including man-made and natural drainage ways that contribute significant sources of sediment to Fowl River. Monitoring will be based on precipitation and resulting stream discharge and include basic field acquired physical and water-quality parameters. These data will be used to determine impacts of land-use change and to focus resources in areas of greatest need for remedial action.

Objectives- The project will utilize modeling techniques to determine bed and suspended sediment loads. This project will identify point sources of sediments including man-made and natural drainage ways that contribute significant sources of sediment loading to Fowl River

EST: 3. REAL-TIME MONITORING OF METEOROLOGICAL CONDITIONS

Project Number	EST1303
Title	Real-Time Meteorological Conditions Monitoring
Values Supported	*Access, Fish, Resiliency, Water Quality*
Purpose	To support a comprehensive, bay-wide, long term data set of water quality conditions throughout the bay to inform boaters, Coast Guard and scientists
Outputs/Deliverables	Data to 1) inform the status and 2) enhance public awareness of water quality condition throughout the bay
Outcomes	Data collected will greatly assist in determining the designated water use criteria for the State of Alabama and providing baseline readings for 303(d) improvements.
Clean Water Act Relevance	Support TMDL development
Year 1 (2013-2014)	$ 0
Other Funding	$ 239,925 (Gulf of Mexico Program- Ongoing)
Total Available	$ 239,925
Match/Leverage	DISL, US EPA Gulf of Mexico Program
Lead/Partners	DISL/MBNEP, ADEM

This is a continuation of the comprehensive, Bay-wide, water monitoring program begun in the FY 2003 Work Plan and funded by the Coastal Impact Assistance Program. It provides an opportunity to collect water quality data over the long term in Mobile Bay and along the Alabama coastline including: 1) new and innovative technologies for real-time monitoring/measurement (data from single, multi-sensor probes used to measure standard meteorological measurements plus dissolved oxygen, salinity, water temperature, pH, turbidity, and fluorescence transmitted to an internet web site every 15 minutes); 2) appropriate information management, processing, and delivery (transmitted data via cellular modem will enter the data management center server and be made available on the internet web site); and 3) real-time communication of information to the public through www.mymobilebaynep.com and lab analyzed water samples will be reported in the local newspapers. The data collected will be of great value in determining the designated water use criteria for the State of Alabama and providing baseline data for 303(d) improvements.

PROJECT DETAILS: ECOSYSTEM RESTORATION

Expenses	Year 1	Cash/In-kind Match	-
Ecosystem Restoration and Protection	**26,543**	**60,180**	**86,723**
1. D'Olive Watershed	1,543		1,543
2. Eight Mile Creek			-
3. Mon Louis Island		10,000	10,000
4. Three Mile Creek	25,000	50,180	75,180
			-

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 the services will contribute to community health and wellbeing, protection against sea level rise, economic sustainability, recreation, and community quality of life.

In 2008, the Mississippi Alabama Habitats Tool was created providing a geospatial representation of priority habitats within Mobile and Baldwin counties. Eleven habitat types were assessed based on criteria developed by scientists and resource managers to identify priority "habitat patches" (those that met the criteria established). The habitat types were : Beaches and Dunes, Freshwater Wetlands; Intertidal Marshes and Flats; Subtidal Habitats; Submerged Aquatic Vegetation; Oyster Reefs; Maritime Forests; Pine Savannah Forests; Long Leaf Pine Forests; Streams and Rivers; Riparian Buffers. In 2011, 30 scientists undertook an exercise to determine which of the above habitats were putting valuable ecosystem services at risk (See Status and Trends section). This study identified freshwater wetlands, streams, rivers and associated riparian buffers and intertidal marshes and flats as those habitats most stressed within our estuarine system.

As a result, over the next five years, the conservation, restoration, and/or protection of freshwater wetlands, streams, rivers and associated riparian buffers and intertidal marshes and flats will be promoted. Knowing which types of habitats were most stressed, the Project Implementation Committee undertook a process for evaluating 21 watersheds throughout the two counties to develop priorities for planning, restoration and conservation. Of those that rated highest, planning and restoration will be initiated in the following watersheds: Fowl River, Bon Secour, and Appalache Tensaw, in addition to continued implementation of Three Mile Creek, Eight Mile Creek and D'Olive watershed plans.

To ensure that all restoration efforts are based on science and are part of an overall management program, sediment analyses will be undertaken (where appropriate) as a precursor to comprehensive watershed planning. All watershed plans will be based on US EPA guidance, addressing the following key elements:

- Identification causes of impairment
- Estimation the pollutant load reductions expected from restoration/management measures
- Description of non-point source reduction measures and 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 the restoration measures and to engage them in long term implementation of the plan

- Schedule for implementation, Key milestones, Evaluation criteria

ERP: 1. D'OLIVE WATERSHED: JOE'S BRANCH RESTORATION- PHASE II

Project Number	ERP
Title	Joe's Branch Restoration- Phase II
Values Supported	Fish, Resiliency, Water Quality
Purpose	Continue restoration of Joe's Branch sub-watershed in the D'Olive Watershed with goal of removal from the State's 303(d) List and reduction in sedimentation being transported downstream
Outputs/Deliverables	Stabilization/Restoration of degraded stream segments, riparian zones, and downstream wetlands in the Joe's Branch sub-basin of the D'Olive Creek Watershed
Outcomes	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities.
Clean Water Act Relevance	Improve water quality monitoring, support TMDL implementation, improve monitoring of wetland function and coverage
Year 1 (2013-2014)	$ 1,543
Other Funding	
Total	$ 1,543
Match/Leverage	Alabama Department of Transportation, Cities of Daphne, Spanish Fort, private property owners
Lead/Partners	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, private property owners

With restoration of the unnamed, head-cut tributary to Joe's Branch and downstream wetlands (funded by a Clean Water Act Section 319 Grant) substantially completed, this project proposes to reestablish historic hydrology in much of the remaining 661-acre sub-basin. As monitoring of sediment loads from the restored tributary continues, other degraded tributaries on properties south of Highway 31 and east of Highway 98 in Spanish Fort continue to drain into streams included on the 2012 Alabama 303(d) List of Impaired Water Bodies for siltation and habitat alteration.

Partners include the cities of Daphne and Spanish Fort, Baldwin County, the Geological Survey of Alabama, Alabama Department of Environmental Management, Auburn University/Alabama Cooperative Extension System, MBNEP, the Dauphin Island Sea Lab, and property owners.

Objectives: Restoration of three stream segments along and flowing into Joe's Branch which joins D'Olive Creek near its mouth on D'Olive Bay. These segments have been substantially degraded by erosion, mass slumping, and downstream wetlands degradation triggered by excessive stormwater runoff generated from upstream development. Appropriate restoration technologies, some novel to the northern Gulf of Mexico region, will be employed to restore 2,500 linear feet of streams and almost two acres of riparian habitat and flood plain wetlands to ecological function.

ERP: 2. EIGHT MILE CREEK WATER QUALITY RESTORATION

Project Number	ERP
Title	Eight Mile Creek Pathogen Reduction Program
Values Supported	Access, Fish, Heritage, Resiliency, Water Quality
Purpose	Advance the restoration of water quality through pathogen reduction activities based on results of an infrared mapping of the watershed with a goal of removal from State 303(D) list
Outputs/Deliverables	Reduction of pathogens to demonstrate significant improvement in Eight Mile Creek- Removal from 303 (D) list
Outcomes	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
Clean Water Act Relevance	Improve water quality monitoring, support TMDL implementation
10-11 EPA Funding	$ 0
11-12 EPA Funding	$ 0
12-13-EPA Funding	$ 0
Other Funding	$ 0
Total	
Match/Leverage	
Lead/Partners	MBNEP/City of Prichard, NRCS

The Eight Mile Creek Watershed is located in Mobile County, with a majority of its 37 square mile watershed located within the cities of Mobile, Prichard, and Chickasaw. The watershed contains five miles of impaired streams comprising components of the semi-braided, perennial Eight Mile Creek and larger Chickasaw Creek tributary system which flow into the Mobile River and eventually into Mobile Bay and the Gulf of Mexico.

In 1998, Eight Mile Creek and Gum Tree Branch were added to the State of Alabama's 303(d) list of impaired waters due to high levels of pathogen pollution (fecal coli form) from urban runoff and/or storm sewers and septic system failure. The Eight Mile Creek Watershed is subject to the impacts generally associated with urbanization: sewage and pathogenic bacteria from aging and overloaded infrastructure, trash and litter carried into the creek by stormwater runoff, and loss of natural shoreline triggered by increases in impervious surface. The Eight-Mile Creek Watershed has been identified by ADEM as one of the top-five Watersheds for septic systems in Mobile County, with 3,800 systems.

CIR photography has proven to be a successful method for identifying failing septic systems. This technique for locating failing septic tanks has been in use for decades, and is described in detail by

the EPA report "Evaluation of Color Infrared Aerial Surveys of Wastewater Soil Absorption Systems." Gwinnett County, Georgia, performed such an investigation in 2006 and documented the study in the report titled, "Fecal Coliform TMDL Implementation – Analysis of Color Infrared Aerial Photographs to Detect Failing Septic Systems." These studies indicate that the CIR process can identify failing septic tank sites with an accuracy of approximately 80%.

Primary project partners will include: Mobile Bay National Estuary Program, The Alabama Clean Water Partnership, Mobile County Health Department, Mobile Area Water and Sewer System, Mobile County Soil and Water Conservation District/USDA NRCS, The Alabama Department of Environmental Management/Alabama Coastal Nonpoint Pollution Coastal Program, and the City of Prichard.

Objectives: Approximately 40-square miles will be photographed with a color infrared (CIR) camera to identify potential failing septic systems. The images will be ortho-rectified and geo-referenced within a GIS system and a subset of potential failing septic systems will be ground truthed by local field experts. This project will create a comprehensive GIS database of potential failing septic systems within the watershed which will enable community decision makers to better allocate limited resources in an effort to remediate compromised systems.

ERP: 3. FOWL RIVER- MON LOUIS ISLAND SHORELINE HABITAT IMPROVEMENTS

Project Number	ERP1303
Title	Mon Louis Island Shoreline Habitat Improvements
Values Supported	*Access, Shorelines, Fish, Heritage, Resiliency, Water Quality*
Purpose	Stabilize shorelines from chronic, routine impacts including but not limited to boat wakes from ship channel and re-establish critical fisheries habitat and storm protection measure
Outputs/Deliverables	Stabilization of 1,000 ft. of shoreline; 1,000 feet of near shore habitat
Outcomes	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
Clean Water Act Relevance	Improve monitoring of wetland function and coverage
Year 1 (2013-2014)	$0
Other	$ 0
Total	$ 0
Match/Leverage	TBD
Lead/Partner	MBNEP/Private property owner

With the Shoreline Stabilization/Habitat Creation Project along the Mon Louis Island properties of six adjacent owners complete and functioning, attention is being turned to the erosion-impacted property adjacent to the mouth of East Fowl River on the northern end of the island. The owner of this undeveloped property, which exceeds 1,000 feet in length, was an early proponent of MBNEP shoreline restoration activities. MBNEP, however, felt that it was important initially to restore a contiguous stretch of private properties and implement at a scale available to property owners. The owner has, through the course of this initial project, expressed a willingness to contribute resources to the stabilization of the shoreline along this parcel, which is the gateway the river.

