

**Mobile Bay National Estuary Program  
CCMP Work Plan Year 17  
Fiscal Year 2013**



**Prepared May, 2012**

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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 that 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 past 16 years, has led the implementation of a CCMP that was adopted in 2002 to address the water quality, living resources, habitat management, human uses and education and public outreach challenges of the Mobile Bay estuarine system. As of March 31, 2010, of the 101 actions identified in the plan, 11 had been completed, 87 had been implemented on some level, and three have yet to be initiated, indicating the need to re-visit this comprehensive plan and re-craft it for the next 5-10-year period.

## INTRODUCTION

### PURPOSE, GOALS, OBJECTIVES

MBNEP's mission is to promote the wise stewardship of water quality and living resources of the Mobile Bay estuary and Mobile-Tensaw Delta. MBNEP's purpose is to catalyze actions of estuary stakeholders, build community based organizational capacity for sound resource management, and leverage commitment and investment in ensuring the estuary's sustainability.

MBNEP's objectives are to 1) engage estuary stakeholders in the development and implementation of a CCMP; 2) expand resources and involvement in the implementation of this CCMP; and 3) educate residents; visitors; lawmakers; local, State, and Federal government agencies; businesses and industries; conservation and environmental organizations; and academic institutions about how to best protect this nationally significant ecological, economic, and cultural resource to ensure its protection and conservation for our lifetime and beyond. MBNEP works within a set of *guiding principles* to maximize its effectiveness in promoting estuary health:

*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 Mobile-Tensaw Delta 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 is simple: 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 the common good of our community and economy.

## PART ONE: MBNEP WORK PLAN FOR 2012-2013

### MAJOR GOALS AND FOCUS FOR 2012-2013

*Does our community recognize the need to maintain a healthy environment, and is it concerned about the degradation of ecosystems and the loss of species and genetic diversity which result from human activities?*

MBNEP's major focus for the coming year is to complete a new Comprehensive Conservation Management Plan based on science that will become the community's road map for coastal environmental management and restoration. In the past year, hundreds of citizens were asked what they valued most and felt were the major environmental challenges about living in coastal Alabama. Concurrently, over 30 scientists have been assessing where the greatest stresses are on the habitats that provide critical ecosystem services to our quality of life. In the coming months, we will bring these two sets of information together and ask the Project Implementation Committee to develop a list of priority projects to address the stresses on habitats providing the ecosystem services most valued by the community. In addition, we will convene a meeting of community stakeholders to develop strategies to educate and engage the community in becoming active stewards of our coastal environment. Finally, we will reach out to new partners to identify and develop policies that improve how our coastal assets are protected to sustain their productivity and quality into perpetuity. Through the course of these efforts, environmental management goals will be developed; a realistic monitoring program that tracks water quality, habitat change, and living resource abundance and diversity will be defined; priority watersheds in need of comprehensive action planning will be targeted; strategic ecosystem restoration projects that can be used to engage and educate citizens will be developed; a finance plan will be prepared by cultivating investment and participation among the estuary's key stakeholders; and policy changes at the State and local levels will be ascertained to improve long-term management of our coastal resources.

This plan is being developed so that the actions outlined in the plan resonate with the community, are achievable and realistic, and are based in science. MBNEP will continue to facilitate the completion of several ongoing projects including but not limited to: Biological Condition Gradient Framework Development; local watershed sediment studies to support watershed management planning; Joe's Branch Restoration, Mon Louis Island Habitat Enhancement; the Local Restoration Partnership Initiative; and stormwater outreach.

Both in the analysis of data and the development of this Work Plan, MBNEP has remained acutely aware of the budget constraints under which the State, counties, and municipalities must operate. To this extent, the priorities and activities have been formed to give maximum weight to feasible projects.

## BUDGET OVERVIEW: 2012-2013



Each year the MBNEP receives an allocation from EPA to support activities geared toward achieving the objectives of the CCMP. The allocation for the Year 17 Plan (**2012-2013**) is **\$597,167**. This third year of funding will be added to the Year 15 allocation (**2010-2011**) **\$800,000** and the Year 16 Plan (**2011-2012**) is **\$611,300** 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 will be available for CCMP implementation will be valued at **\$2,597,099** for Year 17.

	Year 15 EPA/Non- Federal Share	Year 16 EPA/ Non- Federal Share	Year 17 EPA/ Non-Federal Share	Total Non-Federal Share Match (Three Years)
<b>Revenues</b>				
EPA	800,000	611,300	657,167	
State of Alabama	114,148	149,258	140,000	289,258
Local				
Baldwin County	-	-	-	-
Mobile County	23,850	17,888	17,888	35,776
City of Mobile	28,800	28,800	25,000	53,800
Other Cities (Daphne, Fairhope, etc)	3,000	20,000	20,000	40,000
<b>Total Revenues</b>	<b>969,798</b>	<b>827,246</b>	<b>860,055</b>	
<b>Expenses</b>				
Estuary Status and Trends	100,000	100,575	45,000	273,551
Ecosystem Restoration and Protection	243,700	51,509	120,000	225,000
Technical Assistance and Capacity Building	10,000	35,500	65,000	3,750
Education and Outreach	134,035	118,497	71,258	55,920
Program Planning and Administration	353,682	414,893	454,442	
PIR: DISL Administrative Fee	128,381	106,272	104,355	574,733
In-Kind Services				1,056,063
<b>Total Expenses</b>	<b>969,798</b>	<b>827,246</b>	<b>860,055</b>	<b>2,897,109</b>
Surplus/(Deficit)	0	0	0	

## 1. Project Details: Estuary Status and Trends (EST)

Description	Total Activity Budget	2012-2013 Budget (Yr 17)	2011-2012 Reprogram (Yr 16)	2011-2012 Budget (Yr 16)	2010-2011 Reprogram (Yr 15)	2010-2011 Budget (Yr 15)	External Grants	Past Year Grant Funds
BCG Support/Mapping	50,000	25,000		25,000	(75,000)	75,000		
NEW: Mobile Bay Hydro & WQ Model	63,785		63,785					
Sediment Budget for Mobile Bay	100,000				82,326			17,674
ALDOT-D'Olive Sediment Study	18,800						18,800	
Watershed Sediment Studies	47,150	20,000			17,674			9,476
Land Use Land Cover Change Analysis (NASA)	22,725						22,725	
Manatee Monitoring Network	6,790		(8,210)	15,000				
Annual Alabama Shorebird Assessment	5,000			5,000				
Real Time Meteorological Monitoring	239,925						239,925	
	<b>554,175</b>	<b>45,000</b>	<b>55,575</b>	<b>45,000</b>	<b>25,000</b>	<b>75,000</b>	<b>281,450</b>	<b>27,150</b>

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 that data from it is communicated to the public so that progress in improving/protecting biological conditions has widespread community support.

MBNEP's SAC objectives for are to **1) develop consensus for the pursuit of the BCG in the Mobile Bay estuary, 2) define how it would be applied, and 3) outline how it can be used to guide development of the next Comprehensive Conservation Management Plan.** Employing a BCG framework is particularly important in the wake of the Deep Water Horizon incident **to ensure that restoration efforts address the stresses that deteriorate the estuary's biological condition.** In fact, the SAC's greatest concern is "Restoration to what?" The SAC believes that **Citizens key in on the pretty or the productive. Translating biological condition to that would be paramount.**

In 2011, MBNEP was able to retain the services of Barry A. Vittor and Associates through a technical assistance contract with EPA Region One (New England) to investigate application of BCG in the Mobile Bay estuary. Through this contract, Tim Thibaut initially undertook a review of past MBNEP biological indicator development work and evaluated the potential of various indicators for use within a BCG framework. Based on the review, two potential approaches were presented to the SAC: Single Habitat – monitoring of soft sediment macroinvertebrates; and Habitat Mosaic – the Tampa Bay restoring balance approach. The SAC determined that restoring habitat balance was a reasonable approach for identifying meaningful biological indicators that could be used in a BCG framework. The SAC opted to pursue a BCG approach targeting



restoration in terms of *historic change in both the quantity and quality of habitat(s)*. Recognizing that ultimately, clean water is paramount, the SAC was in agreement that if biology is out of balance, the water quality would be out of balance as well.

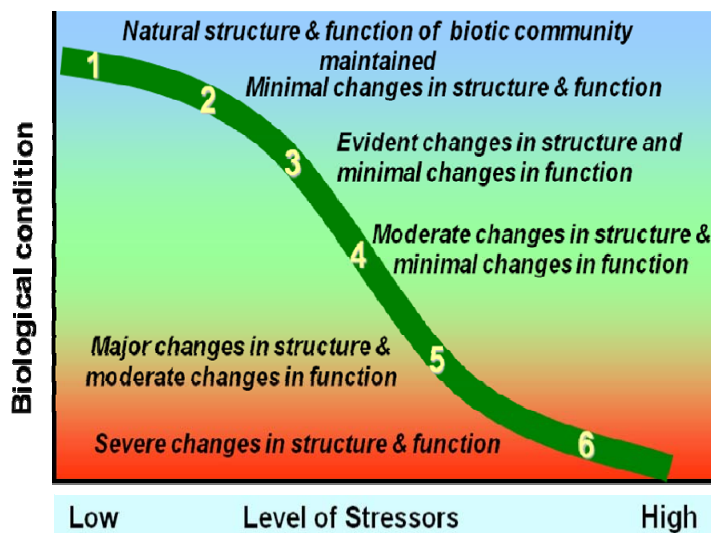
In evaluating how others had employed the BCG, the SAC subsequently determined that looking solely at restoration of historic habitat balances did not capture the “productive” aspect of ecosystem sustainability. At the May, 2011 meeting of the SAC the role of the BCG was characterized to be **a linchpin foundational layer for an updated CCMP - identifying what habitats are most vulnerable to a host of anthropogenic and climate change stressors and calibrating a BCG to measure effectiveness in mitigating those impacts, with an objective of sustaining the vital estuarine ecosystem services that provide value to the coastal community, the state, the Gulf Coast region and the nation.**

#### EST: ENSURING BIOLOGICAL INTEGRITY (BCG)

<b>Project Number</b>	EST1101
<b>Title</b>	Ensuring Biological Integrity
<b>CCMP Objective</b>	All
<b>Purpose</b>	Undertake a habitat balance approach to restoration in terms of change in quantity and quality of habitats through time using Biological Condition Gradient Framework
<b>Performing Organization(s)</b>	US EPA Region 1/MBNEP SAC
<b>Outputs/Deliverables</b>	Review of previously identified indicators to identify those that could be recommended as supporting BCG and biological monitoring; Biological Integrity Profile for certain priority habitats; Establishment of community environmental goals; list of indicators for revised monitoring program
<b>Outcomes</b>	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
<b>Clean Water Act Relevance</b>	Improve water quality monitoring, support TMDL implementation, improve monitoring of wetland function and coverage
<b>10-11 EPA Funding</b>	-\$75,000 reprogrammed to Sediment Budget and CCMP Development
<b>11-12 EPA Funding</b>	\$25,000
<b>12-13 EPA Funding</b>	\$25,000
<b>Other Funding</b>	\$ 0
<b>Total EPA Available</b>	\$ 50,000
<b>Match/Leverage</b>	US EPA, Science Advisory Committee

**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:

- Stressors Having Most Impact

Land Use Change  
Fragmentation of Habitats  
Dredging and Filling  
Sedimentation
- Ecosystem Services Under Most Stress

Biodiversity  
Wildlife Habitat  
Water Quality  
Primary Production (Nesting Habitat and Fisheries were fifth and sixth)
- Habitats That Are Most Stressed

Freshwater Wetlands  
Intertidal Marshes and Flats  
Riparian Buffers  
Streams and Rivers

The habitats most stressed with their associated high rankings for ecosystem services and are as follows:

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

During the next program year, the SAC will focus on two aspects of BCG development. First the improvement of two ecosystem goods that result from habitat restoration will be quantified. 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 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) will be compared to restored locations. Samples will be taken periodically over two years along transects running from the upper intertidal to the subtidal. In addition, existing datasets will be 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 for the Bay.