This parcel is largely covered by tidal wetlands, restored in 2005 by Barry A. Vittor and Associates with funding from the Alabama Coastal Foundation. They excavated a monoculture of invasive *Phragmites australis* to restore hydrology to favor a more diverse assemblage of installed native marsh plants. The Bay-fronting shoreline, which lies between the river mouth and the island's northern-most, developed and armored private parcel, has continued to recede at a rate that far exceeds more southern areas of the island. In fact, with less than 120 feet of low uplands separating Mobile Bay from the relatively-deep water harbor that provides access to Fowl River for commercial

and recreational fishing interests, a breach at this site during a tropical weather event would not be unlikely.

An initial engineering plan could recommend shoreline stabilization techniques, where interruption of long shore, northerly sand transport would not affect down drift properties but instead may reduce the frequency of dredging efforts necessary to maintain an open channel in the mouth of East Fowl River. Implementation of this plan to stabilize the shoreline could reduce the threat of a breach across Old Shipyard Road during a tropical weather event and protect critical ecosystem services delivered by over six acres of productive brackish marsh habitat as well as residential properties to the south.

Funding has been secured to prepare the engineering design for this restoration, and these plans are anticipated to be complete by December, 2013.

Objective: Secure funding and begin restoration/stabilization of the tip of Mon Louis Island.

ERP: 4. THREE MILE CREEK RESTORATION

Project Number	ERP 1304
Title	Three Mile Creek Restoration
Values Supported	Access, Fish, Resiliency, Heritage, Water Quality
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
Lead/Partner	MBNEP/US ARMY CORPS, USFWS, ADCNR, ADEM, MAWSS, City of Mobile, Mobile County, Gulf Coast Asphalt, Inc.
Outputs/Deliverables	Watershed Management Plan initial implementation (project TBD)
Outcomes	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
Clean Water Act Relevance	Assist with TMDL implementation; Improve monitoring of wetland function and coverage
Year 1 (2013-2014)	$25,000
Other Funding	$20,000 (Waterkeeper Alliance) ; $30,180 Other
Total	$ 45,000
Match/Leverage	MAWSS, Mobile County, City of Mobile , Waterkeeper Alliance, , US Army Corps of Engineers, US Fish and Wildlife Service, US EPA

In January, 2013 Dewberry, in partnership with Brown and Caldwell, Aerostar, and Placemaker, was hired to develop a watershed management plan for the Three Mile Creek Watershed that runs over 14 miles from west of the University of South Alabama east to the Mobile River near the State Ports. This Creek and its surrounding watershed present an extraordinary opportunity to the City of Mobile to turn what is now a community liability into an amenity similar to "river walks" in other cities as well as providing a template for planning in larger urban watersheds in coastal Alabama.
This watershed includes the constituencies of several city and county officials and is heavily urbanized; the majority of its 29-square mile area lies within the City of Mobile, and it is home to several Mobile Housing Board housing developments. From 1974 to 2008, the urban area of this watershed increased from 49.5% to 70.2%, with significant development occurring in a portion of the watershed that has an elevation at or near sea level, so potential impacts of climate change and sea level rise are of particular concern.

The 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. The identified

primary sources of impairment within the watershed as described in the TMDL are municipal collection system failures and urban stormwater runoff.

A decade ago, urban development and decaying sewer infrastructure led to increased incidences of 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. Lower portions of the Creek were listed for Chlordane (from unknown sources) between 2000 and 2006 but were delisted in 2008 when no exceedances were sampled. 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 cost of this comprehensive plan, $250,000, was funded by the Alabama Department of Conservation and Natural Resources, the Alabama Department of Environmental Management and Gulf Asphalt, the U. S. Environmental Protection Agency, the Mobile Area Water and Sewer System, Mobile County, and MBNEP, the objectives of this plan are to:

- Collect community input on strengths, weaknesses, opportunities, and threats within the watershed and associated with the Creek,
- Determine the locations, causes, and sources of degradation in Three Mile Creek and its tributaries,
- Create goals and objectives for improving conditions in the Creek, its tributaries, and associated freshwater wetlands,
- Investigate financing options for long-term watershed management projects, and
- Prepare a conceptual plan of action by December 31, 2013.

During the next program year, implementation of this watershed plan will begin. This funding has been budgeted to provide a catalyst for implementing on the ground measures to be identified in the plan.

Objectives: Implementation of at least one identified project of the watershed management plan.

PROJECT DETAILS: TECHNICAL ASSISTANCE/ CAPACITY BUILDING

Expenses	**Year 1**	**Cash/In-kind Match**	-
Technical Assistance and Capacity Building	**46,435**	**10,005**	**56,440**
1. Alabama Water Watch	5,000	5,000	10,000
2. Clean Water Partnership	10,000		10,000
3. Climate Ready Estuaries- DI History/Future			-
4. Estuary Corps	10,000	5,005	15,005
5. Green Port Feasibility Study		TBD	-
6. Oyster Gardening			-
7. Watershed Management Plan (Bon Secour)	21,435		21,435
			-

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 organization. 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. Integration of EPA's Climate Ready Estuaries program will ensure that the impacts of climate change and sea level rise are considered as projects are planned and implemented.

Estuary Corps will cultivate an adult cadre of environmental stewards available to undertake volunteer efforts to improve water quality, provide habitat, and educate potential environmental stewards. A Green Port Feasibility study will inform State partners about opportunities to reduce their "environmental footprint." Oyster Gardening has proven to be a valuable tool in cultivating stewardship in shoreline property owners and instilling values that drive sustainable decisions about shoreline and habitat protection. Initiation of a watershed management plan for the Bon Secour River Watershed will provide opportunities to chart a course for protection of a critical priority watershed threatened by the impacts of increasing development upstream.

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: 1. ALABAMA WATER WATCH COASTAL PROGRAM SUPPORT

Project Number	TAC1301
Title	Alabama Water Watch Coastal Program Support
Values Supported	Access, Fish, Heritage, Resiliency, Water Quality
Purpose	To expand citizen stewardship of the estuary through voluntary water quality monitoring activities
Outputs/Deliverables	Two workshops for 13 grassroots organizations
Outcomes	Increase knowledge about science, monitoring, habitat management, and restoration of the Mobile Bay estuarine environment; Increase community ownership and involvement in local environmental protection activities
Clean Water Act Relevance	Improve water quality monitoring
Year 1 (2013-2014)	$5,000
Other Funding	$ 0
Total	$ 5,000
Past Year Funding	
Match/Leverage	AWW
Lead/Partners	AWW/MBNEP, CAST

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.

During the next program year, MBNEP will partner with AWW to expand its citizen water quality monitoring program throughout the coast.

Objective: At least one train the trainer workshop will be held and at least two community based organization trainings will take place.

TAC: 2. COASTAL CLEAN WATER PARTNERSHIP- NON-POINT SOURCE POLLUTION PROGRAM

Project Number	TAC1302
Title	Coastal Clean Water Partnership- NPS Pollution Program
Values Supported	Access, Fish, Heritage, Resiliency, Water Quality
Purpose	Assess, plan and implement projects to address non point source pollution through the Clean Marina Program and community based watershed management plans to guide grassroots actions aimed at addressing waterways listed on the State's 303(d) Impaired Water bodies List
Outputs/Deliverables	One completed Watershed Management Plan, NEMO video/education program; seed funding to support Clean Marina BMPs
Outcomes	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities; expanded community engagement and ownership
Clean Water Act Relevance	Support water quality standards; Improve water quality monitoring, Support TMDL implementation
10-11 EPA Funding	$ 10,000
Other Funding	$ 40,500 (BC/MC WCD-ACWP)
Total	$
Match/Leverage	Auburn University, Mississippi Alabama Sea Grant Consortium
Lead/Partners	BCWSD/ MBNEP, A CWP, Auburn University

The Alabama Clean Water Partnership, a statewide 501(c)(3) non-profit organization, is a diverse and inclusive coalition of public-private interest groups and individuals working together to improve, protect and preserve water resources and aquatic ecosystems in Alabama. Through the ACWP, ten River Basin Facilitators and a Statewide Coordinator are tasked with implementing watershed efforts in order to achieve the following goals:

- Improved Communication to promote information sharing and nonpoint source education, broad awareness of resource availability, and networking with others facing the same challenges.
- Data and Information Sharing through the creation of a communications and technical assistance network so that a more complete account of each river's water quality is available when making watershed decisions.

- Improved Coordination between community-based groups, municipalities, and industries to prevent the duplication of effort and to acquire, streamline and maximize resources.
- Opportunity for Collaboration in decision-making and the development of watershed management plans, as well as in the implementation of watershed projects and TMDLs (Total Maximum Daily Loads).

The Coastal Alabama Clean Water Partnership Facilitator is a shared position between the Partnership, the Mobile and Baldwin Counties' Soil and Water Conservation Districts, the MBNEP, Auburn University and Mississippi Alabama Sea Grant. The facilitator is considered a non-point pollution specialist, coordinating watershed planning, conducting outreach on stormwater management and related issues, and coordinating the Clean Marina program for Mississippi and Alabama.

This past year, a watershed management planning process was initiated for the Three Mile Creek Watershed and will be completed in December, 2013. As part of the Clean Marina Program, a successful pilot project was launched at Zeke's Landing Marina in Orange Beach where over 70,000 pounds of fish waste was turned into a high-quality protein meal. Work is underway to expand this project to capture the remaining material from three marinas and the State fishing pier.

In the coming year, the Coastal Basin Facilitator will continue to seek out funding sources to help address stormwater problems that have prevented many interested marinas from being designated as clean marinas. In addition, the facilitator will participate in ongoing activities to expand coastal nonpoint-source education and outreach efforts, including but not limited to:

- CAST - The Coastal Alabama Stormwater Team (CAST), is a local coalition of 20 local organizations, municipalities, and agencies working together to address stormwater in coastal Alabama. The primary focus of this group has been a public education campaign, "Creating a Clean Water Future", which has included PSAs in local print and television and the development of a webpage and support materials.

- Stormwater Education video – A five to ten minute video and support materials will be developed to educate local elected officials about Municipal Separate Storm Sewer Systems (MS4s) and what expectations exist for complying with such permits. A five minute program will be initiated to reach local officials during city council work sessions and through use of social media/internet.

- Coastal Alabama Rain Barrel Program – The rain barrel program conducts workshops in coastal Alabama and Mississippi where residents build 55-gallon rain barrels and includes educational sessions explaining practical measures to protect water quality and conserve water resources.

During the current fiscal year, the CACWP has worked to identify and prioritize coastal watersheds as part of a State-wide NRCS initiative. During the coming year, these watersheds will be ranked on a State-Wide list in three categories (Urban, Ag/Forestry, and Aquatic Resources) with the possibility of the top five in each category being eligible for additional implementation funds. Preliminary prioritization has indicated that two coastal watersheds (Three Mile Creek and Tensaw-Apalachee) will be ranked in the top five State-wide in at least one of the three categories.

Objectives: Expand fish waste recycling to four new sites; procure funding for increased stormwater outreach; conduct 6 rain barrel workshops.