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.

## EST: MOBILE BAY HYDRO & WATER QUALITY MODEL

<b>Project Number</b>	EST1108
<b>Title</b>	Mobile Bay Hydro & Water Quality Model
<b>CCMP Objective</b>	
<b>Purpose</b>	To update of the Loading Simulation Program C++ (LSPC) Watershed Model through December 2011 for the watersheds adjacent to Mobile Bay up to the USGS gage 02428400 on the Alabama River and the USGS gage 02469761 on the Tombigbee River.
<b>Performing Organization(s)</b>	Tetra Tech, MBNEP
<b>Outputs/Deliverables</b>	A calibrated hydrodynamic and water quality model to aid ADEM in developing TMDLs
<b>Outcomes</b>	Increased knowledge of the levels of pollutant loadings impacting Mobile Bay and its tributaries
<b>Clean Water Act Relevance</b>	
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 63,785 (reprogrammed from Local Ecosystem Restoration Partnership)
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 0
<b>Total EPA Available</b>	\$ 63,785
<b>Match/Leverage</b>	US EPA

During the 2011 program year, MBNEP, working in partnership with U.S. EPA Region 4 and ADEM, will facilitate an update of the existing Loading Simulation Program (LSPC), Environmental Fluid Dynamics Code (EFDC) and Water Quality Analysis Simulation Program (WASP) that has been applied to the Mobile Bay watershed and waterbody for the purpose of developing Total Maximum Daily Loads and update the models through 2011 to incorporate new datasets.

The current model represents the watershed flows and water quality concentrations from watersheds adjacent to Mobile Bay up to the USGS gage 02428400 on the Alabama River and the USGS gage 02469761 on the Tombigbee River. The model is setup to simulate flow, temperature, dissolved oxygen, total nitrogen, total phosphorus, biochemical oxygen demand (BOD) and total suspended sediment (TSS). The model also includes point sources that are located in this area.

This project will be complete by December, 2012.

## EST: SEDIMENT BUDGET FOR MOBILE BAY ESTUARY

<b>Project Number</b>	EST1102
<b>Title</b>	Sediment Budget for Mobile Bay Estuary
<b>CCMP Objective</b>	HM-D2 Regional Sediment Management
<b>Purpose</b>	Develop sediment budget for the Bay and Delta to establish baseline sediment conditions and determine the relationship between fringe wetlands and sediment dynamics to identify positive and/or negative impacts associated with dredged material management practices, including, but not limited to: circulation impacts from dredged material mounding; beneficial uses of dredged material; and “within-bay” disposal for erosion reduction.
<b>Performing Organization(s)</b>	US Army Corps of Engineers/MBNEP
<b>Outputs/Deliverables</b>	Sediment Budget for Mobile Bay
<b>Outcomes</b>	Increase knowledge about sediment management within Mobile Bay system; Improve use of resources for restoration of the Mobile Bay estuarine environment; Improve understanding of restoration impacts to Mobile Bay environment
<b>Clean Water Act Relevance</b>	Improve water quality monitoring, support TMDL implementation, improve monitoring of wetland function and coverage
<b>10-11 EPA Funding</b>	\$ 82,326
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 17,674 (Past EPA Award)
<b>Total EPA Available</b>	\$100,000
<b>Match/Leverage</b>	US Army Corps of Engineers, Northern Gulf Institute, Dauphin Island Sea Lab (Park et al)

According to the Loading Budget Analysis for Mobile Bay Modeling (Tetra Tech, 2001) the major water quality issues in the Mobile River Basin at the turn of this century included nutrient enrichment, sedimentation, pesticides and toxics, habitat degradation, metals, bacterial contamination, and the health of the estuarine environment and its fisheries. To track changes in the condition of this basin, MBNEP has supported a variety of environmental monitoring, including water quality, habitat change, and key living resource populations. This monitoring is conducted to establish long-term datasets to track change over time.

At present, MBNEP is working with the U. S. Army Corps of Engineers and its sediment experts to support development of a sediment budget for Mobile Bay for the implementation of a sediment management plan for the Mobile Bay Watershed. A sediment budget illustrates a balance of the sediment volume entering and exiting a particular section of the coast or estuary system. Sediment budget analysis consists of the evaluation of sediment transport patterns, consisting of sources and sinks involving the various sediment transport processes that accounts for additions and subtractions of sediment within an area of interest such as a section

of coast or an estuary. Such knowledge will be useful in better understanding how sediment flows within the Mobile Bay estuary system (Associated British Ports Marine Environmental Research, Ltd., 2008). This work will be coupled with other ongoing efforts to determine circulation and sediment transport patterns in the bay.

The ultimate goal of these activities is to develop a Sediment Transport Model that will provide decision support for restoration efforts along the shore to ensure that these activities do not adversely alter fisheries areas that may be in close proximity to potential restoration sites.

This project will be complete by December 31, 2012.

#### **EST: D'OLIVE CREEK SEDIMENT BASELINE UP-STREAM I-10**

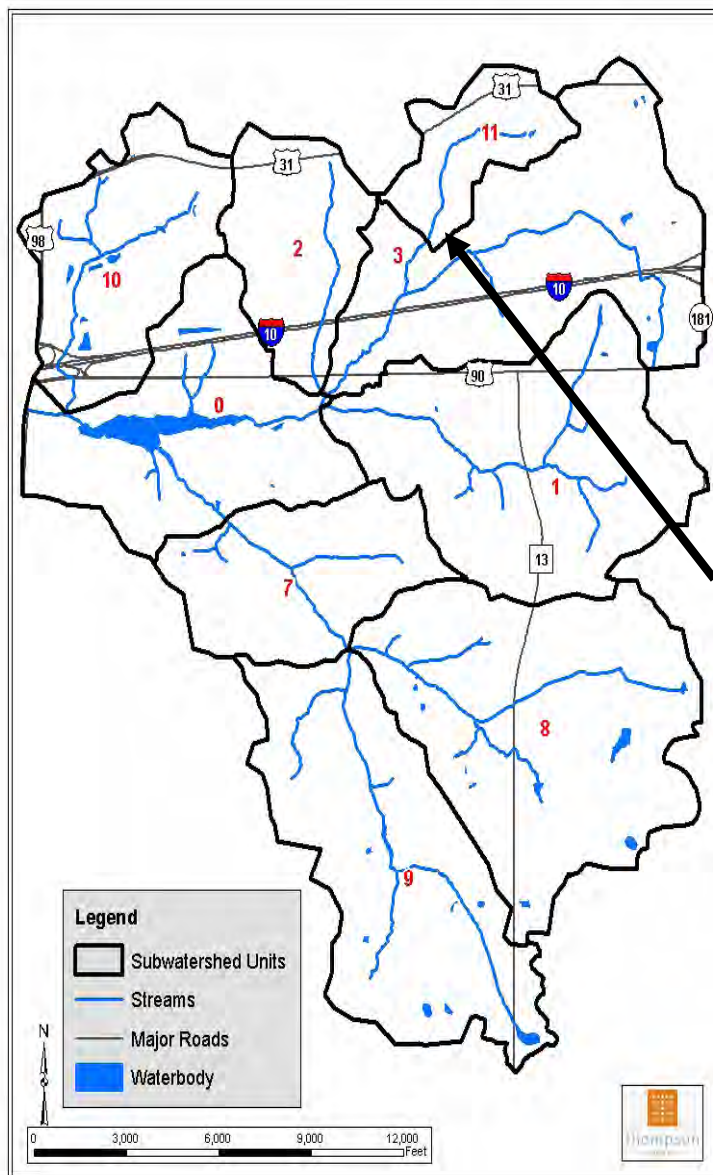
<b>Project Number</b>	EST1103
<b>Title</b>	D'Olive Creek Sediment Baseline Up-Stream I-10
<b>CCMP Objective</b>	HU-B2 Restore Natural Hydrologic Conditions
<b>Purpose</b>	Assessment of stream flow and sediment loading upstream of D'Olive Creek at I-10 crossing to develop a baseline of conditions pre-development within a priority impaired water body
<b>Performing Organization(s)</b>	AL Department of Transportation/MBNEP
<b>Outputs/Deliverables</b>	Survey of Baseline conditions for D'Olive Creek at I-10 crossing
<b>Outcomes</b>	Increase knowledge about sediment management within Mobile Bay system, and improve understanding of environmental condition of impaired waterbodies
<b>Clean Water Act Relevance</b>	Improve water quality monitoring, support TMDL implementation
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 18,800 (ALDOT)
<b>Total EPA Available</b>	\$18,800
<b>Mach/Leverage</b>	ALDOT State funding, Geological Survey of AL

D'Olive Creek and its associated wetlands have been severely impacted throughout the majority of the sub-watershed because of dense residential and commercial development. The construction of the Lake Forest subdivision impacted the western half of the creek. More recently the Timber Creek subdivision has contributed to the rapid degradation of habitat quality within the northeastern region of the watershed. Home-building within both subdivisions has contributed large quantities of sediment to the upper reaches of D'Olive Creek and its tributaries, and the subdivisions' road network, golf courses, driveways, roofs, and grassed lawns have all contributed greatly to the volume of runoff that the Creek must accommodate during storm events. The quantity and velocity of the water have scoured the creek bottom and has pushed sediment far



downstream, altering the vegetative composition of much of the surrounding wetland acreage. D'Olive Creek has been impacted primarily by sedimentation.

D'Olive Creek and an unnamed tributary to it were among several streams in this watershed that were added to the Alabama Section 303(d) List in 2008. The cause of the listings was given as "Siltation (habitat alteration)" due to "Land Development." The basis for addition to the list was cited as the Geological Survey of Alabama sediment loading rate study (Cook, 2007). A TMDL has not yet been developed for the any of the 303(d)-listed streams in the D'Olive Watershed. The 2010 Alabama 303(d) List provides a Draft TMDL date of 2013 for these waters. The TMDL will be developed on an entire Watershed basis.



For the period 2007-2008, the Upper D'Olive Watershed (i.e., Sub-watersheds 1, 3, and 11 in the map at left) was the dominant contributor of sediments in the Watershed. Sub-watersheds 3 and 11 collectively contributed nearly half the total sediment load of the entire D'Olive Watershed, while Sub-watershed 1 contributed just under one third.

One route for flow into and out of D'Olive Bay is an opening located in the extreme northwestern portion of the Bay, an extremely narrow channel that connects with the I-10 work canal. Discharges from D'Olive Creek enter the Bay through this connection which delivers sediments to D'Olive Bay (Thompson Engineering, 2010).