TAC: 3. CLIMATE READY ESTUARIES: DAUPHIN ISLAND HISTORY TO FUTURE

Project Number	TAC1303
Title	Dauphin Island History to Future Project
Values Supported	Access, Shorelines, Fish, Heritage, Resiliency
Purpose	The purpose of this project is to provide Dauphin Island with a documentation of past community resiliency to inform future resiliency planning.
Outputs/Deliverables	18 ½ to 20 minute video/film of an intergenerational Oral History of Dauphin Island
Outcomes	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities; expanded community engagement, ownership, resilience
Clean Water Act Relevance	Support water quality standards; improve wetland function and coverage
Year 1 (2013-2014)	$ 0
Other Funding	$
Total	$ 0
Match/Leverage	University of South Alabama
Performing Organization(s)	MBNEP/USA- Dr. Greg Waselkov

With Heritage and Resiliency both determined to be among the things most valued by residents of coastal Alabama, MBNEP will undertake production of an oral history video to explore how resiliency "habits" or practices from "back in the day" compare to how we currently interact with each other and our environment. In partnership with Dr. Greg Waselkov, Professor of Anthropology at the University of South Alabama, the concept for this video production is for present-day Dauphin Island kids to interview older residents. Their questions will investigate differences in how the mid-twentieth century Dauphin Island community built, travelled, dealt with natural features like dunes, marshes, and shorelines, fished, interacted with one another, prepared for and recovered from tropical weather events, etc.

Before the technological advances of the late twentieth century and the rush of human populations to the coasts, structures were built to withstand natural forces, "walkability" was more than a convenient option, dunes were valued for the protection they provided from waves and flooding, and smart concepts were employed not as innovative trends, but because they were worked and were passed between successive generations. This educational video will employ 21st Century technology to

revisit the wisdom that preceded it, in hopes that current coastal residents can employ more of the values and practices that allowed previous generations to enjoy the coastal lifestyle and the challenges it presented.

Objective: Production of 18-20 minute Oral History Video for Dauphin Island.

TAC: 4. ESTUARY CORPS

Project Number	TAC1304
Title	Estuary Corps
Values Supported	Fish, Heritage, Resiliency, Water Quality
Purpose	To promote the wise stewardship of water quality and living resources of Alabama's estuaries through education, volunteer experiences, and career path guidance
Outputs/Deliverables	20 Estuary Corps Members
Outcomes	Increase knowledge about science, monitoring, habitat management, and restoration of the Mobile Bay estuarine environment; Increase community ownership and involvement in local environmental protection activities
Clean Water Act Relevance	Improve water quality monitoring, Improve monitoring of wetland function and coverage
Year 1 (2013-2014)	$ 10,000
Other Funding	$ 0
Total	$ 10,000
Match/Leverage	DISL; Alabama Coastal Foundation
Lead/Partners	MBNEP/DISL/ACF

Engaging volunteers in activities that improve estuary conditions is vital to the long-term sustainability of our coastal environment. Building community knowledge and ownership through citizen involvement activities lays a foundation for ongoing care of the water quality and living resources associated with this estuarine system.

The pilot year of the Mobile Bay Estuary Corps program for middle school students was a tremendous success. During the 2012-2013 year, MBNEP, Alabama Coastal Foundation (ACF) and Dauphin Island Sea Lab (DISL) partnered to bring the Mobile Bay Estuary Corps concept into reality. The purpose of the program is to promote the wise stewardship of water quality and living resources of Alabama's estuaries through education, volunteer experiences, and career path guidance. Feedback from teachers, students and parents has been overwhelmingly positive and requests have been made to conduct it a second year. During the next fiscal year, MBNEP will partner with ACF and the Dauphin Island Sea Lab to continue to develop Estuary Corps.

Objectives: Recruit two schools, one from Mobile County and one from Baldwin County, and 15 adults to participate in the Estuary Corps program.

TAC: 5. GREEN PORT FEASIBILITY /MARINE SPATIAL PLANNING

Project Number	TAC1305
Title	Green Port Feasibility /Marine Spatial Planning
Values Supported	Access, Shorelines, Fish, Heritage, Resiliency, Water Quality
Purpose	Achieve a balance among the many uses of the Mobile Bay to sustain a long-term comprehensive approach to environmental management
Outputs/Deliverables	Marine Spatial Planning Vision, Goals, and Objectives; Port Expansion feasibility study
Outcomes	Increase knowledge about science, monitoring, habitat management, and restoration of the Mobile Bay estuarine environment; Increase community ownership and involvement in local environmental protection activities
Clean Water Act Relevance	
10- 11 EPA Funding	$0
11-12 EPA Funding	$ 0
12-13 EPA Funding	$ 0
Other Funding	$ 0
Total	$ 0
Past Year Funding	
Match/Leverage	
Lead/Partners	Alabama State Port Authority/ADCNR, MBNEP, MASGC, others

In the past, port development and operations often resulted in considerable alteration of and damage to the natural environment. In response to nationally-mandated environmental protection, ports are more conscious of and responsive to the need to minimize impacts on natural resources and surrounding communities. In fact, the need to address environmental concerns is a top priority for many U. S. ports, according to a poll of the membership of the Association of American Port Authorities.

Port development and expansion often requires significant alteration of the environment through dredging and filling and on-going operations and maintenance have the potential to impact the quality of air, soil, and water resources. The common challenge faced by ports is the need to conduct all aspects of their operations in an environmentally sound yet economically productive and competitive manner. Although any port will always impact the environment, by thinking strategically, dealing responsibly with waste, and monitoring energy and water usage, it is possible to develop as much of an environmentally-friendly outlook as possible. A port obviously does not become 'clean and green' overnight, but it can make a significant contribution to the environment while saving money through reduced energy consumption in the long-term.

The Alabama State Port Authority comprises several different parts, all of which contribute to its environmental footprint. These can be segregated into maritime activities, in-port operations and in-land transport. Offering a gateway to the Gulf of Mexico, the Port Authority, a government agency, operates the deepwater port facilities in Mobile. The port complex includes facilities for handling general cargo, such as containers, forest products, and metals, as well as liquid bulk and dry bulk cargo, such as chemicals, coal, iron ore, and steel. The port complex features more than four million square feet of warehouse space and open yards and almost 40 berths. A 75-mile rail line links Port of Mobile facilities and provides connections to major freight railroads.

An economic impact study completed recently by John C. Martin Associates estimates that the Port of Mobile generates an estimated statewide economic value from cargo and vessel activity of $22.3 billion, some $18.7 billion of which is attributed directly to the authority's public terminals. The Port is an invaluable component of the State of Alabama's prosperity and a major stakeholder in protecting the water quality and living resources of Mobile Bay and the Tensaw Delta.

As a major stakeholder of the Mobile Bay estuary, the Port is committed to continuously improving its operations to be more "green" by strengthening environmental performance through a process of continuous improvement; building strong relations with marine waterway stakeholders; and enhancing the community's understanding of the industry's activities and environmental performance. With a $40 million ship channel widening project in its future which will dramatically increase port traffic, an opportunity exists to investigate opportunities to grow in an environmentally friendly manner.

During the next program year, MBNEP will partner with the Port to promote the need to undertake a feasibility study or assessment the current status of the Port and what opportunities exist to improve its environmental performance.

TAC: 6.OYSTER GARDENING

Project Number	ERP
Title	Oyster Gardening
CCMP Objective	ERP-Living Resources
Purpose	To teach citizens about oysters and their importance to bay water filtration and habitat creation and to restore relic oyster reefs in Mobile Bay
Outputs/Deliverables	Oysters ready for planting on public reefs
Outcomes	Increase in community understanding about the value of oysters in the ecosystem.
Clean Water Act Relevance	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
Year 1 (2013-2014)	$ 0
Other Funding	$ 0
Total	$ 0
Match/Leverage	
Lead/Partners	AUMERC, Volunteers

The Mobile Bay Oyster Gardening Program is a volunteer based project which focuses on education, restoration/enhancement, and research by bringing the reef to the people. Now in its eleventh year of operation, Oyster Gardeners have produced nearly 500,000 oysters for restoration and enhancement efforts within Mobile Bay.

The Gardeners, Garden Adopters, corporate partners, and agency partners make the program successful, and there are opportunities for everyone to get involved. Program partners include The Gardeners & Adopters, The Mississippi-Alabama Sea Grant Consortium, The Alabama Cooperative Extension System, The Mobile Bay National Estuary Program, The Auburn University Marine Extension and Research Center, The Department of Fisheries and Allied Aquacultures -Auburn University, and The Alabama Department of Conservation and Natural Resources State Lands-Marine Resources Division of Alabama.

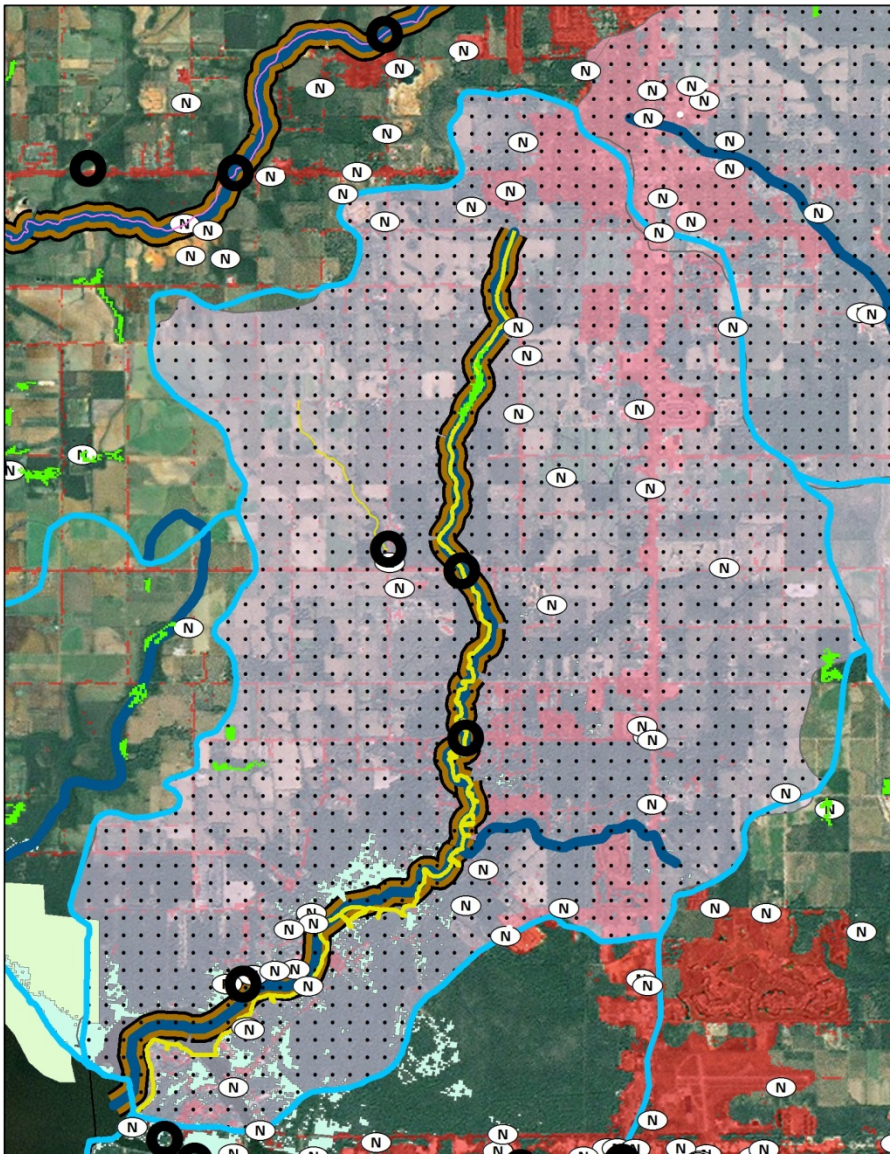
Funding for this program supports gardening supplies and outreach activities.

TAC: 7. WATERSHED PLANNING- BON SECOUR

Project Number	TAC1307
Title	Watershed Management Plan- Bon Secour
Values Supported	Access, Shorelines, Fish, Heritage, Resiliency, Water Quality
Purpose	To promote the wise stewardship of the Bon Secour watershed and foster improved oyster productivity in Bon Secour bay
Outputs/Deliverables	Watershed Management Plan
Outcomes	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities; expanded community engagement and ownership
Clean Water Act Relevance	Support water quality standards; improve wetland function and coverage
Year 1 (2013-2014)	$ 21,435
Other Funding	$ 0
Total	$ 21,435
Match/Leverage	
Lead/Partners	MBNEP/ADCNR

The Bon Secour River, which drains part of southwestern Baldwin County and flows southwestward into Bon Secour Bay in the southeastern corner of Mobile Bay, is targeted for watershed management planning during FY18. Land use in the watershed is varied and characterized urban, residential, and rural. Headwaters are dominated by urban and residential land use that includes the southern part of the City of Foley. The central part of the watershed is rural and dominated by agriculture, although with recent development, residential is becoming the dominant land use. Upstream and central parts of the watershed have flashy stream flow with numerous intermittent streams that transport storm water flow during frequent rainfall events. The downstream portion is characterized as tidal with uplands dominated by residential development. Near Bon Secour Bay, the watershed is dominated by industrial and commercial land use, primarily associated with the commercial fishing industry.

Erosion and sedimentation in many watershed areas are likely excessive and major contributors to degraded water quality and habitat destruction. Stakeholders are concerned that increasing development and continuing erosion and sedimentation will jeopardize future water and habitat quality currently enjoyed. The Geological Survey of Alabama has engaged in sediment analyses for this watershed to identify sources of sediment and to establish baseline data and sedimentation rating curves that could be used to evaluate future changes in erosion and sediment transport. The monitoring project assessed suspended and bed sediment transport rates at selected sites in tributaries to the Bon Secour River. Monitoring is be based on precipitation and resulting stream and river discharge, including basic field acquired physical and water quality parameters as well as sediment. These data will be used to determine impacts of land-use change and to focus resources in areas of



greatest need for remedial action. The data may also be used to assist municipal and state erosion and sedimentation inspection programs. This project will be complete by September 30, 2013.

Due to the percentage of impervious cover and the presence of 303(d) listed water bodies (the Bon Secour River is listed for mercury and Bon Secour Bay is listed for pathogens), this 33.5-acre watershed was identified by the Habitats Tools as a priority watershed for restoration. The criteria were developed by The Nature Conservancy, the NOAA Coastal Services Center, and Coastal Habitats Coordinating Team comprising, local resource management personnel. It was ranked in the top five by MBNEP's Project Implementation Committee among priority watersheds for restoration.

Objectives: A watershed management plan for the Bon Secour River Watershed will recommend actions that provide opportunities to improve ecosystem function and protection while expanding community engagement and ownership. It will support water quality enhancement and improve wetland function and coverage.

PROJECT DETAIL: EDUCATION AND PUBLIC INVOLVEMENT

Expenses	Year 1	Cash/In-kind Match	-
Education and Public Involvement	**33,435**	**66,557**	**99,992**
1. Management Conference Support			-
2. Semi Annual Newsletter			-
3. Interpretive Signage		10,000	10,000
4. Video Production	14,000	20,000	34,000
5. Special Events	14,435	14,557	28,992
6 Promotional Materials	5,000		5,000
7. Public Awareness Campaigns		22,000	22,000
			-

PROJECT DETAIL: PROGRAM IMPLEMENTATION

Expenses	Year 1	Cash/In-kind Match	-
Program Planning and Administration	**563,227**	**155,118**	**718,345**
1. Staff Salaries/Program Implementation costs	469,687		469,687
2. DISL Administrative Fee	93,540	155,118	248,658

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 last two annual retreats, MBNEP's Executive Committee (EC) has evaluated the functioning of the current Management Conference structure and assessed progress on implementation of the CCMP.

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

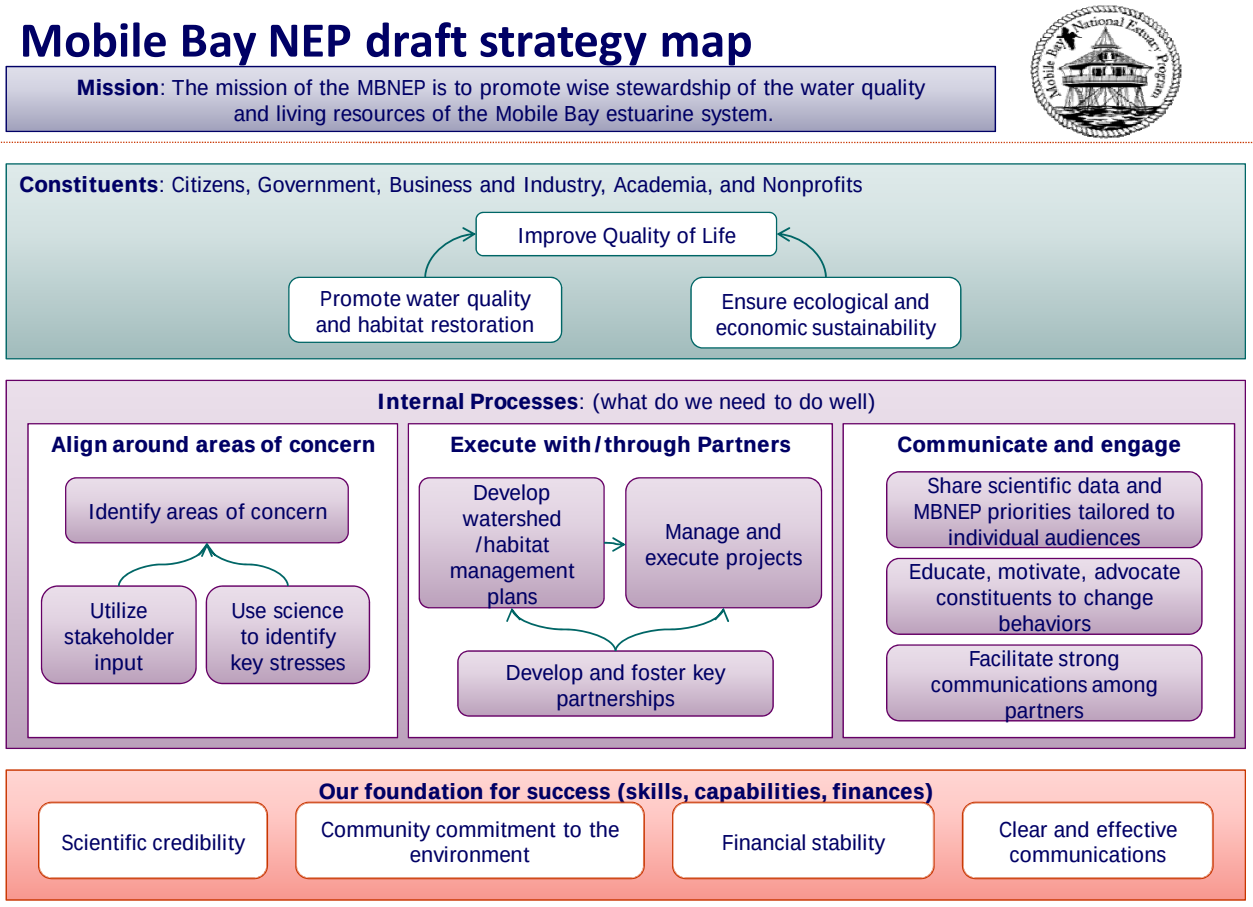
Purpose: The MBNEP brings together an engaged and diverse community committed to integrating environmental health with community and economy to develop consensus on what our ecosystem priorities are, how to achieve them, and how to facilitate/promote their implementation.

Mission: To provide 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.



During the next fiscal year, MBNEP will continue to promote greater coordination and participation of Management Conference members in implementing the CCMP 2013-2018 through improving program transparency, communications, and community awareness. This will be done by development of a communications plan for promoting the new CCMP, coordination of special events to expand MBNEP partnerships, development of a public awareness campaign to highlight emerging environmental issues, and continuously improving and expanding our website to provide more interactivity and highlight management conference efforts. Expected outcomes related to these activities include better understanding of MBNEP activities 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.

EPI: 1. MANAGEMENT CONFERENCE SUPPORT

Project Number	EPI1301
Title	Management Conference Support
Values Supported	Access, Shorelines, Fish, Heritage, Resiliency, Water Quality
Purpose	Sustain and expand stakeholder involvement in the implementation of the CCMP 2013-2014
Outputs/Deliverables	Quarterly meetings of each Management Conference Committee; Five year action plans for Estuary Status and Trends, Ecosystem Restoration, Technical Assistance and Capacity Building, and Education and Public Involvement
Outcomes	Improved community management of ecosystem restoration and protection activities; expanded community engagement and ownership
Clean Water Act Relevance	Support water quality standards; Improve water quality monitoring, Support TMDL implementation, Improve monitoring of wetland function and coverage
Year 1 (2013-2014)	$0
Other Funding	$0
Total Funds	$0
Match/Leverage	
Lead/Partners	MBNEP/All members of the management conference

The Mobile Bay region is part of an urban and economic network that is connected around the globe. It is also located in a sensitive place in the world's environment, an estuarine complex subject to natural and technological disasters. Creating a framework for the future of the Mobile Bay estuary, in light of the oil spill, will require an analysis of systems behavior at the global and continental scales and the ability to telescope inside the region to the scale of regional sub-component areas. The systems that will be examined through this project are vulnerable to many stressors. "Stressors" are perturbations to a system that are either (a) foreign to that system or (b) natural to the system but applied at an excessive (or deficient) level (Barrett et al. 1976:192). For the Mobile Bay estuary, these stressors include but are not limited to stormwater runoff and other non-point source pollution. Other considerations include climate change and sea level rise.

In preparation for the next CCMP, the following background project will be undertaken:
During the Spring of 2012, Auburn University, School of Forestry and Wildlife Sciences conducted a mail-based survey of 2,000 residents of the Mobile Bay region (Baldwin County and Mobile County, AL), focusing on the participants' bay usage, identification of threats, and management preferences. A large component of .

EPI: 2. SEMI ANNUAL NEWSLETTER

Project Number	EPI1302
Title	Semi Annual Newsletter
Values Supported	Access, Shorelines, Fish, Heritage, Resiliency, Water Quality
Purpose	Publish semi-annual newsletter to highlight emerging issues, project progress and other issues of interest
Outputs/Deliverables	2 Newsletters
Outcomes	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors; Increased knowledge of activities being undertaken to protect estuarine resources
Clean Water Act Relevance	
Year 1 (2013-2014)	$6,000 (Included in Program Planning Budget)
Other Funds	$6,000 (ADCNR)
Total	$12,000
Match/Leverage	
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.