During the fall of 2010, MBNEP partnered with the Alabama Department of Transportation and the Geological Survey of Alabama to undertake a stream flow and sediment transport assessment to develop a robust baseline for a severely impacted section of D'Olive Creek. The project objective was to monitor conditions pre-construction of any future proposed development in the area. In addition, this project will help guide future development and justify the need to implement better land management practices including low impact design measures.

## EST: WATERSHED SEDIMENT STUDIES

<b>Project Number</b>	EST1109
<b>Title</b>	Comprehensive Sediment Loading Analysis for Dog River
<b>CCMP Objective</b>	
<b>Purpose</b>	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 in Dog River
<b>Performing Organization(s)</b>	Geological Survey of Alabama
<b>Outputs/Deliverables</b>	Identify significant sources of sediment loading and recommend engineering solutions; quantify seriousness of sediment loading at target locations
<b>Outcomes</b>	Improve understanding of sources of sedimentation in tributaries of the Mobile Bay estuarine system
<b>Clean Water Act Relevance</b>	Improve water quality monitoring, support TMDL implementation
<b>10-11 EPA Funding</b>	\$17,674
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13 EPA Funding</b>	\$ 20,000
<b>Other Funding</b>	\$ 9,476 (Past EPA Award)
<b>Total EPA Available</b>	\$ 47,150
<b>Match/Leverage</b>	\$27,150 (GSA)

Dog River drains the southern part of the metropolitan area of Mobile and flows southward into Mobile Bay in east-central Mobile County. Land use in the watershed is varied, characterized as urban, residential, and rural, although with recent development, the urban component is increasing in the western and southern parts of the watershed. Erosion and sedimentation in many of these transitional areas are excessive, and when combined with runoff from the historically urban areas of the city of Mobile, deterioration of water quality and habitat are readily apparent. Increasing development and continuing erosion and sedimentation are major and jeopardize future water and habitat quality and the quality of life enjoyed by the residents of the watershed.

In 2011, the Geological Survey of Alabama began to characterize land use, erosion, and sedimentation in the 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 load transport. The monitoring project assessed suspended and bed sediment transport rates in selected tributaries of Dog River (a total of 10 monitoring sites). 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 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.

Due to intermittent delays related to weather conditions, this project will be complete by the December, 2012.

## **EST: LAND USE LAND COVER 2-AIDING CONSERVATION/PROTECTION**

<b>Project Number</b>	EST1104
<b>Title</b>	Land Use Land Cover Analysis: Aiding Conservation and Protection
<b>CCMP Objective</b>	HM-A1 Promote Habitat Preservation Activities
<b>Purpose</b>	Assess permanency of habitat change and identify priority watersheds for habitat conservation efforts
<b>Performing Organization(s)</b>	NASA/University of South Carolina/MBNEP
<b>Outputs/Deliverables</b>	GIS files depicting Coastal HUC-12 change products and urbanization projection outputs; graphic depiction of other geospatial products that can aid in prioritization analysis
<b>Outcomes</b>	Increase knowledge about permanent habitat changes within Mobile Bay system; Improve education about land conversion within the system
<b>Clean Water Act Relevance</b>	improve monitoring of wetland function and coverage
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 22,725 (NASA)
<b>Total EPA Available</b>	\$ 22,725
<b>Match/Leverage</b>	NASA ROSES A-28, Baldwin County Watershed Study

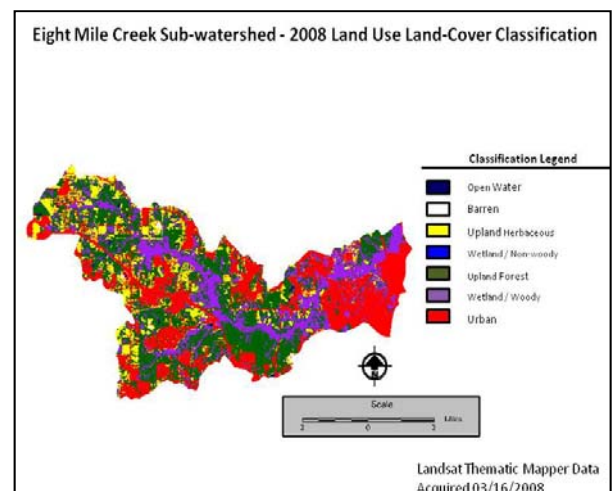
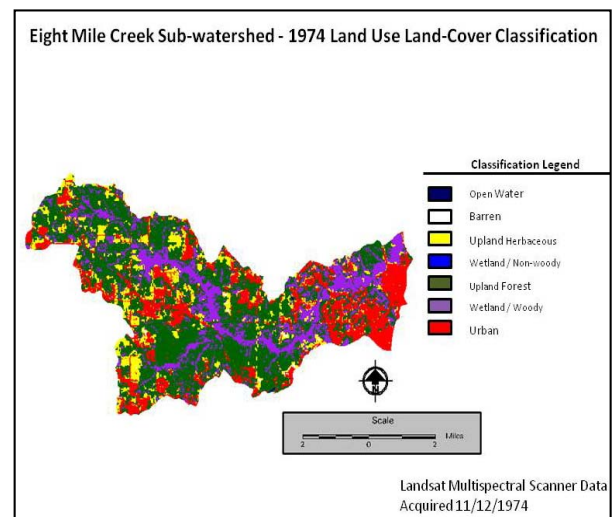
Land-Use and Land-Cover (LULC) change can negatively impact Gulf coast water quality and ecological resources. The conversion of forest to urban cover impacts the carbon cycle and increases the freshwater and sediment delivered to coastal waters. Increased freshwater runoff decreases salinity and increases the turbidity of coastal waters, thus impacting the growth potential of submerged aquatic vegetation (SAV), which is critical nursery habitat for many Gulf fish and shellfish species. Surveys of Mobile Bay SAV have shown wide spread decreases since the 1940s. Prior to this LULC analysis, coastal environmental managers in Baldwin and Mobile Counties needed greater understanding of the historical LULC to properly assess the impacts of increasing urbanization. In particular, more information on the location and extent of changing urbanization LULC patterns was needed to aid planning and to assess predictions of future LULC patterns.

This project created LULC products to aid end-user coastal conservation decision-making needs. Previous Landsat-based LULC products will be analyzed to characterize the changing urban landscape, assess the permanence of LULC change, and suggest regions of interest for conservation and restoration. The major deliverables will be validated LULC time series with emphasis on key watersheds identified by MBNEP, data products analyzing urban change trends, assessments of the permanence of LULC change, and model output results to identify parcels with conservation and restoration potential.

During 2011, Land use/land cover maps showing changes spanning from 1974 to 2008 for coastal watersheds of a scale designated by 12-digit hydrologic unit codes (HUCs) were prepared as requested by MBNEP because of their proximity to the coast and the significant development that has occurred in them. These maps provide a valuable tool for the development of watershed management plans conforming to U. S. EPA guidelines at the scale preferred by National Resource Conservation Service and other federal and state resource management agencies.

These maps have been used in the following MBNEP products:

1. Eight Mile Creek Watershed Management Plan (Pending publication)- The maps will be used to illustrate urbanization change over time and to assist in prioritizing areas for restoration/mitigation projects. These maps are being used to document changes having occurred and predict future changes in this watershed and to identify development trends and locations in need of restoration or protection as wildlife habitat or areas for human use as green spaces.
2. D'Olive Watershed Management Plan (2010)- Land use Land Cover change products included in Plan (Figure 2-21, page 2-45)
3. Watershed Profiles- MBNEP is currently working with its Project Implementation Committee to develop watershed profiles as precursors to Watershed Management Plan development. Status and trends pertaining to land use and land cover are particularly important and critical components of such profiles, providing a “head start” detailed plan development.
4. Community Presentations- Maps, in general, are a valuable tool in outreach campaigns, graphically illustrating to the public changes that may have appeared obvious or inconspicuous over the past four decades. The “thousand-word” value of pictures of the changing landscape provides graphical confirmations of trends that require the attention of decision-makers.



These products will help coastal environmental managers and land-use planners make better LULC planning and implementation decisions. This project has helped to establish a historical baseline of LULC distributions, a fundamental need in any long term stewardship program (Ellis, *et. al.*, 2008).

## EST: MANATEE MONITORING NETWORK

<b>Project Number</b>	EST1105
<b>Title</b>	Manatee Monitoring Network
<b>CCMP Objective</b>	LR-A1 Improve Monitoring of Key Living Resources
<b>Purpose</b>	Provide interim funding of the Manatee Monitoring Network to support tracking of this endangered species and to better understand the ecology that supports their existence.
<b>Performing Organization(s)</b>	Dauphin Island Sea Lab- Dr. Ruth Carmichael
<b>Outputs/Deliverables</b>	Data to 1) inform the status and 2) enhance public awareness of endangered West Indian manatees in AL
<b>Outcomes</b>	To determine the status of ecologically important and endangered species.
<b>Clean Water Act Relevance</b>	NA
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 6,790 (\$ 15,000 budgeted, \$ 8,210 reprogrammed)
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 0
<b>Total EPA Available</b>	\$ 6,790
<b>Match/Leverage</b>	DISL, AL Dept. of Wildlife and Freshwater Fisheries

The Dauphin Island Sea Lab's Manatee Sighting Network (DISL/MSN) is entering its sixth year of research on manatees and manatee habitat in Alabama waters. DISL/MSN remains the only formal manatee sighting network in the U.S. and is dedicated to receiving and mapping every local manatee sighting. DISL/MSN was established in 2007 as part of a study funded by the Alabama Department of Conservation and Natural Resources, Wildlife and Freshwater Fisheries Division (ALWFFD) under Section 6 from the U.S. Fish and Wildlife Service, to begin defining manatee resources in Alabama. The Network has successfully processed more than 600 manatee sightings in the past four years (in contrast, 156 sightings were recorded in the area during the entire 20 years prior).

DISL/MSN's scientific research has increased the understanding of life history traits for endangered West Indian manatees (*Trichechus manatus*) in fringe habitat. Research has included defining when manatees visit local waters, where they go, what they eat, and linkages between manatees in the northern Gulf of Mexico and

Florida. In 2009 and 2010, the project expanded (with leveraged funding from the MBNEP) to include fitting manatees with satellite-linked GPS/telemetry tags to better define seasonal movements in Alabama waters. *Tracking locally tagged manatees has allowed collection and analysis of data with a level of accuracy never before possible for manatees in fringe habitats of the northern Gulf of Mexico.* As a result, DISL/MSN tracked and directly monitored movements of five manatees nearly continuously within Alabama and during migration to Florida. Over time, these data will unambiguously define the spatial and temporal boundaries of local manatee habitat.

The timing and duration of manatee movements observed to date suggest that Alabama and nearby waters may be home to a subset of manatees who spend most of their time in northern Gulf of Mexico, only traveling to Florida during the coldest months of winter and quickly returning when water temperature rises. Evidence for the existence of a northern Gulf of Mexico manatee population is important not only to understand the fundamental ecology of this endangered species,

but also to establish relevant management and conservation practices throughout their range. Despite past successes and the development of substantial infrastructure, funding for this valuable ongoing research and monitoring effort, however, will end on September 30, 2011, and no other program exists to collect these needed data. Funds are needed to continue tagging and tracking efforts and to confirm and further define the regular habitual use of northern Gulf of Mexico waters by manatees through time.

In the past, MBNEP funding has been used to cover costs including but not limited to: Argos satellite monitoring, collaborator time and travel, DISL travel out-of-state, batteries for passive acoustic monitors and tags, minor repair, supplies, maintenance, and postage/shipping.