Two newsletters will be published in the next year for distribution as hard copy as well as in electronic format.

EPI: 3. EDUCATIONAL/INFORMATIVE SIGNAGE

Project Number	EPI1303
Title	Educational/Informative Signage
Values Supported	Access, Shorelines, Fish, Heritage, Resiliency, Water Quality
Purpose	Educate community about watershed, ecosystem characteristics and project components
Outputs/Deliverables	Educational/Informative Signage at public locations adjacent to project sites
Outcomes	Increase public awareness of environmental issues
Clean Water Act Relevance	
Year 1 (2013-2014)	$0 (Note: These signs are part of past year grant reprogram)
Other Funding	$0
Total	$
Match/Leverage	
Lead/Partners	MBNEP

MBNEP will develop and install three interpretive signs in public places adjacent to on the ground projects undertaken to educate the public about: 1) Where they are in the watershed; 2) What the ecosystem is like in that area; and 3) What the project entailed. These signs have already been installed at Helen Wood Park, Dog River Park and for Brooks Park.

During the next program year, interpretive signage will be prepared for Reading Park, Steele Creek Lodge, and an area close by Joes Branch.

EPI: 4. VIDEO PRODUCTION

Project Number	EPI1304
Title	Video Production
Values Supported	Access, Shorelines, Fish, Heritage, Resiliency, Water Quality
Purpose	To educate children and adults about the estuary, its people, and its flora and fauna.
Outputs/Deliverables	Two educational videos
Outcomes	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors
Clean Water Act Relevance	
Year 1 (2013-2014)	$ 14,000
Other Funding	$
Total	$ 14,000
Match/Leverage	
Lead/Partners	MBNEP

In response to increasing concern about the health of Gulf coast watersheds due to excessive anthropogenic nutrient loading, MBNEP has partnered with the Dauphin Island Sea Lab, the Gulf of Mexico Program, Hamline University and a local producer to develop two interactive, touring videos and three interactive, touring kiosks. This program, with English and Spanish translation, will educate children and adults about the impacts of excess nutrients on Gulf coastal waters and stimulate behavior changes. It will clarify the concepts of "watersheds" and "estuaries" and describe the various sources of nutrients, their impacts on estuaries, and actions that people can take to reduce nutrient input and impacts. When finished, the videos and kiosks can be used together to reinforce key messages. However, they still will provide comprehensive educational value if used independent of each other.

With the first installment, "*A Redfish Tale*," complete, MBNEP produced a second video, "Fish Slap," that highlights both positive and negative human behaviors and their effects on our environmental resources. The leading characters of the first video, animated redfish named Jimbo and Thibodaux, return in the second video to provide the continuing perspective of "a fish out of water" to emphasize the sense of urgency. The three interactive kiosks that complement the videos travel throughout the Gulf to educate the general public about watersheds and practices that can negatively impact our environment.

During the next program year, MBNEP will seek out partners to produce another educational video that focuses on the issue of trash.

EPI: 5. SPECIAL EVENTS

Project Number	EPI1305
Title	Special Events
CCMP Objective	Access, Shorelines, Fish, Heritage, Resiliency, Water Quality
Purpose	To educate the public about the things that are valued most about living in coastal Alabama
Outputs/Deliverables	Create an Outreach and Communications plan, Sponsor 5 community events, Conduct 3 public meetings/workshops
Outcomes	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors
Clean Water Act Relevance	
10-11 EPA Funding	$14,435
Other Funding	$ 0
Total	$14,435
Match/Leverage	Community groups, Management Conference members
Lead/Partner	MBNEP

MBNEP will continue to support and participate in such activities as Coastal Kids Quiz, Baldwin and Mobile County Water Festivals, Wolf Bay Watershed Watch Kid's Fishing Tournament, Discovery Day, Coastal Cleanup, BirdFest, and others

EPI: 6. COMMUNITY OUTREACH PROMOTIONAL MATERIALS

Project Number	EPI1306
Title	Community Outreach Promotional Materials
CCMP Objective	EPI
Purpose	To promote messages related to protecting the Mobile Bay estuary
Outputs/Deliverables	Assorted items (SWAG) with estuary messages
Outcomes	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors
Clean Water Act Relevance	
Year 1 (2013-2014)	$ 5,000
Other Funding	$ 0
Total	$ 5,000
Match/Leverage	
Lead/Partner	MBNEP

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. Over the past several years, MBNEP has worked with the Gulf of Mexico Program, the Alabama Clean Water Partnership, and other partners to develop outreach material for use in raising awareness about the environmental issues and ecosystem stressors over which we have control, such as excess nutrients, stormwater, and nonpoint source pollution.

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 that establishes goals, identifies target audiences, determines what information should be disseminated and how, implements actions, and evaluates results.

EPI: 7. COMMUNITY AWARENESS CAMPAIGNS

Project Number	EPI1307
Title	Stormwater Demonstrations and Education Campaign
CCMP Objective	EPI
Purpose	To educate the residents of Baldwin and Mobile Counties about ways to decrease harmful stormwater runoff
Performing Organization(s)	MBNEP
Outputs/Deliverables	Production of educational materials to be distributed at community meetings, raise awareness by conducting 3 demonstration workshops
Outcomes	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors
Clean Water Act Relevance	
Year 1 (2013-2014)	$0 (Note: This campaign is part of past year grant reprogram)
Other Funding	
Total	$0
Match/Leverage	
Lead/Partners	MBNEP/CAC

Stormwater runoff, considered by the EPA to be the number one source of pollution to American waters, is the primary threat to water quality in coastal Alabama. Exacerbated by increased impervious surfaces associated with development, it causes flooding and carries fertilizer, pesticide, animal waste, residues from automobiles and road surfaces, organic debris, trash, and all of the residues of urban and suburban living, untreated, into creeks, streams, rivers, and ultimately the Bay and Gulf. The force generated by increased volumes and velocities of runoff degrades channels, erodes stream banks, and adds sediment loads that increase turbidity and decrease habitat quality. Baldwin and Mobile County water bodies listed on the State 303(d) list are overwhelmingly impaired by pollutants conveyed by stormwater. Local governments, already responsible for stormwater management, face increased Federal regulations with limited resources.

While the public demands better management, education is needed to promote individual, residential stormwater management; encourage changes in policy and regulations to address problems at their source; and encourage regional/watershed level management to reduce costs and increase benefits.

Spring boarding off of the failed local referendum in Baldwin County, MBNEP has joined in partnership with the many entities, including local municipalities, community groups, the Clean Water Partnership, Weeks Bay National Estuarine Research Reserve, ACF, and BayKeeper to build a comprehensive program for educating

government officials, the development community, educators and students and the general public about the impacts of stormwater runoff and changes that need to be made at the individual and community levels to improve how it is managed by watershed. This group has formed the Coastal Alabama Stormwater Team (CAST) to leverage efforts at improving stormwater management throughout coastal Alabama

MBNEP has entered into a contract with Mobile Baykeeper to conduct a Stormwater Media Campaign in Mobile and Baldwin counties. Goals of the campaign are to provide residents with a clear understanding of stormwater, its impact, and the need for improved stormwater management. In addition, the campaign will encourage good stewardship of the watershed through positive personal and community (governmental) stormwater management. Objectives of the campaign include awareness of stormwater issues including the importance of clean water to the recreational and commercial uses of our waters (our way of life), awareness of economic degradation caused by poor stormwater management and its ensuing damage to the environment, and awareness of the cost of prevention versus the cost of restoration.

In addition to the above, MBNEP will execute cultivation strategies that educate potential new partners about the issues, challenges and opportunities for environmental improvements and engage them in helping to develop solutions that can be undertaken by all sectors of the community. During the next fiscal year, MBNEP will also seek out opportunities within the community to engage place-based grassroots organizations in developing programs, including additional community-based clean ups, aimed at increasing these groups' knowledge about their watersheds and ecosystem functions and the stressors that can negatively impact the system's function and value. This will be done using the services of an Americorps volunteer.

PIR: 1. ADMINISTRATION AND INDIRECT COSTS

Project Number	PIR1301	
Title	Program Administration	Indirect Costs (15%)
CCMP Objective	MPA	
Purpose	Develop standardized mechanisms for planning, financing, and tracking activities	Leverage resources to streamline program implementation
Performing Organization(s)	MBNEP	DISL
Outputs/Deliverables	Improved financial tracking system; new time allocation system	27.6% unrecovered administrative costs contributed to program as non-Federal share from DISL
Outcomes	Improved program management and administration	
Clean Water Act Relevance		
Year 1 (2013-2014)		
Total		

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; 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.

STAFFING PLAN

Position	Employee	Responsibilities	Main Activities
Program Director	Roberta Arena Swann	General Oversight, Acceptance, and Implementation of Program	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 throughout the community; Oversees all office activities.
Watershed Protection Coordinator	Tom Herder	Conducts restoration projects and educational activities	Oversight of all Restoration-related Projects including Project Design, Implementation, Coordination and Monitoring; Develop, initiate and coordinate baseline data collection; Facilitate the transfer of technical information; Prepare public outreach efforts for the general public on watershed issues; other
Community Outreach Coordinator	Kelley Barfoot	Coordinates Public Outreach and Education Programs	Manages public information development and distribution including press, website, social media, outreach materials; develops outreach and education plans for program and specific watershed plans; prepares program activity reports for grantors/public; other
Grants and Business Administrator	Tiffany England	Overall business and office management	Maintains budget, project files, financial record keeping, grant reporting; coordinates logistics and promotional materials for educational outreach and special events
Coastal Basin Clean Water Partnership Facilitator	Christian Miller	Non-Point Source Pollution Specialist	Works with communities to develop watershed management plans and implement initiatives of the Alabama Clean Marina Program and the Alabama Clean Water Partnership
Communications Coordinator	Debi Foster	Newsletter and other publicity; media specialist	Coordinates and writes newsletter, press releases, and other publicity materials; executes media events
Special Projects Coordinator	Kristen O'Keefe	Project Assistance as needed; Community engagement	Coordinate marine spatial planning, management conference sub committees and provides assistance to other staff in executing projects.
Website Manager	Blue Fish Design	Information Technology Coordinator	Maintains MBNEP's web presence including the MBNEP website and social media sites. Website management to ensure functionality and accuracy of information. Coordinate GIS services with external partners.

TRAVEL

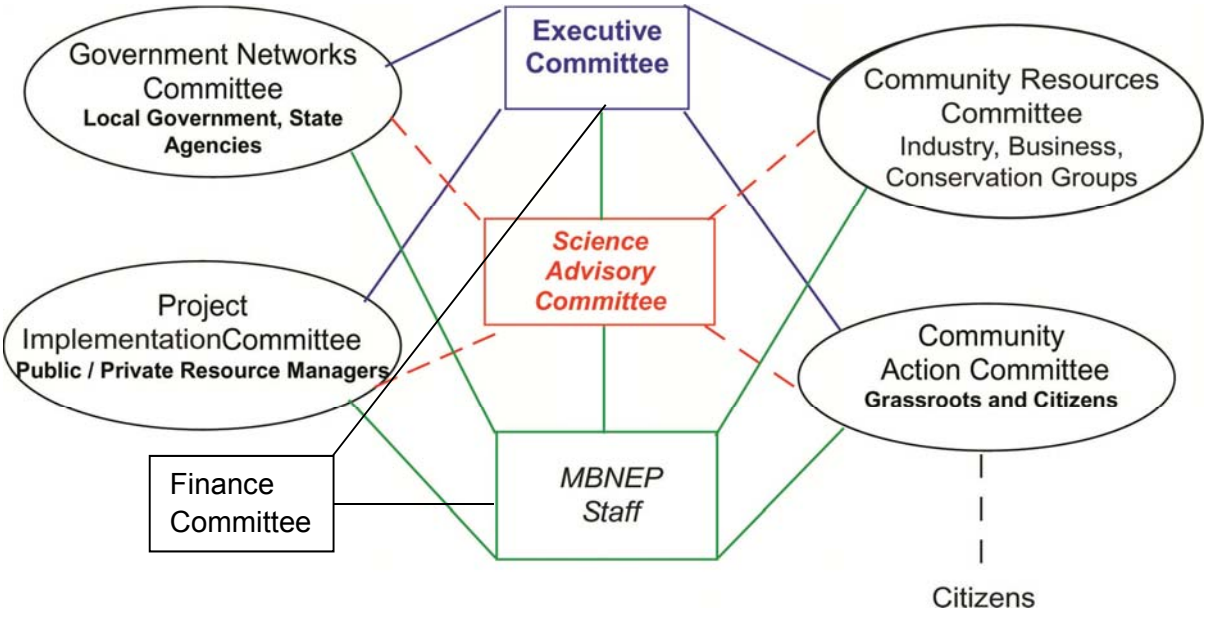
In addition, this amount includes $12,500 for travel related to outreach and technology and information transfer. Program staff will participate in regional, state, and national conferences and meetings relevant to estuarine management. Attendance at Association of National Estuary Programs workshops and EPA workshops / meetings will be stressed.

Indirect Costs are charged at a rate of 15% on all cash expenditures (grant and matching funds) of the MBNEP by Dauphin Island Sea Lab. DISL allowable Indirect Cost negotiated rate with Federal Government is 42.6%. The un-recovered indirect of 28.6% 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. *(See appendix for past year travel)*

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 four main committees: Community Action Committee, Community Resources Committee, Government Networks Committee, and Project Implementation Committee.



- 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 Community Resources Committee brings together a balance of interested community leaders from industry, business, environmental services, and the non-profit sector 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 the target area 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 and a sound basis to be used by the other committees in their decision making processes. A Finance

Committee includes community leaders that are committed to assisting non-Federal matching dollars to implement activities of the CCMP. An Executive Committee – 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. At present, MBNEP is managing one EPA grant in the amount of $2,822,600 with an expected completion date of September, 2014. EPA funding in the amount of $597,750 has been budgeted in this workplan. However, we anticipate that this amount will be reduced to as much as $512,000. Should this funding be reduced, budget lines in red will be modified to accommodate the reduction.

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. To date, MBNEP has received over $540,324 in Gulf of Mexico Program (GOMP) grants to support a water management strategy for Eight Mile Creek, wetlands resource measurement baseline development, SAV gardening, Oyster gardening programs and the creation of a strategic assessment of priority habitats. Currently the MBNEP continues managing a $239,925 GOMP grant to support a real time water quality monitoring throughout Mobile Bay.

COASTAL IMPACT ASSISTANCE PROGRAM (CIAP)

In fiscal year 2001, the U.S. congress authorized the Coastal Impact Assistance Program (CIAP) to assist states and local communities in mitigating the impacts of Outer Continental Shelf oil and gas development and production. Alabama received a onetime grant of approximately $21,000,000, of which MBNEP received $390,000 to fund an analysis of fish data, air deposition sample analysis, a study of Living Resources in the Delta, and Mobile Bay water monitoring.

In 2005, congress re-authorized funding for CIAP, which was established under section 384 of the Energy Policy Act (EPACT) of 2005 and authorizes the Secretary of the Interior to distribute $250 million annually to six Outer Continental Shelf (OCS) oil and gas producing states in fiscal years 2007 - 2010. The EPACT of 2005 requires that all CIAP funds be used to directly conserve, restore, enhance or protect renewable natural resources. The Minerals Management Service (MMS) will act as the administration entity for this funding. In Alabama, the CIAP eligible recipients are the State of Alabama (through the ADCNR), the Baldwin County Commission and the Mobile County Commission. In total, the State will receive $51,103,214.08 for fiscal years 2007 and 2008. Of this funding amount, $33,217,089.16 will be available to the State of Alabama,

$7,894,094.64 will be available to the Baldwin County Commission and $9,902,030.28 will be available to the Mobile County Commission. This funding will be utilized to implement projects outlined in the CIAP Plan.

In April, 2009 the State's plan was approved by MMS for the first round of CIAP funding (as described above) and activity will begin during the summer of 2009. County governments and the Alabama Department of Conservation and Natural Resources- Coastal Section develop projects under this program.

MISSISSIPPI ALABAMA SEA GRANT CONSORTIUM (MASGC)

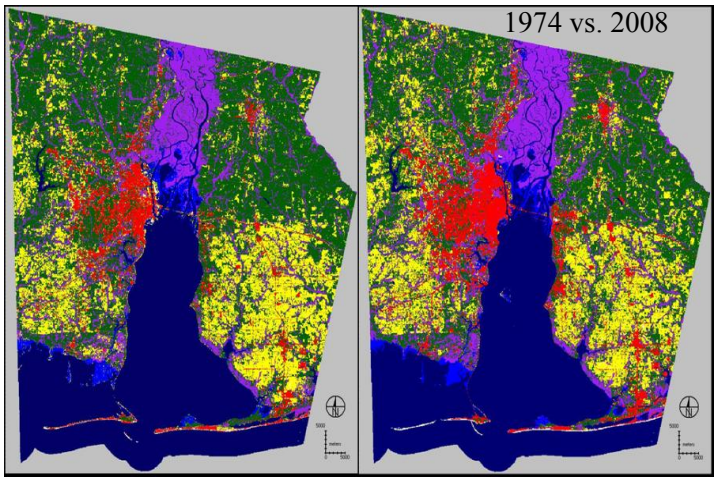
The Mississippi Alabama Sea Grant Consortium is dedicated to activities that foster the conservation and sustainable development of coastal and marine resources in Mississippi and Alabama. Sea Grant is NOAA's primary university-based program in support of coastal resource use and conservation. The MASGC 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 partners with MASGC to co-fund a Coastal Resource specialist position. In addition, MASGC recently submitted a NOAA Economic Stimulus Restoration proposal which lists MBNEP as a partner.

NOAA RESTORATION GRANTS/ GULF OF MEXICO FOUNDATION (GOMF)

The NOAA Community-based Restoration Program administered by the Gulf of Mexico Foundation funds citizen-driven habitat restoration projects which benefit living marine resources and foster local stewardship throughout the Gulf of Mexico region. Approximately $200,000 in external NOAA grant funding has been received to implement priorities of the CCMP.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

The NASA Stennis Space Center Applied Science Coastal Program has used and is using local interest and coastal community science needs to guide development of a strategic plan. The overarching purpose of the Applied Sciences Program is to discover and demonstrate innovative applications of NASA Earth science research and technology and to maximize the benefits to society of the nation's investments in the NASA Earth science research program. Mobile Bay was identified as a priority area and a NASA team led by Dr. Jean Ellis partnered with MBNEP to address a priority local need by mapping and assessing Land Use-Land Cover changes in Baldwin and Mobile Counties from 1974-2008, a period of rapid development and growth using LandSat and other imagery data. The project was completed in September 2008 and products included: change detection maps in static and in digital format for several specific time intervals, Land Use-Land Cover change geospatial statistics; and a final project report. Under a separate NASA grant ($400,000) MBNEP was a co-investigator on a second A-28 grant, ($398,401) to continue this project by verifying analysis results with other datasets to develop a cohesive understanding the permanency of habitat change over the time period with a focus on the coastal hydrologic units. This project is helping us assess coastal change due to development and its impact on water quality, habitat and living resource populations. These maps have been very useful in watershed planning.



NORTHERN GULF INSTITUTE

The Northern Gulf Institute (NGI), a NOAA Cooperative Institute, develops, operates, and maintains an increasingly integrated research and transition program focused on filling priority gaps and reducing limitations in current Northern Gulf of Mexico awareness, understanding and decision support. Partnering with five academic institutions and NOAA, the institute is a collaboration led by Mississippi State University (MSU) that includes the University of Southern Mississippi (USM), Louisiana State University (LSU), Florida State University (FSU) and the Dauphin Island Sea Lab (DISL). The NGI was established in October of 2006. The five focus areas of the NGI are: Ecosystem-based Management, Geospatial Data/Information and Visualization in Environmental Science, Climate Change and Climate Variability Effects on Regional Ecosystems, Coastal Hazards and Resiliency.

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. USACE completed two Preliminary Restoration Plans (PRP) valued at approximately $10,000 each: one for the restoration of an area on Isle of Herbes and a second for a habitat restoration along Dauphin Island Causeway. As part of the ongoing planning for Isle of Herbes, MBNEP completed a living resources characterization of the island to assist with the corps combined planning and development phase. USACE requested Section 204 funding to continue to implement the Isle of Herbes restoration but the project was stopped due to the presence of submerged aquatic vegetation (SAV). A combined planning and design report, valued at over $80,000 was completed for the DI Causeway Restoration. However, due to a lack of suitable material and cost prohibitive staging issues, the USACE abandoned the DI Causeway restoration. Although USACE chose no further action on the project, the work done by the USACE was used as part of a grant submitted by MASGC through a NOAA stimulus grant to fund a very similar project. Another project Helen Wood Park (along the Dauphin Island Parkway) to break wave energy, thus reducing erosion has been cancelled by USACE due to the presence of SAV in the area that was identified for marsh establishment. USACE participation in CCMP activities represents a crucial resource for moving projects forward.

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 $570,000 over the past nine years and will receive $70,000 per year of funding for 2013-2014. At present we are currently managing two five year projects funded by ADNCR: Coastal Marine Spatial Planning and Habitat Restoration Planning ($199,000) of which $6,000 per year is 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. This funding has been reduced each year as follows:

Funding Year	Funding Amount
2008-2009	$89,000.
2009-2010	$81,709.
2010-2011	$79,258.
2011-2012	$79,258.
2012-2013	$75,588.

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:

Local	***2013-2014***
Baldwin County	
Mobile County	17,888
City of Mobile	25,920
City of Daphne	10,000
City of Spanish Fort	5,000
City of Fairhope	5,000
Other Cities	3,000

IN-KIND CONTRIBUTIONS

MBNEP depends on volunteer support and local contributions of 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.