This project is being funded from other sources during the 2012-2013 program year.



## EST: ANNUAL ALABAMA SHOREBIRD ASSESSMENT

<b>Project Number</b>	EST1106
<b>Title</b>	Alabama Shorebird Assessment
<b>CCMP Objective</b>	LR-A1 Improve Monitoring of Key Living Resources
<b>Purpose</b>	To support a comprehensive, shorebird population and nesting assessments
<b>Performing Organization(s)</b>	Conservian
<b>Outputs/Deliverables</b>	A report detailing the recommendations, future needs, and protective measures that could be implemented to maintain, restore and protect beach-nesting shorebirds.
<b>Outcomes</b>	To survey and document the breeding, migratory, and wintering behaviors of all beach-nesting shorebirds along the Alabama coast.
<b>Clean Water Act Relevance</b>	
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 5,000
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 0
<b>Total EPA Available</b>	\$ 5,000
<b>Match/Leverage</b>	ADCNR, USFWS



photo credit: Margo Zdravkovic, 2010

In the spring and summer of 2007, MBNEP and ADCNR State Lands Division- Coastal Section partnered with the National Audubon Society Coastal Bird Conservation Program (CBCP) to conduct the first comprehensive standardized survey of the Alabama coast (including islands) for breeding beach-nesting birds with the cooperation of State and Federal agencies. The surveyed species were those included in the 1998 MBNEP Habitat Loss Characterization and listed as Federal or State species of concern, including: Snowy Plovers, Wilson's Plovers, American Oystercatchers, Least Terns, Gull-billed Terns, Common Terns, and Black Skimmers.

The CBCP surveyed all beach-nesting bird habitat or potential habitat on the Alabama coastline, including Bon Secour National Wildlife Refuge, Dauphin Island, West Dauphin Island, Isle Aux Herbes, Pelican Island, Cat Island, Gulf State Park, and Barton Island



Peninsula. During the course of this study, the BP Deepwater Horizon oil spill impacted the Gulf Coast. The study and resulting report summarizes the portion of CBCP's work in coastal Alabama. CBCP is currently engaging in discussions to implement protective measures with the cooperation of local, State, and Federal agencies to preserve and enhance Alabama's small but precious beach-nesting bird population.

MBNEP is currently assessing the need for continued funding of this program.

## EST: REAL-TIME MONITORING OF METEOROLOGICAL CONDITIONS

<b>Project Number</b>	EST1107
<b>Title</b>	Real-Time Meteorological Conditions Monitoring
<b>CCMP Objective</b>	WQ-A1.2 Assess Data to Identify Water Quality Problems
<b>Purpose</b>	To support a comprehensive, bay-wide, long term data set of water quality conditions throughout the bay.
<b>Performing Organization(s)</b>	DISL- Michael Dardeau
<b>Outputs/Deliverables</b>	Data to 1) inform the status and 2) enhance public awareness of water quality condition throughout the bay
<b>Outcomes</b>	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.
<b>Clean Water Act Relevance</b>	Support TMDL development
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 239,925 (Gulf of Mexico Program)
<b>Total EPA Available</b>	\$239,925
<b>Match/Leverage</b>	DISL, US EPA Gulf of Mexico Program

This is a continuation of the comprehensive, Bay-wide, water monitoring program begun in the Year Seven (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](http://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.

## 2. PROJECT DETAILS: ECOSYSTEM RESTORATION

Description	Total Activity Budget	2012-2013 Budget (Yr 17)	2011-2012 Reprogram (Yr 16)	2011-2012 Budget (Yr 16)	2010-2011 Reprogram (Yr 15)	2010-2011 Budget (Yr 15)	External Grants	Past Year Grant Funds
D'Olive Watershed: Joe's Branch Restoration	845,600						845,600	
D'Olive Mgt Plan-Implementation	40,903	25,000	2,903		13,000			
Local Ecosystem Restoration Partnership	296,215	45,000	(63,785)	90,000	-	225,000	-	-
City of Chickasaw-Brooks Park Restoration	20,000					20,000		
City of Fairhope- Volanta Watershed Restoration	50,000					50,000		
City of Foley- Wolf Creek Restoration	82,500					82,500		
City of Orange Beach- 161 Wetlands Restoration	27,500					27,500		
City of Daphne- LID Green Infrastructure Regs.	15,000					15,000		
City of Orange Beach- Canal Rd. overlay district	30,000					30,000		
Mon Louis Island	161,493	20,000		10,000			118,450	13,043
Stream Restoration								
Prichard's Reading Park	22,995						22,995	
Shoreline Stabilization								
Satsuma Steele Creek	10,000							10,000
Oyster Gardening	4,371		4,371					
Three Mile Creek Restoration	63,720	30,000	3,020	5,000	5,700		20,000	
	1,445,297	120,000	(53,491)	105,000	18,700	225,000	1,007,045	23,043

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 climate change and sea level rise, economic sustainability, recreation, and community quality of life.

In the coming year, MBNEP will focus on the restoration of Joe's Branch, located in the D'Olive Watershed. MBNEP will also work with the State of Alabama to initiate a living shoreline project for habitat enhancement and shoreline stabilization along the western shore of Mobile Bay in part to assess potential policy modifications at the State level to promote this type of activity. In addition, MBNEP will partner with the City of Chickasaw to undertake a wetland restoration, the City of Daphne to develop local stormwater regulations; the City of Fairhope to develop and implement a watershed management plan for Volanta Gully within the Fly Creek Watershed; the City of Foley to undertake a wetland restoration project on Wolf Creek and the City of Orange Beach to conduct a wetland enhancement project and create an overlay district to ensure appropriate development of a sensitive area of the City. Outcomes from these activities include improved wetland function and stormwater management to reduce negative habitat impacts.



## ERP: D'OLIVE WATERSHED: JOE'S BRANCH RESTORATION

<b>Project Number</b>	ERP
<b>Title</b>	Joe's Branch Restoration
<b>CCMP Objective</b>	WQ, HU-B2
<b>Purpose</b>	Restore Joe's Branch in the D'Olive Watershed with goal of removal from the State's 303(d) List and reduction in sedimentation being transported downstream
<b>Performing Organization(s)</b>	MBNEP , Baldwin County, City of Spanish Fort, City of Daphne, Alabama Department of Transportation, Alabama Department of Conservation and Natural Resources, Westminster Village
<b>Outputs/Deliverables</b>	
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities.
<b>Clean Water Act Relevance</b>	Improve water quality monitoring, support TMDL implementation, improve monitoring of wetland function and coverage
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$645,600 (ADCNR), \$200,000 (ALDOT)
<b>Total</b>	\$845,600
<b>Match/Leverage</b>	Alabama Department of Transportation, Cities of Daphne, Spanish Fort, Westminster Village

Having been notified in November, 2011 of a Clean Water Act Section 319 Grant award of \$646,600, project partners including MBNEP, the Alabama Department of Transportation (ALDOT), the Cities of Daphne and Spanish Fort, Westminster Village, the Dauphin Island Sea Lab, and Thompson Engineering are currently in the design phase of plans to restore a head cut tributary to Joe's Branch in Spanish Fort and impacted downstream wetlands. With the August 2010 completion of a Comprehensive Management Plan (CWMP) for the D'Olive and Tiawasee Creek and Joe's Branch Watershed, planned Alabama Department of Transportation (ALDOT) modifications to Highway 31, concerns by Westminster Village over severe stream bank erosion and sedimentation of wetlands, and recognition by Baldwin County and local municipalities of need and opportunity to address this impacted stream, MBNEP facilitated the successful application for the Section 319 funding from the State. ALDOT contributed \$200,000 of non-federal match which would have been necessary to protect Highway 31 in Spanish Fort.

Thompson Engineering, which headed the team that prepared the D'Olive CWMP, was contracted by WV to provide engineering guidance for problems on their property that include dramatic head-cutting and stream bank erosion with mass wasting impacting forested land and threatening homes in stream segments running just south of and parallel to Highway 31. Sources of stormwater runoff include outflows from highway conveyances as well as sheet flow from the Faith Family Fellowship property to the east. These eroded stream segments have delivered silt into D'Olive Creek (currently 303(d)-listed for habitat alteration/sedimentation) and deposited massive accumulations of coarse sediment in wetland areas directly east of the Spanish Fort Methodist Church killing trees and wetland plants.

Thompson is currently using guidance from Anne Arundel County, MD, to prepare plans to slow stormwater velocity, reduce its volume, and stabilize and restore ecological function to the impacted tributary by constructing a step pool conveyance. Plans include installation of approximately 40 rock check dams with intermittent rock step pools overlying a sand and sawdust infiltration matrix down the 1,000-foot length of the tributary. They also include excavation of tons of deposited sandy sediment and removal of invasive plant species from the degraded wetlands at the foot of the tributary. Native vegetation will be planted to replace killed trees, establish riparian corridors, and restore the excavated wetland areas. The City of Spanish Fort anticipates installing best management practices on municipal ball fields and Spanish Fort Elementary School grounds which drain through the impacted stream as its contribution to match the Federal funds. Educational signage will be installed which explains the source and extent of the erosion and the design of a services provided by the restoration process.

During the next program year the construction of the Regenerative Step Pool Conveyance System will be undertaken to restore this highly degraded tributary to Joes Branch.

## ERP: D'OLIVE MANAGEMENT PLAN - IMPLEMENTATION

<b>Project Number</b>	ERP
<b>Title</b>	Joe's Branch Restoration
<b>CCMP Objective</b>	WQ, HU-B2
<b>Purpose</b>	To prepare presentations and grant applications for Joe's Branch in the D'Olive Watershed with goal of removal from the State's 303(d) List and reduction in sedimentation being transported downstream
<b>Performing Organization(s)</b>	Thompson Engineering
<b>Outputs/Deliverables</b>	15 minute presentations suitable for presentation to county and municipal work sessions; preparation of Section 319 grant application to be submitted to ADEM
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities.
<b>Clean Water Act Relevance</b>	
<b>10-11 EPA Funding</b>	\$ 13,000
<b>11-12 EPA Funding</b>	\$ 2,903
<b>12-13 EPA Funding</b>	\$ 25,000
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$ 40,903
<b>Match/Leverage</b>	

Having been notified in November, 2011 of a Clean Water Act Section 319 Grant award of \$646,600, project partners including MBNEP, the Alabama Department of Transportation (ALDOT), the Cities of Daphne and Spanish Fort, Westminster Village, the Dauphin Island Sea Lab, and Thompson Engineering are currently in the design phase of plans to restore a head cut tributary to Joe's Branch in Spanish Fort and impacted downstream wetlands. With the August 2010 completion of a Comprehensive Management Plan (CWMP) for the D'Olive and Tiawasee Creek and Joe's Branch Watershed, planned Alabama Department of Transportation (ALDOT) modifications to Highway 31, concerns by Westminster Village over severe stream bank erosion and sedimentation of wetlands, and recognition by Baldwin County and local municipalities of need and opportunity to address this impacted stream, MBNEP facilitated the successful application for the Section 319 funding from the State. ALDOT contributed \$200,000 of non-federal match which would have been necessary to protect Highway 31 in Spanish Fort.

Thompson Engineering, which headed the team that prepared the D'Olive CWMP, was contracted by WV to provide engineering guidance for problems on their property that include dramatic head-cutting and stream bank erosion with mass wasting impacting forested land and threatening homes in stream segments running just south of and parallel to Highway 31. Sources of stormwater runoff include outflows from highway conveyances as well as sheet flow from the Faith Family Fellowship property to the east. These eroded stream segments have delivered silt into D'Olive Creek (currently 303(d)-listed for habitat alteration/sedimentation) and deposited massive accumulations of coarse sediment in wetland areas directly east of the Spanish Fort Methodist Church killing trees and wetland plants.

Thompson Engineering facilitated the presentations and grant applications that resulted in the MBNEP receiving funds to undertake the D'Olive Watershed: Joe's Branch Restoration project.

## ERP: LOCAL ECOSYSTEM RESTORATION PARTNERSHIP

<b>Project Number</b>	ERP
<b>Title</b>	Local Restoration Partnership
<b>CCMP Objective</b>	WQ, LR, HM, HU
<b>Purpose</b>	Build partnerships with local government and community groups to engage in activities that benefit the entity while implementing actions to reduce the impacts of stormwater, improve wetland coverage and function, or support reduced sediment loading and transport throughout the Mobile Bay estuarine system
<b>Performing Organization(s)</b>	MBNEP – Cities of Chickasaw, Daphne, Fairhope, Foley, Orange Beach, Mobile County
<b>Outputs/Deliverables</b>	Six projects: Three wetland restorations; low impact development program/policy modifications; watershed management plan/stormwater management projects; overlay district for sensitive wetland area
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities.
<b>Clean Water Act Relevance</b>	Improve water quality monitoring, support TMDL implementation, improve monitoring of wetland function and coverage
<b>10-11 EPA Funding</b>	\$ 225,000
<b>11-12 EPA Funding</b>	\$ 26,215 (\$ 90,000 budgeted, \$ 63,785 reprogrammed)
<b>12-13 EPA Funding</b>	\$ 45,000
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$ 296,215
<b>Match/Leverage</b>	Cities of Chickasaw, Daphne, Fairhope, Foley and Orange Beach, Mobile County

Growth and development, along with necessary increases in infrastructure, result in conversion of natural landscapes to **impervious surfaces**, causing a chain of events that negatively impacts water resources. Impervious cover seals the soil surface, eliminating rainwater infiltration and natural groundwater recharge of aquifers. Stormwater accumulates on and runs directly across impervious surfaces, with increased flow volumes and velocities resulting in incidents of localized flooding, accelerated stream bank erosion, and increasing sediment, nutrient, and pollutant loads. Many of the residues of urban and suburban living flush into streams without treatment, degrading the water quality. Impervious surfaces also deprive tree roots of aeration, eliminating the "urban forest" and the canopy shade that would otherwise moderate our coastal climate. Because impervious surfaces displace living vegetation, they reduce ecological productivity and interrupt the natural removal of carbon dioxide from the atmosphere.

According to Public Works Departments in Mobile and Baldwin Counties, both counties have experienced an approximate five percent increase in the number of miles of newly paved roads over the last five years. Not surprisingly, in a Loading Budget Analysis for Mobile Bay Modeling (Tetra Tech, 2002) prepared to assess pollutant loadings contributing to Mobile Bay by way of the Mobile River Basin, there were significant increases in non-point source pollutants for the period from 1970 to 1995. Communities throughout Mobile and Baldwin Counties continue to struggle with the impacts of increases in impervious surface and the challenges of managing of stormwater and the sediments that borne from stream bank erosion and poorly managed construction sites.

With a first round of Local Restoration Partnership Funding awarded in April, 2011, funded projects currently being implemented include:

The **City of Chickasaw** - \$20,000 to undertake **wetlands restoration at Brooks Park**. The City has installed 320 feet of elevated boardwalk with handrails and benches and designated and cleared 1,100 linear feet of walking trails. Interpretive signage is currently in development with purchase and installation projected as next steps along with gravelling the walking trails.

The **City of Daphne**- \$15,000 to develop a program to initiate and encourage the use of **low impact development (LID) practices, green infrastructure (GI), and incentives** to supplement City Subdivision Regulations and to provide alternatives to traditional stormwater management practices. The City hired a local consultant, Jade Consulting, to: 1.) educate those involved in regulatory and land development decision-making; 2.) evaluate existing stormwater management regulations and existing stormwater management plans; 3.) devise appropriate goals, objectives, and LID/GI policies, alternatives, and incentives for implementation; and 4) assist in adoption of these policies into law. Education efforts have been initiated, and a survey questionnaire has been developed and circulated to solicit opinions on the best types of LID/GI techniques, establish their values, and identify correlative incentives to promote their use. When sufficient responses have been gathered, the consultant will evaluate findings, draw conclusions, and make specific recommendations.

The **City of Fairhope**- \$50,000 to develop a **Volanta Gulley Watershed Management Plan** which recommends five construction-ready projects within the watershed to alleviate problems related to drainage and to use the city's own labor and equipment to construct a minimum of two of the designed projects. The City hired Jade Consulting, who conducted two public meetings and completed the watershed management plan (viewable on the City website at [www.cofairhope.com](http://www.cofairhope.com)) in April 2012. Phase two of the project involves selection of two of the five recommended projects by the City Council and construction of the projects by the City Public Works Department.

The **City of Foley** received \$82,500 to perform a **Wolf Creek stream restoration**. Objectives include implementing a stream and floodplain restoration plan on this stormwater-impacted stream in Foley, AL, based upon natural channel design, to reverse effects of urban development and provide greater habitat for increased species diversity. To facilitate a favorable project outcome, the City intends to implement urban watershed management practices effective in minimizing sediment, nutrients, and other nonpoint source pollutants. With the plan (completed by contractor Goodwyn, Mills and Cawood) under review by the City, the next step is construction/excavation of the flood plain and channel.

The **City of Orange Beach** received two grants: One for \$27,500 for **wetlands enhancement along Highway 161** to reduce nutrient input in runoff entering the head of Cotton Bayou and reduce incidences of hypoxia there. The other for \$30,000 for **development of a Canal Road Overlay District** to minimize paved surfaces, enhance aesthetics, and offer improved recreational opportunities to pedestrians and bicyclists.

The City contracted the professional engineering services of Hutchinson, Moore & Rauch, LLC to implement the surveying, engineering, and permitting portion of the **Highway 161 wetlands enhancement** project. They have completed wetland delineation, a survey of the wetland and right of way areas, and design, coordination and planning phases. Professional land surveyors and stormwater engineers calculated the alteration of the watershed (grading plan), engineered the contour alteration, and designed the outfall requirements for the requisite permits for the project. Grading, contouring, and material removal is currently being undertaken, with vegetation installation in riparian and littoral zones to follow. Interpretive signage will be installed to educate about the importance of wetlands to water quality.

With ALDOT targeting Canal Road in Orange Beach for widening to five undivided lanes, the City will develop a **Canal Road Overlay District** that will allow the City to implement coastal planning that promotes low environmental impact design, green spaces, and pedestrian and bicycle access. The City has contracted Hutchinson, Moore & Rauch, LLC (HMR) to oversee development of this plan. A Canal Road Working Group has been created, baseline data gathered, land use analysis taken place, maps created and a Kick Off Meeting conducted. Currently a Conceptual Redevelopment Master Plan and regulatory change strategies and revisions are in development, while coordination with ALDOT is taking place. A draft Overlay District plan will be presented to the Orange Beach Planning Commission for review and adoption prior to presentation to the Orange Beach City Council for review and adoption.

## ERP: MON LOUIS ISLAND SHORELINE STABILIZATION/HABITAT ENHANCEMENT

<b>Project Number</b>	ERP
<b>Title</b>	Mon Louis Island Shoreline Stabilization/Habitat Enhancement
<b>CCMP Objective</b>	HM D3, LR-C2
<b>Purpose</b>	Stabilize shorelines from chronic, routine impacts including but not limited to boat wakes from ship channel and re-establish critical fisheries habitat
<b>Performing Organization(s)</b>	MBNEP
<b>Outputs/Deliverables</b>	1,000 ft of shoreline stabilized; 1,000 feet of near shore habitat structure; .45 acres of salt marsh habitat
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
<b>Clean Water Act Relevance</b>	Improve monitoring of wetland function and coverage
<b>10-11 EPA Funding</b>	\$0
<b>11-12 EPA Funding</b>	\$10,000
<b>12-13-EPA Funding</b>	\$20,000
<b>Other</b>	\$ 58,450 (GOMF); \$60,000 (USFWS); \$13,043 (Past EPA grant)
<b>Total</b>	\$ 161,493
<b>Match/Leverage</b>	Gulf of Mexico Foundation; USFWS; Volunteers; University of South Alabama, Mississippi Alabama Sea Grant Consortium

MBNEP and partners have recruited and engaged six contiguous private property owners along an almost 700-linear foot length of eroded residential northern Mon Louis Island shoreline to help design and implement a project to 1) attenuate routine wave energy, 2) create/enhance oyster reef and marsh habitat, and 3) demonstrate technologies alternative to shoreline armoring on a scale available to property owners concerned with loss of near shore habitat. The gradual and chronic shoreline loss, not only from tropical weather events but also routine effects like ship wakes and prevailing winds, has prevented natural establishment of oyster reef and salt marsh habitat. Homeowners have reported spending thousands of dollars annually to preserve and protect property, frequently using habitat-degrading shoreline armoring practices.

While not offering protection from catastrophic weather events, construction of near shore reef structures and intertidal oyster reefs and a reef-lined marsh island will stabilize this eroding shoreline and re-establish critical habitat for NOAA Trust Resources, including commercially and economically important fish and shellfish. Alabama's oyster fishery – with historic presence in the project area – has suffered from impacts of recent storms, drought, and resultant proliferation of predacious oyster drills. The project, with funding through the



Gulf of Mexico Foundation- Community-based Restoration Partnership grant and Coastal Programs of the U. S. Fish & Wildlife Service, will provide settlement substrate and enhance seed stock of this commercially important resource and will provide fishery habitat.

To ensure scientific integrity and appropriate technical guidance, a Request for Qualifications was distributed to coastal engineering firms in October, 2011, and a panel that included the property owners and local resource managers selected South Coast Engineers (SCE) to undertake project planning and design. Working with property owners, SCE developed a plan that was presented at an April 12 Community Meeting at the St. Rose of Lima Parish Hall. Project plans included installation of two submerged oyster reefs with a rock breakwater-protected marsh island 300 to over-600 feet from and along the Mon Louis Island-Mobile Bay shoreline to create and enhance sub-tidal and intertidal habitat with four rock, near shore, breakwater structures and clean sand fill to stabilize the shoreline. Its objectives are to:

- Create 0.25 acres of reef surface favorable for oyster settlement to provide nursery, forage, and refuge habitat for invertebrates and fish and enhance water quality
- Create salt marsh habitat to the extent practicable to provide nursery, forage, and refuge habitat for invertebrates, fish, and birds; stabilize shoreline sediments, and filter stormwater runoff
- Attenuate the routine wave energy from ship traffic and prevailing southeasterly winds using installed wave attenuating reef structures with addition of sand fill to avoid interrupting long shore sand transport
- Engage private property owners in designing and implementing a public shoreline restoration project that employs living shorelines technologies and concepts on a scale available to property owners

While other living shorelines projects have been undertaken locally on public shorelines or those owned by a single agreeable entity, this project represents a first attempt to engage multiple private property owners in the design and implementation of a project to offer shoreline protection and provide ecosystem services from installed habitat features.