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 eastern edge of coastal Alabama to its western coastal border. In addition, it extends seaward to the three-mile State jurisdictional limit. MBNEP's target area also includes Mississippi Sound, up to the Mississippi/Alabama border. Major waterways include the Tombigbee, Tensaw, Appalachee, 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 TWO: ONGOING PROJECTS

MBNEP ACCOMPLISHMENTS 2012

MOBILE BAY NATIONAL ESTUARY PROGRAM
MAJOR ACCOMPLISHMENTS 2012

PROGRAM IMPLEMENTATION

Each year the MBNEP receives an allocation from EPA to support activities geared toward achieving the objectives of the Comprehensive Conservation Management Plan (CCMP). The allocation for the 2012-2013 was $597,167. This was the third year of funding of a three year grant for a total of $2,008,467. EPA requires that this total allocation be matched with non-Federal dollars in a 1:1 ratio, or an additional $2,008,467 either in cash or in-kind valuation. This match may be in the form of cash investments, donated property valuation, or in-kind equipment, professional, or volunteer services (see Match section). Total EPA funds, including match, that were available for CCMP implementation were $**2,597,099**.

CCMP DEVELOPMENT/REVISION

The U.S. EPA requires National Estuary Programs to revise the CCMP periodically. The first CCMP, completed and approved in 2002, consisted of 29 primary objectives or actions that were broken down into 101 sub-objectives or steps. Actions were grouped under five priority issue areas: Water Quality, Habitat Management, Living Resources, Human Uses, and Education and Public Involvement. As of October 1, 2012, 11 had been completed, 87 implemented on some level, and three reconsidered. In 2011, MBNEP initiated a revision of the CCMP, to create a roadmap for 2013-2018, for coastal environmental management and restoration and a plan to arm citizens with knowledge to heighten their sense of ownership.

MBNEP's major focus this past year was to complete a new CCMP based on science that would become the community's road map for coastal environmental management and restoration. To accomplish this, the current CCMP was evaluated to determine whether or not we achieved what we set out to achieve in the first plan. A team of Volkert scientists and engineers and current and past MBNEP Management Conference partners (that included Dr. George Crozier, Dr. Rick Wallace, Steve Heath, John Carlton, Cherie Arceneaux, and Randy Roach) reviewed ten years of accomplishments towards realizing goals set in 2002(http://www.mobilebaynep.com/images/uploads/library/CCMPEvalfinal(1).pdf). This evaluation resulted in over 100 recommendations to be considered in future CCMP planning.

Second, what citizens most valued and what were considered the greatest threats, was assessed scientifically-conducted Community Attitudes Assessment in summer, 2011. To augment this data, throughout 2012, MBNEP staff conducted targeted community meetings to gather input from stakeholder groups across the two coastal counties. Through these efforts, MBNEP was able to identify six common Values based upon the things considered most important to our coastal quality of life: ***Access (to water and open spaces), Beaches and Shorelines, Fish, Heritage/Culture, Resiliency, and Water Quality***.

Concurrently, over 30 scientists assessed where the greatest stresses are on the habitats that provide critical ecosystem services to our quality of life. In June, 2011 over 30 scientists and ecologists evaluated the impact of each of a series of 13 habitat stressors on provision of 14 different ecosystem services by ten coastal habitats. Each stressor was rated between zero (absolutely no negative impact) to three (the most negative and direct impact) for each service for each habitat, a total of 1,820 cells. The three most stressed coastal habitats were determined to be freshwater wetlands, intertidal marshes and flats, and rivers and streams (with their riparian buffers).

Determining which coastal watersheds required the most attention to derive the greatest benefit fell to MBNEP's Project Implementation Committee. Initially, the wide range of environmental projects proposed in reaction to the Deepwater Horizon incident and subsequent passage of the RESTORE Act were compiled/consolidated into a single list. A Working Group was appointed with the goal of determining a framework for prioritization. This group collected data sets relevant to prioritization of watersheds on the 12-digit Hydrologic Unit Codes (HUCs)-scale. Of the forty-eight 12-digit HUCs in the two county area, the "first cut" included only those watersheds containing at least two of the three habitat types determined by the SAC to be the most stressed. Data were presented and 24 watersheds reviewed at a public meeting, where attendees voted to determine where attention and resources should be focused. Priorities included Fowl River, Bon Secour River, and the Tensaw Apalachee watersheds.

To determine which actions should be recommended by the new CCMP, MBNEP hosted a workshop on Thursday, November 29 at the Outlaw Convention Center in Mobile, AL. Six teams – one for each of the identified common coastal Values – each captained by local experts with ten to twenty community leaders, resource managers, and experts, convened to 1) identify desired outcomes and barriers to their realization, 2) identify at least five actions that are specific, measureable, realistic and time-bound that relate to the stressors and drivers identified in the first step, and 3) discuss and recommend implementation strategies. A list of over 140 actions was compiled from this effort. MBNEP posted a draft of the CCMP for public comment along with a Survey Monkey survey of the actions for prioritization by the public, gathering data from 232 respondents.

STATUS AND TRENDS

Mobile Bay Sediment Budget
MBNEP joined forces with the U. S. Army Corps of Engineers to develop a Sediment Budget for Mobile Bay that describes the various sediment inputs (sources) and outputs (sinks) for the entire Mobile Bay watershed. This Budget, with a final draft completed August 31, 2012, will be used to predict morphological changes over time and will be particularly useful in assessing any changes related to future habitat restoration projects. Such a tool will provide great value to regulatory and enforcement agencies to make decisions that affect policy development, project implementation, and management of habitats and living resources. Contractor: Dr. Mark Byrnes, Applied Coastal Research and Engineering, Inc.

Mobile Bay Real-Time Monitoring
With continued funding (6th year) from the Gulf of Mexico Program in 2012, water monitoring sites at Meaher Park, Dauphin Island, Weeks Bay, and Mobile (Middle) Bay continue to provide real-time data that can be viewed at WWW.MYMOBILEBAY.COM. That website also contains links to the Mobile River, Fort Morgan, and the Farewell Buoy as part of the Physical Oceanographic Real-Time System of the National Ocean Service with data particularly pertinent to shipping interests. Data is also available from Weeks Bay and Grand Bay through the NOAA National Weather Service Hydrometeorological Automated Data System.

The My Mobile Bay website will ultimately be connected to a larger network of stations as part of the Gulf Coast Ocean Observing System with research reports, maps, and other information available to the public. Contractor: Mike Dardeau, DISL

Dog River Watershed Sediment Study
In December, 2012, the Geological Survey of Alabama completed a characterization of land use, erosion, and sedimentation in the Dog River Watershed to identify sources of sediment and to establish baseline data and sedimentation rating curves that can be used to evaluate future changes in erosion and sediment load transport. This monitoring project assessed suspended and bed sediment transport rates in 10 monitoring sites in selected tributaries of Dog River. Monitoring was based on precipitation and resulting stream discharge and included basic field acquired physical and water quality parameters as well as sediment. These data will be used to determine impacts of land use change, to focus resources in areas of greatest need for remedial action, and t assist municipal and state erosion and sedimentation inspection programs.

Mobile Bay Hydrological and Water Quality Model
In partnership with the U. S. EPA Region IV and ADEM, MBNEP facilitated an update of the existing Loading Simulation Program (LSPC), Environmental Fluid Dynamics Code (EFDC) and Water Quality Analysis Simulation Program (WASP) that have been applied to the Mobile Bay watershed and water body for the purpose of developing Total Maximum Daily Loads of pollutants. Models were updated through 2011 to incorporate new datasets. The current model was developed by Tetra Tech and released in December, 2012.

ECOSYSTEM RESTORATION AND PROTECTION

Joe's Branch
In the D'Olive watershed, a tributary to Joes Branch running parallel to Highway 31 was eroding at an accelerating rate due to increases in the volume and velocity of stormwater runoff. To address this area, identified as a high priority in the D'Olive Creek, Tiawasee Creek and Joe's Branch Watershed Management Plan, MBNEP secured a $645,600 grant from the Alabama Department of Environmental Management and a $200,000 award from the Alabama Department of Transportation on behalf of its partners in Spanish Fort, Daphne, and Westminster Village. The goals of the project included removing this stream from the State's 303(d) list for impairment by siltation and demonstrating to public officials, engineers and other professionals how water quality protection through natural "green infrastructure" is a practical alternative to rock fill and armored bank retention systems. Baseline monitoring of a site just upstream from its confluence with D'Olive Creek revealed an annual sediment load of 100,000 tons, the worst ever encountered by Geological Survey of Alabama researchers.

The restoration began in November 2012 and involved a cutting-edge technology called Regenerative Step Pool Storm Conveyance (SPSC). This methodology involves grading and filling the gully to flush with an infiltration matrix of sand and saw dust after installing a series of rock dams and cobbles to create step pools down the length of the impacted stream to 1) slow velocity and 2) promote infiltration of the runoff underlying the stream bank degradation. The project includes post-construction installation of native plants to stabilize riparian areas and restoration of downstream wetlands impacted by sediments resulting from the upstream erosion. Earth work and installation of temporary grasses has been completed. Southern Excavating, LLC was contracted to perform SPSC construction and downstream wetlands restoration. Design and Engineering Services Contractor: Emery Baya, Thompson Engineering In addition, the Dauphin Island Sea Lab is donating in-kind services.

Mon Louis Island
The western shore of Mobile Bay has suffered erosion and degradation of its shallow water and intertidal habitats that provide nursery grounds for fish and shellfish and promote benthic biodiversity. This erosion stems not only from the effects of periodic tropical weather events, but also from chronic impacts like

prevailing winds and ship wakes. After three years of community education about living shoreline technologies and bay hydrodynamics, MBNEP and six contiguous property owners undertook this project to use "living shorelines" technology to demonstrate its benefits as an alternative to habitat-degrading shoreline armoring, increasing in acreage and ecosystem function of these near shore habitats for a greater community benefit.

MBNEP received funding from the Gulf of Mexico Foundation Community Restoration Partnership and the U. S. Fish and Wildlife Service Coastal Programs to undertake this project. The six property owners of parcels encompassing almost 700 feet of shoreline, have agreed to partner to demonstrate how such a project would be implemented on a multi-property scale and constructed under existing State and Federal regulations.

Project goals initially included creation and enhancement of sub-tidal reef and intertidal marsh habitats, with the objectives to install 0.25 acres of reef structure to expand quality oyster settlement opportunities and to establish 0.45 acres of low energy inshore area to restore emergent marsh vegetation, while optimizing sandy areas along this stretch of shoreline. After recommendations from project engineers and consideration of alternatives, the goal of marsh creation along this relatively high-energy beach was abandoned in favor of additional reef and intertidal beach habitat. Final designs involved placement of two submerged reef structures with warning signage 600 and 800 feet from shore, four 15- by 40-foot Class #3 riprap headland breakwaters at the intertidal slope change, and 1,500 tons of clean sand fill behind the breakwaters.

An obstacle to project completion (and implementation of other similarly beneficial projects) was State Lands Division Regulation 220-4-.09 Placement and Configuration of Piers and Other Improvements on State Submerged Lands, which precludes any placement of materials seaward of the mean high water line unless related to reclamation activities after an event involving avulsion or artificial erosion. MBNEP was able to secure permission from the Conservation Commissioner to proceed as a demonstration project to study the benefits of this technology and determine how State regulations would need to be modified to allow for these projects. MBNEP developed a legal instrument by which shoreline private property owners agreed to fix seaward property borders at current MHW on deeds and to refrain from construction of any shoreline armament on a beach zone extending 60 feet west of eastern border of installed breakwaters for a period of three years as a condition of the project.