Other project partners include but are not limited to: Residents of Mon Louis Island, Alabama Department of Conservation and Natural Resources, State Lands Division- Coastal Section, University of South Alabama Department of Civil Engineering, and the Dauphin Island Sea Lab.

A Request for Construction Bids will be distributed during the summer of 2012, and construction will begin soon thereafter.

## ERP: STREAM RESTORATION AT PRICHARD'S JACKSON READING PARK

<b>Project Number</b>	ERP
<b>Title</b>	Stream Restoration at Prichard's Jackson Reading Park
<b>CCMP Objective</b>	ERP-Habitat Management
<b>Purpose</b>	Restoration of stream bank and riparian habitat, and establish an educational site showcasing appropriate technologies for managing buffer areas in an urban setting
<b>Performing Organization(s)</b>	MBNEP, City of Prichard, Auburn University
<b>Outputs/Deliverables</b>	300 linear feet of stream bank, 2 acres of riparian habitat, public access point
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
<b>Clean Water Act Relevance</b>	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13-EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$22,995 (5 Star)
<b>Total</b>	\$22,995
<b>Match/Leverage</b>	

At the City of Prichard's Jackson Reading Park, community volunteers, the MBNEP, and Auburn University will use National Fish & Wildlife Foundation funding to restore a small first order tributary to Eight Mile Creek. With headwaters just west of the Park and north of Highway 45/St. Stephens Road, this stream runs through a culvert under Newton Street, where a scour pool begins the targeted project area. From the scour pool, the creek runs approximately 350 feet along the southern border of the park into adjacent woodlands to a developing head-cut that marks the end of the project area. Along the length of the project area, streambank erosion and invasive species characterize this small creek.

Since grant award, the area has been prepared and a dense stand of invasive privet from the Jackson property on the south side of the stream has been undertaken. An Auburn University engineer has completed a restoration plan, but construction will not be undertaken until fall to provide planted vegetation the best opportunity for survival. Auburn will supervise and oversee construction activities, which will be performed by City of Prichard Public Works and Parks and Recreation Department employees. At the completion of

stream bank grading, Auburn University Landscape Architecture students will supervise the planting of over 2,500 native plants.

This project will demonstrate technologies to restore ecosystem services in a stream impacted by increased volume and velocity of stormwater associated with urban development in a low-income, traditionally underserved community, whose members will undertake post project monitoring of stream condition, riparian plant density and diversity, water quality, and presence of invasive species.

#### **ERP: SHORELINE STABILIZATION/HABITAT CREATION AT SATSUMA'S STEELE CREEK LODGE**

<b>Project Number</b>	ERP
<b>Title</b>	Shoreline Stabilization/Habitat Creation at Satsuma's Steele Creek Lodge
<b>CCMP Objective</b>	ERP-Habitat Management
<b>Purpose</b>	Restore and protect shoreline from adverse impacts of boat wakes and other high energy.
<b>Performing Organization(s)</b>	City of Satsuma
<b>Outputs/Deliverables</b>	150 linear feet of stabilized shoreline
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
<b>Clean Water Act Relevance</b>	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13-EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$10,000 (Past EPA Award)
<b>Total</b>	\$10,000
<b>Match/Leverage</b>	

Steele Creek Lodge is a municipal park and boat ramp facility owned and operated by the City of Chickasaw on an embayment off of Bayou Sara. Stormwater runoff and wakes from boats have contributed to erosion and undercutting along the bay's western shore. The City requested and received \$10,000 from the MBNEP to purchase materials necessary to use City equipment and personnel to restore and protect the shoreline while ensuring the provision of ecosystem services.

In August 2010 Dr. Bret Webb of the University of South Alabama investigated the site and produced Shoreline Stabilization Strategies for Steele Creek Lodge which provided conceptual recommendations given the limited budget. The City selected the creation of a perched terrace by installing a sill composed of class 1 riprap along the 150-foot shoreline, behind which sand fill would be placed to a depth of around one foot.

This area will be planted with native emergent plants of species and diversity similar to those found at an existing marshy area adjacent to the boat ramps.

## ERP: OYSTER GARDENING

<b>Project Number</b>	ERP
<b>Title</b>	Oyster Gardening
<b>CCMP Objective</b>	ERP-Living Resources
<b>Purpose</b>	To teach citizens about oysters and their importance to bay water filtration and habitat creation and to restore relic oyster reefs in Mobile Bay
<b>Performing Organization(s)</b>	AUMERC
<b>Outputs/Deliverables</b>	Oysters ready for planting on public reefs
<b>Outcomes</b>	Increase in community understanding about the value of oysters in the ecosystem.
<b>Clean Water Act Relevance</b>	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 4,371
<b>12-13-EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$ 4,371
<b>Match/Leverage</b>	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.

## ERP: THREE MILE CREEK HISTORIC STREAM BED RESTORATION

<b>Project Number</b>	ERP
<b>Title</b>	Three Mile Creek Restoration
<b>CCMP Objective</b>	HMC1, LR-C2
<b>Purpose</b>	Use environmentally sound engineering techniques to restore in-stream habitat, create adjacent riparian habitat, enhance wooded floodplain habitats, and provide public access to a unique backwater environment within a highly urbanized, traditionally underserved area of the City of Mobile
<b>Performing Organization(s)</b>	MBNEP, City of Mobile
<b>Outputs/Deliverables</b>	1.25 acres of in-stream habitat; 1,800 feet of restored stream bed; 0.85 acres of riparian habitat; public access point
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community understanding of ecosystem restoration and protection activities.
<b>Clean Water Act Relevance</b>	Improve monitoring of wetland function and coverage
<b>10-11 EPA Funding</b>	\$5,700
<b>11-12 EPA Funding</b>	\$8,020
<b>12-13 EPA Funding</b>	\$30,000
<b>Other Funding</b>	\$20,000 (Waterkeeper Alliance)
<b>Total</b>	\$ 63,720
<b>Match/Leverage</b>	Waterkeeper Alliance, City of Mobile, US Army Corps of Engineers, US Fish and Wildlife Service

The restoration of Three Mile Creek provides an opportunity to restore a tidally-influenced creek on State lands in a relatively pristine, cypress-dominated, wetland-rich, flood plain surrounded by industrial development and low-income, traditionally underserved neighborhoods lacking access to environmental resources or passive recreational opportunities.

In 2002, the U. S. Army Corps of Engineers, Mobile District was charged with evaluating various ecosystem restoration alternatives that would restore flow to the historic streambed of Three Mile Creek as a modification to a flood control project to re-establish biological integrity. Their objective was to determine a way to divert a portion of the flow from the bypass channel back into the historic streambed while maintaining average velocities below four feet per second for ten-year flood events. In their “Environmental Assessment – Section 1135 Environmental Improvement and Restoration – Three Mile Creek,” four alternatives were considered (including “no action”). Their preferred alternative involved excavating the old streamway to historical width and depth from the eastern bank of the bypass channel approximately 1,800 feet to where the historic streamway is blocked and terminates. However, the Corps was not able to undertake this project due to funding constraints and Federal agency objections over negative impacts.

As a partner to the Corps and the City of Mobile on this project, MBNEP continues its commitment to the restoration of the original Three Mile Creek streamway. Our goal is to use environmentally sound engineering techniques to restore in-stream habitat, create adjacent riparian habitat, enhance wooded floodplain habitats, and provide public access to a unique backwater environment within a highly urbanized, traditionally underserved area of the City of Mobile. While conventional bucket dredging was rejected by



the F&WS due to excessive ecosystem impacts, spray dredging provides a less invasive technology at 28% of the estimated costs associated with excavation.

This project entails redirecting flow into approximately 1,800 feet of the State-owned, historic streambed of Three Mile Creek to restore hydrology and mimic natural condition to the creek, riparian areas, and the surrounding wooded floodplain. This restoration includes the removal of sediment and woody debris that has built up over several decades after construction of a bypass channel by the City to reduce flood problems between Dr. Martin Luther King, Jr. Avenue (MLK) and Conception Street Road. That project effectively “cut off” a portion of the existing streamway that meandered through the wetland-rich floodplain between the two road crossings. Material dredged to restore the streamway will be side cast using thin-layer disposal without negative impacts to adjacent wetlands.

By clearing sediment and woody debris presently choking off the original streamway, the surrounding environment will greatly benefit from improved water quality, re-establishment or enhancement of native habitat, increased concentrations of dissolved oxygen (DO) in the water column, and restored hydrology to adjacent wetlands. It would provide public access to a unique, backwater environment (within a highly urbanized area) that would further connect to the surrounding flood plain and the associated micro-habitats found within.

The restoration of Three Mile Creek provides community recreation access to local waters for residents of Albert Owens/Jesse Thomas Homes neighborhood, a project developed under the Hope VI Revitalization Plan of the Mobile Housing Board. Such access, along with development of a passive park on Mobile Gas/Sempra property at the corner of MLK and Beauregard Ave., enhances a newly revitalized area that is home to a traditionally underserved segment of the population.

Additionally, MBNEP intends to support ALWFFD efforts to contain and reduce abundance of the invasive exotic Island Apple Snail (*Pomacea insularum*) from Three Mile Creek by funding the purchase of emergent aquatic herbicide. Herbicide will be used to limit egg-laying substrate in certain high priority areas in conjunction with the application of copper sulfate and egg scraping from solid structures.

Apple snails were first reported anecdotally in the Creek in 2008, and eradication efforts were undertaken in 2009 and 2010. The presence of this nuisance species in Three Mile Creek is of particular concern, since it drains directly into the Mobile River Ship Channel. Concerns include invasion of the more than 20,000 acres of Mobile-Tensaw Delta habitat as well as attachment to ships and barges and potential introduction to the Tombigbee and Alabama Rivers and ports outside Alabama.

Before undertaking a restoration of the historic streambed, MBNEP, MAWSS, ADCNR, Mobile BayKeeper and others will undertake a comprehensive watershed plan for Three Mile Creek. This creek and its surrounding watershed present an extraordinary opportunity to the City of Mobile to turn what is now a community liability due to its degraded condition, into a community amenity similar to “river walks” in other cities. By restoring the hydrology and water quality of this historic cultural and environmental resource, property values within its watershed would be enhanced, Three Mile Creek would become a unique urban ecotourism destination, and area economic development prospects would be improved.

This watershed includes the constituencies of several city and county officials and is heavily urbanized; the majority of its 24 sq 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. Of particular concern are potential impacts to this area related to sea level rise.

The Creek was first placed on the State’s 303(d) List of Impaired Water Bodies in 1996 due organic enrichment and low dissolved oxygen (DO). A Total Maximum Daily Load (TMDL) was then developed and approved in 2006. 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 (SSO) 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.

Increased volume and velocity of stormwater runoff has exacerbated erosion-related problems in much of the watershed, leading to another set of water quality degradation issues. Unknown legacy connections of sanitary sewers to stormwater drains have proven to be yet another notable source of Creek contamination. As recently as this past spring, MAWSS and City of Mobile field crews discovered that the sanitary sewer from Mobile’s Visitation Monastery was connected to the stormwater system draining to Three Mile Creek. With many of

their activities being integral to the watershed, MAWSS continues to seek ways to improve Three Mile Creek water quality and the organization is committed to participating in this initiative.

In addition to stormwater runoff related issues directly impacting water quality, Environmental Justice within the Three Mile Creek Watershed deserves special attention. A sizeable portion of the urbanized area within the watershed is comprised of a minority and traditionally underserved community. Initial efforts spearheaded by the MBNEP, the City of Mobile, the Mobile Housing Board- a U.S. Department of Housing and Urban Development program, and local partners to engage these communities in environmental stewardship have proven fruitful. Most recently these partners successfully executed a large community clean-up, “Clean Up the Bottom”. To address this aspect of the planning process, Mobile Baykeeper has submitted a grant request to the U.S. Environmental Protection Agency under its Environmental Justice Program to undertake community engagement during the planning process.

MBNEP is currently seeking financial partnerships to begin the planning process that will provide the foundation for Three Mile Creek’s transformation. In addition to securing funding for the development of the plan, MBNEP has begun to identify potential sources of implementation dollars so that restoration activities can begin immediately upon completion of the planning process.

We anticipate that a comprehensive watershed plan will cost approximately \$200,000. The following financial resources are being pursued:

<b>Watershed Planning</b>	<b>Initial Implementation (Projected)</b>	
MBNEP (committed)	10,000.00	50,000.00?
ADCNR (awarded)	35,000.00	35,000.00
ADEM/Gulf Coast Asphalt (SEP-pending)	25,000.00	50,000.00
City (request)	27,500.00	50,000.00
County (request)	27,500.00	50,000.00
MAWSS (pending)	50,000.00	50,000.00
Baykeeper (EPA EJ- Award Pending)	25,000.00	TBD
US EPA Climate Ready Estuaries (in process)	TBD	TBD
	200,000.00	285,000.00



### 3. PROJECT DETAILS: TECHNICAL ASSISTANCE/ CAPACITY BUILDING

Description	Total Activity Budget	2012-2013 Budget (Yr 17)	2011-2012 Reprogram (Yr 16)	2011-2012 Budget (Yr 16)	2010-2011 Reprogram (Yr 15)	2010-2011 Budget (Yr 15)	External Grants	Past Year Grant Funds
Clean Water Partnership Facilitation	53,500		10,000	3,000			40,500	
Estuary Corps	25,000	5,000		10,000		10,000		
Community Outreach Cost Share	-		(10,000)	10,000				
Climate Ready Estuaries	102,500	60,000		12,500			30,000	
	181,000	65,000	-	35,500	-	10,000	70,500	-

Besides community presence, watershed-based, grassroots organizations have the local knowledge of environmental resources and their stressors; volunteer leadership-building capacity; and ability to enable members to plan, implement and monitor on-the-ground projects to improve environmental conditions and connections to the community. Grassroots organizations are in a position to promote greater community awareness about the importance of the estuarine environment to a community's health, safety, economy and overall quality of life. Throughout Mobile and Baldwin Counties, grassroots organizations are the cornerstone of environmental protection at the community level.

During the next fiscal year, MBNEP will support and help build capacity of these critical groups by developing outreach and decision support materials for their use; providing specialized training and education opportunities; and initiating an Estuary Corps program to engage local schools in hands-on learning experiences that build on-going stewardship while improving the quality of Alabama's coastal resources. The outputs generated under this section will be largely dependent on the results of a community assessment that is currently underway. MBNEP anticipates that recovery planning and projects will be priorities to grassroots organizations and continues to develop watershed profiles for coastal hydrologic units (HUC 12s) to provide baseline environmental and socio-economic data for planning purposes. (Note: The ongoing LULC project with NASA to determine permanency of habitat change is contributing to the profiling effort).

It is anticipated that one watershed management plan will be initiated (Threemile Creek). In addition, MBNEP will partner with Alabama Coastal Foundation to establish an Estuary Corps program in Mobile and Baldwin County schools.

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: COASTAL NON POINT SOURCE POLLUTION PROGRAM: CLEAN WATER PARTNERSHIP

<b>Project Number</b>	TAC
<b>Title</b>	Coastal Non Point Source Pollution Program
<b>CCMP Objective</b>	WQ
<b>Purpose</b>	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
<b>Performing Organization(s)</b>	BCWSD, MBNEP, A CWP, Auburn University
<b>Outputs/Deliverables</b>	One plan complete; one plan initiated; coastal HUC12 watershed profiles; 1 new Clean Marina designation
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities; expanded community engagement and ownership
<b>Clean Water Act Relevance</b>	Support water quality standards; Improve water quality monitoring, Support TMDL implementation
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$ 13,000
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 40,500 (BC/MC WCD-ACWP)
<b>Total</b>	\$ 53,500
<b>Match/Leverage</b>	Auburn University, Mississippi Alabama Sea Grant Consortium

Much progress has been made to protect water quality in Alabama. However, addressing non-point source pollution is a special concern because it is often difficult to ascertain sources and causes, and education and outreach have proven deficient. To address non-point pollution issues in coastal Alabama, two programs have been established to improve outreach, education and voluntary implementation of environmentally protective and cost-effective management practices.

The Mississippi-Alabama Clean Marina Program, administered by MASGC and Auburn University Marine Extension and Research Center, is a voluntary, incentive-based program that encourages marina operators and recreational boaters to protect coastal water quality by engaging in environmentally sound operating and maintenance procedures.

The Coastal Alabama Clean Water Partnership, administered by the Mobile/Baldwin Soil and Water Conservation Districts (SWCD) and managed by the MBNEP, is made up of local interests, including agriculture, forestry, business, industry, environmental groups and local governments that coordinate, plan, and implement environmental protection and restoration efforts through non-regulatory means. The Partnership's main focus is on reducing non-point sources of pollution through voluntary measures to improve water quality in local streams, especially those listed as impaired on the 303(d) List developed by ADEM.

To better coordinate activities related to non-point source pollution reduction throughout coastal Alabama, MASGC, AUMERC, SWCD, and MBNEP have co-funded the position of a Coastal Non-Point Source Outreach Specialist to act as a lead point of contact for all issues related to non point source pollution. This position's time is divided between recruiting marinas into the Clean Marina Program and developing or participating in the development of watershed management plans and projects to reduce the quantities of non-point source pollution entering coastal waterways.

This past year, a watershed management plan was completed for the Eight Mile Creek Watershed; watershed planning commenced for the Volanta Gulley, and watershed profiles are being developed for the other coastal sub-watersheds for use in future watershed planning. In addition, three local marinas (Bear Point, San Roc Cay, and Homeport) are actively being recruited to become certified as Clean Marinas. Additionally, ordinances in the Cities of Orange Beach and Gulf Shores now require any new marinas to be built to Clean Marina Standards.

During the next fiscal year, MBNEP anticipates the initiation of a watershed plan for Threemile Creek and the certification of one Clean Marina. Work with existing marinas will continue to find funding sources to address stormwater and fish waste disposal issues which have prevented many coastal marinas from attaining Clean Marina status.

## TAC: ESTUARY CORPS

<b>Project Number</b>	TAC
<b>Title</b>	Estuary Corps
<b>CCMP Objective</b>	EPI
<b>Purpose</b>	Establish a program that engages teachers and students in promoting the wise stewardship of the water quality and living resources of the Mobile Bay estuary
<b>Performing Organization(s)</b>	MBNEP/ACF
<b>Outputs/Deliverables</b>	20 Estuary Corps Members
<b>Outcomes</b>	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
<b>Clean Water Act Relevance</b>	Improve water quality monitoring, Improve monitoring of wetland function and coverage
<b>10-11 EPA Funding</b>	\$ 10,000
<b>11-12 EPA Funding</b>	\$ 10,000
<b>12-13 EPA Funding</b>	\$ 5,000
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$ 25,000
<b>Match/Leverage</b>	DISL; Alabama Coastal Foundation

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. In the days following the Deepwater Horizon incident, over 7,000 volunteers offered their assistance to local non-profits to help areas affected by the oil. Unfortunately, due to the hazardous nature of the oil and its residue, volunteers were largely unengaged. This fact prompted area non-profit organizations to develop ways for volunteers to stay involved, leading to the creation of the Volunteer Field Observer Program by the Alabama Coastal Foundation (ACF) and Mobile BayKeeper.

During the next fiscal year, MBNEP will partner with ACF and the Dauphin Island Sea Lab to establish an Estuary Corps. The goals of the Estuary Corps Program are to establish an after school enrichment program which engages teachers and students in hands-on learning experiences that build on-going stewardship while improving the quality of Alabama's coastal resources; and to create opportunities for interested middle school students to interact and gain guidance from professionals in the fields of environmental science, marine biology, ecology, botany, and wildlife biology/conservation career fields.

It is expected that one school from Mobile County and one school from Baldwin County will be identified and selected to pilot the Estuary Corps program, with one teacher from each school commissioned to serve as the school's program leader.

This program will be launched in September, 2012.

## TAC: COMMUNITY OUTREACH COORDINATION

<b>Project Number</b>	TAC
<b>Title</b>	Community Outreach Coordination
<b>CCMP Objective</b>	All
<b>Purpose</b>	Provide informal training to grassroots groups on issues related to ecosystem status and trends, restoration, stressors, organizational development and other topics as determined by community
<b>Performing Organization(s)</b>	MBNEP, DISL, ACF, Consultants
<b>Outputs/Deliverables</b>	Two workshops for 13 grassroots organizations
<b>Outcomes</b>	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
<b>Clean Water Act Relevance</b>	Improve water quality monitoring, Improve monitoring of wetland function and coverage
<b>10- 11 EPA Funding</b>	\$0
<b>11-12 EPA Funding</b>	\$ 0 (\$ 10,000 budgeted, \$10,000 reprogrammed)
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$ 0
<b>Past Year Funding</b>	
<b>Match/Leverage</b>	

MBNEP's purpose is to encourage a community-based approach to watershed management by securing community involvement and ownership in the estuary's health. This past year, partly in response to a recognized need to reach out to community groups during the Deepwater Horizon incident, MBNEP hired a Community Outreach Coordinator on a temporary basis to develop, coordinate and deliver different outreach initiatives, including but not limited to: one-on-one technical support to the grassroots organizations located throughout Mobile and Baldwin Counties; public input meetings on topics related to community environmental concerns; educational materials; documentation of activities; communication of MBNEP activities and other pressing environmental issues with the objective of expanding the size and geographic area of the available volunteer base; and expanding volunteer engagement activities to promote the wise stewardship of the Mobile Bay estuarine system.

The position involved coordinating workshops and information programs focused on contact with community members through first-hand delivery. Duties included the planning and development of this programming,

followed by implementation and evaluation. This position also served as a liaison between other organizations within the community that share similar goals. Unfortunately, due to increasing budget uncertainty, MBNEP was unable to make the position permanent.