The project was awarded to J&W Marine Enterprises, who completed construction in March, 2013. Clean sand fill was donated by the Alabama State Port Authority, and riprap for submerged reefs and headland breakwaters was donated by the Alabama Department of Transportation. Design and Engineering Services Contractor: Scott Douglass, South Coast Engineers.

Prichard's Jackson Reading Park/Eight Mile Creek

With completion of a Watershed Management Plan for the Eight Mile Creek (EMC) Watershed, MBNEP received a National Fish and Wildlife Foundation Five Star Grant to restore a first order tributary that borders Prichard's Jackson Reading Park in the Whistler Community. The creek conveys stormwater from a drainage area north of St. Stephens Road past the Park and downstream to Eight Mile Creek, which was listed on the State's 303(d) list for impairment by pathogens. Partners from Auburn University (Landscape Architecture Department and Alabama Cooperative Extension System [ACES]) co-developed an engineering plan for the stream restoration and oversaw construction by the City of Prichard Public Works Department in early November, 2012. MBNEP and the Coastal Alabama Clean Water Partnership installed water lines and oversaw a community planting on March 2, 2013 to install almost 3,000 native emergent and riparian plants in and around the stream bed. Partners also include the Prichard Environmental Restoration Keepers and Mobile Baykeeper, who coordinated volunteer clean up and planting efforts. The restored stream will provide habitat for a broad diversity of wildlife and aquatic organisms and an educational venue to connect school-aged stakeholders with environmental assets where they live. Design and Construction Management Services: Charlene LeBleu, Jessica Roberts Brown, and Eve Brantley, Auburn University.

Steele Creek Lodge Shoreline Restoration, Satsuma, AL

The City of Satsuma requested technical assistance and $10,000 to purchase materials necessary to use City equipment and personnel to address erosion and undercutting along the western shore of the embayment off of Bayou Sara where Steele Creek Lodge and municipal boat ramps are located. In August 2010 Dr. Bret Webb of the University of South Alabama investigated the site and provided conceptual recommendations for restoration within that limited budget. The City selected the creation of a perched terrace and in 2012 installed a rock sill composed of class 1-2 riprap with a crest located an average of six feet from and along the 150-foot impacted shoreline. Clean sand was placed behind the sand fill to create a terrace at a depth between MLW and MHW with an area of approximately 900 square feet. This area will be planted by Satsuma High School Environmental Science or Grasses In Classes Students using native emergent plants of species and diversity similar to those found at an existing marshy area adjacent to the boat ramps.

Local Ecosystem Restoration Partnership

In 2011, MBNEP solicited proposals from Baldwin and Mobile counties and coastal municipalities for projects related to stormwater management; wetlands restoration, protection, enhancement, or creation; and sediment management. Six projects received awards ranging from $15K to $82.5K, and project completion was expected by September 30, 2012. Project summaries follow:

- The City of Daphne was awarded $15,000 to support a Low Impact Development Project. The City hired Engineer Trey Jinright of Jade Consulting to guide initiation and encouragement of low impact development practices, green infrastructure, and incentives for the City to spearhead the process of developing LID/GI practices to be used to supplement the City Subdivision Regulations and to provide alternatives to traditional stormwater management practices. This LID guidance was adopted by the City of Daphne in March, 2013.
- The City of Chickasaw was awarded $20,000 to construct 300 feet of boardwalk and 1,000 feet of gravel trails allowing public access and provide public education by creating and installing signage in the park. It also involved debris removal and eradication of invasive species to improve wetland function. Construction, wetland improvement, and installation of signage are complete.
- The City of Orange Beach was awarded $27,500 address stormwater management and wetland restoration by altering the contour of the east Highway 161 right-of-way to create a serpentine wetland system that will greatly improve the receiving waters of Cotton Bayou. Additionally, interpretive signage will be installed along well-established pediestrian and biking trail that runs through the project area. With an extension approved, construction is pending.
- The City of Orange Beach was awarded $30,000 to analyze usage along soon-to-be-improved Canal Road and design a plan to provide for expanded traffic usage in a way that promotes stormwater infiltration, minimizes the use of impervious pavement, and is both pediestrian and bicycle friendly. With an extension approved, plan completion and adoption is pending.
- The City of Fairhope was awarded $50,000 to develop a management plan for the Volanta Gully subwatershed and to implement at least two projects recommended in that plan. Fairhope hired Trey Jinwright of Jade Consulting to develop the watershed management plan and to supervise construction of the two projects. Following a transparent process that included public input, the WMP was completed and the City implemented three projects: Installation of best management practices and drainage improvements at City ballfields, parking areas, and dog park; installation of best management practices and drainage improvements at the City's Jasmine Park, and drainage improvement as demonstrations near the intersection of Central Boulevard and Westley Streets were implemented by the City to match MBNEP funding.
- The City of Foley was awarded $82,500 to address/reverse impacts of urban development on Wolf Creek by restoring the stream and floodplain to natural condition. This project will provide more and improved habitat for increased species diversity, implement urban watershed management practices, and serve as an

example of holistic watershed restoration. The grant period has been extended to allow establishment of vegetation.

EDUCATION, OUTREACH AND CAPACITY BUILDING

Fish Slap

As a follow up to *"A Redfish Tale*," an educational video produced by MBNEP and directed by Hidden World Productions that addresses nutrient loading through nonpoint source pollution, "*Fish Slap"* was created as part of a grant from the Gulf of Mexico Program and was released in January 2013. Both film-shorts feature a pair of animated redfish, *Jimbo and Thibodeaux*, who explain concepts related to nonpoint source pollution. *Fish Slap* addresses problems related to litter pollution in urban and downstream waters using an imaginary TV program hosted by the fish heroes to illustrate the sources and possible solutions to these problems. This film premiered at the Public Library in Fairhope and is available via the MBNEP website. "*Fish Slap*" will be distributed to area schools, libraries, and educational venues, available on the MBNEP website (www.mobilebaynep.com) and offered at interactive kiosks across the Gulf Coast. Movie Contractor: Lynn Rabren, Hidden World Productions. Kiosk Contractor: Hamline University.

Educational Kiosks

The same Gulf of Mexico Program grant that funded production of the two educational videos also funded the creation of three educational kiosks developed by Hamline University in St. Paul, MN. The three kiosks include presentations in English and Spanish targeted to a middle school audience. Their goal is to impart knowledge about critical issues of the Gulf of Mexico Alliance while raising public awareness about basic watershed concepts and motivating behavior changed related to activities that impact the environment. The kiosks, currently located at 1) the Weeks Bay National Estuarine Research Reserve in Fairhope, AL, 2) the Ding Darling National Wildlife Refuge on Sanibel Island, FL, and 3) the Museum of Science in Corpus Christi, TX, are available to educational venues in the five Gulf States.

Watershed Management Planning for the Three Mile Creek Watershed, Mobile, AL

In response to community concerns and following efforts to 1) Clean Up the Bottom and 2) restore the historic stream bed of Three Mile Creek, MBNEP raised $268K to fund development of a Watershed Management Plan for Three Mile Creek. The Creek, which until the mid-twentieth century was the water source for the City, has been degraded or challenged by urban stormwater runoff, invasive species (i.e., island apple snails, Chinese Tallow/Popcorn Trees, alligator weed, etc.), trash and litter from city streets and parking lots, limited public access, impaired water quality (nutrients and pathogens), and environmental justice issues. The confluence of stakeholder support and resources (University of South Alabama, Mobile Infirmary, USA Medical Center, USA Children and Women's Hospital, Mobile Gas/Sempra, Scotch Gulf Lumber, and the Alabama State Port Authority), political jurisdiction (watershed includes portions of five Mobile City Council Districts and all three Mobile County Commission Districts), and environmental justice issues(watershed includes five public housing developments) make Three Mile Creek and its watershed an extraordinary opportunity to turn what is now a community liability, due to its degraded condition, into a community amenity similar to "river walks" in other American cities. The vision for this transformation includes construction of bicycle, running, or walking trails connecting a linear series of parks and green spaces, restoration of hydrology to the Creek and its surrounding wooded wetlands, enhanced paddling and ecotourism opportunities, and improved water quality and fish and wildlife health, resulting in enhanced community health and civic pride and increased property values.

Coastal Alabama Clean Water Partnership

As part of the Alabama Rain Barrel Project, CACWP conducts workshops for citizens to "make and take" a 55-gallon rain barrel. Included in the workshop is an educational session teaching citizens how to protect water quality and conserve water resources, including how rain barrels contribute to water quality protection, replenish groundwater sources, and reduce the use of potable water.

- Six workshops were held in Mobile and Baldwin Counties with a total of approximately 120 barrels constructed.
- An abstract and poster were presented at the 2012 Bays & Bayous Symposium in Biloxi, MS, highlighting the Coastal Alabama Rain Barrel program
- As part of the implementation of the D'Olive Watershed Management Plan, which recommended the establishment of a residential rain barrel program to raise public awareness of area stormwater issues, a concerted effort is being made in Daphne and Spanish Fort, AL.
    - Two rain barrel workshops were held in Daphne and Spanish Fort, with assistance from the Cities of Daphne and Spanish Fort.
    - Two Low-Impact Development demonstration sites were established in Daphne and one is being constructed in Spanish Fort.
        - A demonstration site was constructed at Daphne City Hall consisting of a 250-gallon cistern, rain garden, and educational signage acknowledging project partners.
        - A demonstration site was constructed at the Lake Forrest Subdivision consisting of a rain barrel, rain garden, and educational signage acknowledging project partners.
        - A demonstration site is being constructed at 5 Rivers Delta Center consisting of a 250-gallon cistern, rain barrel, rain garden, and educational signage acknowledging project partners
- Rain barrels were donated to support several area projects.
    - Six rain barrels were donated to Bayside Academy. The barrels are used to teach students about water conservation.
    - 10 rain barrels were donated to Habitat for Humanity.
    - Two rain barrels were donated to the Southeastern Wildlife Conservation Group.

Estuary Corps

Estuary Corps was established by a partnership that includes MBNEP, Alabama Coastal Foundation, and DISL's Discovery Hall to engage youth and adults in activities that explore and improve the Mobile Bay estuary system. The purpose of Estuary Corps is to promote the wise stewardship of the water quality and living resources of Alabama's estuaries through education, volunteer experience, and career path guidance. In its first year of operation, "Watersheds 101" was presented to students at Phillips Preparatory School and Spanish Fort Middle School. Students from both schools engaged in water monitoring activities. Phillips Prep students tested the lakes at Langan Park under the supervision of Alabama Water Watch Director Dr. Bill Deutsch using AWW kits and protocols, and SFMS students tested stream water on campus under the direction of AWW Volunteer Jeff Nye. CACWP Facilitator Christian Miller directed both student groups in construction of rain barrels at both of the campuses. Recycling collections, a campus cleanup, and tree and native plant plantings have been completed at SFMS and are pending at PPS.

IMPLEMENTATION PROGRESS

Attached:

Year 1 (2013-2014) Budget Overview
Administration Budget (2013-2014)
EPA Cost Categories
Existing Grant Budget Approved Budget Reprogramming
Existing Grant: Budget Vs. Actual/Narrative Status
Travel (2011-2012) Detail
Contracts with Local Entities (2011-2012)
Special Events: Detail