## TAC: CLIMATE READY ESTUARIES: ADAPTATION PLANNING DAUPHIN ISLAND

<b>Project Number</b>	TAC04
<b>Title</b>	Climate Adaptation: Dauphin Island
<b>CCMP Objective</b>	HU
<b>Purpose</b>	The purpose of this project is to provide Dauphin Island with a cost-effective method for assessing climate change vulnerabilities and identifying adaptation policy responses to assist with climate change adaptation planning.
<b>Performing Organization(s)</b>	MASGC, Town of Dauphin Island, Dauphin Island Water and Sewer Authority, Dauphin Island Park and Beach Board, MBNEP
<b>Outputs/Deliverables</b>	The end product of the vulnerability and risk assessment process will be a series of Vulnerability-Consequence Adaptation Planning Scenario (VCAPS) diagrams and narrative report identifying vulnerabilities and risk by sectors and planning areas.
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities; expanded community engagement and ownership
<b>Clean Water Act Relevance</b>	Support water quality standards; improve wetland function and coverage
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$12,500 (Climate Ready Estuaries)
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$
<b>Total</b>	\$ 12,500
<b>Match/Leverage</b>	Mississippi Alabama Sea Grant Consortium, Town of Dauphin Island, Dauphin Island Water and Sewer Authority, Dauphin Island Park and Beach Board

Information on regional climate change impacts is readily available in scientific journal articles, governmental reports, newspapers, and websites. It is often difficult, however, for non-scientists to process this wealth of information and assess the validity of individual reports or claims. In addition, global climate change models are difficult, if not impossible, to "downscale" to accurately predict impacts on a local level. Despite its small size and limited resources, Dauphin Island, Alabama's barrier island, must evaluate the potential climate change impacts to the natural and human systems and develop adaptation plans. The purpose of this project is to provide Dauphin Island with a cost-effective method for assessing climate change impacts and identifying adaptation policy options to assist with climate change adaptation planning.

Dauphin Island, Alabama is a low-lying barrier island located five miles south of Mobile, Alabama. Dauphin Island is a narrow island, approximately 15 miles long and only a mile wide at its widest point. The majority of Dauphin Island's 1,238 residents live on the more stable eastern seven miles, and the western areas of the island remain virtually undeveloped. With an average elevation of only 7.2 feet, Dauphin Island is highly



susceptible to damages resulting from rising sea levels. Because of the small size and relatively low elevation of the Island, a slight vertical increase in sea level can force the shoreline to move significantly inland, particularly in the low-lying areas of the island already threatened by erosion and shoreline retreat. The low-lying beaches on the West End were almost destroyed during Hurricane Katrina and subsequent tropical storms, and the flooding conditions and wave action exacerbated by these storms accelerated and worsened the effects of erosion throughout the island. The relatively undeveloped western end of the island has been particularly susceptible to the effects of erosion, with over 350 feet of beach destroyed thus far. With erosion causing the beaches to recede along the western portion of Dauphin Island, a significant amount of Alabama's coastal marshes have been destroyed, which in turn could present a substantial threat to the state's seafood industry.

The Town of Dauphin Island was incorporated in 1988. The Town is governed by a mayor and a five-member town council who are responsible for establishing policy and providing governmental services for such things as public safety, land use, and solid waste disposal. A planning commission assists the Mayor and Town Council in the preparation, maintenance and implementation of plans, regulations and ordinances for the orderly development of the Town. The Dauphin Island Water and Sewer Authority, which operates independently from the Town, provides water and sewer services. Dauphin Island's public parks, beaches, campgrounds, and other recreational facilities are managed by the Dauphin Island Park and Beach Board. Like the Water and Sewer Authority, the Park and Beach Board operates independently from the Town under the leadership of an executive director and board.

Given Dauphin Island's fragmented governance structure, it is essential that all three organizations evaluate the potential climate change impacts to the natural and human systems within their spheres of authority and develop adaptation plans. While these assessments could be done independently, a coordinated approach saves time and money and provides opportunities for joint fact-finding, mutual learning, and collaboration. By engaging all three organizations, MASGC ensures that all of Dauphin Island's resources are included in the Dauphin Island Climate Resiliency Study, not just those falling within the Town's authority.

Working in partnership with Mississippi-Alabama Sea Grant Consortium (MASGC), the Town of Dauphin Island, the Dauphin Island Water and Sewer Authority, and the Dauphin Island Park and Beach Board, this project will improve the capacity of Dauphin Island to adapt to climate change through the preparation of climate change vulnerability and risk assessments and development of recommended adaptation policy responses to address identified vulnerabilities and risks. Following the framework laid out by the Climate Impacts Group, King County, Washington, and ICLEI-Local Governments for Sustainability in "Preparing for Climate Change: A Guidebook for Local, Regional, and State Governments," this project will provide technical assistance and support to Dauphin Island through MASGC to scope the climate change impacts to its natural and built resources, identify planning areas relevant to climate change, and conduct a climate change vulnerability assessment and climate change risk assessment. In the second year of this project, MASGC will continue support this barrier island community by reviewing Dauphin Island's existing policies, procedures, and practices to assess adaptive capacity and make recommendations for policy responses to address identified vulnerabilities.

The Mobile Bay NEP will partner with the MASGC to enhance the technical assistance provided to Dauphin Island by enabling the project team to incorporate the Vulnerability-Consequence Adaptation Planning Scenarios (VCAPS) process into the Dauphin Island Climate Resiliency Study. The VCAPS process, developed by the Social and Environmental Research Institute, uses facilitated community sessions and a diagramming program (Visual Understanding Environment (VUE) freeware) to help decision-makers, staff, and planners identify and understand the climate change adaptation challenges facing their communities. Through the VCAPS process, participants learn how climate stressors lead to particular consequences and how those consequences can be mitigated or prevented. A typical VCAPS process involves conducting background research on the community, 2-4 facilitated meetings, and follow-up interviews with participants to develop the diagrams.

The VCAPS process will be incorporated into the first phase (Year 1) of the Dauphin Island Climate Resiliency Study – the climate change vulnerability and risk assessments – which will commence June 1, 2012. It is anticipated that the background research will be undertaken during the summer with facilitated meetings to be held between September – November 2012. The VCAPS diagrams and community input will provide the foundation for the vulnerability and risk assessments and inform the policy review undertaken in Year 2.

#### **TAC: CLIMATE READY ESTUARIES: ADAPTATION PLANNING THREE MILE CREEK**

<b>Project Number</b>	TAC04
<b>Title</b>	Climate Change Vulnerability Assessment For Lower 3 Mile Creek
<b>CCMP Objective</b>	HU
<b>Purpose</b>	The purpose of this project is to assess climate change vulnerabilities and identify adaptation policy responses to assist with climate change adaptation planning in the Three Mile Creek Watershed.
<b>Performing Organization(s)</b>	MBNEP, DISL, MAWSS, USA, USGS, US Army Corps of Engineers
<b>Outputs/Deliverables</b>	Inundation Mapping, Land Use And Facilities Mapping, a series of Vulnerability-Consequence Adaptation Planning Scenario (VCAPS) diagrams and narrative report identifying vulnerabilities and risk by sectors and planning areas.
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities; expanded community engagement and ownership
<b>Clean Water Act Relevance</b>	Support water quality standards; improve wetland function and coverage
<b>10-11 EPA Funding</b>	\$ 0
<b>11-12 EPA Funding</b>	\$
<b>12-13 EPA Funding</b>	\$ 60,000 (Climate Ready Estuaries- 15% admin fee)
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$ 60,000
<b>Match/Leverage</b>	Mississippi Alabama Sea Grant Consortium, MAWSS, AL State Port Authority, US Army Corps of Engineers, NASA

Climate change threatens human and environmental resources in the lower Three Mile Creek Watershed where many low income and environmental justice (EJ) communities are located. The most significant threat related to climate change is the increased risk of flooding that occurs in the low lying areas occupied by the EJ community. While historically the flooding of homes by Creek waters has not been limited to areas occupied by the EJ community, these areas are most vulnerable and the first to experience flooding impacts. Flashiness

of stormwater runoff related to the heavy participation characteristic of this region presents threats to the safety of residents of low lying areas along this Creek, one of Mobile's primary stormwater conveyances. Important natural resources are also at risk since significant acreage of critical wetland areas are located in the lower Three Mile Creek watershed.

The EJ community that surrounds the Creek is particularly vulnerable to climate change impacts associated with increased stormwater runoff and nonpoint source pollution and sea level rise. Increased rainfall events will carry dense waves of floatable trash and debris from city streets and parking lots throughout the 29-square mile watershed through storm drains and into the Creek, where much is deposited by high waters onto downstream Creek banks occupied by the EJ community. Sea Level rise will threaten the stability of an adjacent landfill, which is unlined. Fish kills resulting from nutrient-stimulated hypoxic episodes would be particularly unpleasant in the low lying areas that surround the Creek occupied by the EJ community. Mosquitoes thrive in even small pools of the standing water that remains after flood events, and the EJ community will be geographically most vulnerable to this nuisance.

With aging infrastructure underlying documented sanitary sewer overflows (SSOs) in the watershed, increased and intensified rain events threaten more such failures, especially in historic neighborhoods with older infrastructure. Pathogen contamination flows with the Creek, so even upstream SSOs will be manifested by contamination downstream in areas occupied by the EJ community.

However, Three Mile Creek provides many benefits to its adjacent communities. Fishing – either recreational or subsistence – is perhaps the activity most embraced by the EJ community, with anglers regularly on banks or bridge crossings with cane poles or rods and reels. The historic EJ community around Martin Luther King Jr. Avenue is known as The Bottom, due to its low topography, and the Creek provides adequate drainage to curtail flooding during all but the most extreme weather events. Green spaces and parks provide some recreational opportunities to the community. An example is Tricentennial Park, an attractive and safe waterfront park and picnicking venue. Even grassy areas between Roger Williams Park and the Creek provide recreational opportunities for school-aged children to exercise and play in close proximity to their homes.

The ***purpose*** of this Climate Ready Estuaries project is to assess climate change vulnerability and resilience and to increase community understanding of how Climate Change will affect the Three Mile Creek watershed's water quality, ecological integrity, and residents. The ***goal*** of this project is to improve the knowledge and capacity of key stakeholders and the resident community, including an extensive environmental justice population, in actively participating in watershed management and future adaptation planning to improve the area's resiliency to the impacts of Climate Change.

The ***objectives*** are to:

- Build a process-based model for the Three Mile Creek watershed that incorporates hydrodynamic feedbacks between surface water, land surface, soil, and groundwater zones to assess the sensitivity of the hydrological and water quality response to future climate conditions.
- Prepare flooding maps for selected scenarios. At a minimum, three future sea level rise scenarios, three storm induced surge scenarios and three extreme rainfall scenarios shall be developed. Combinations of these scenarios shall also be produced to result in potential future vulnerability scenarios for the lower Three Mile Creek watershed. The conditions that could result in each scenario shall be fully describe and the relative likelihood of occurrence shall be described.

- Using the above flooding maps run at least three different climate change scenarios to assess impacts of, but not limited to, human risks, infrastructure risks, ecological risks, salt water intrusion, inundation of wetlands, water availability and quality, changes in habitat and species distribution, and increased storms on the watershed.
- Conduct a NatureServe Climate Change Vulnerability Index to identify plant and animal species within the watershed that are particularly vulnerable to the effects of climate change.
- Conduct a vulnerability assessment of the Hickory Street landfill under at least two climate change scenarios to determine possible threats to area water quality and to the surrounding environmental justice community
- Conduct a Vulnerability and Consequence Adaptation Planning Scenario (VCAPS) to assess how changes in air temperature and higher incidences of fecal coliforms may affect certain segments of the (EJ) community including those with heart problems or asthma; the elderly; the very young; and the homeless.
- Inform and incorporate climate change impacts in strategies to be included in watershed management plan.

During the next program year, this comprehensive climate change analysis will be initiated. The project will be conducted in phases with the first phase (2012-2013) including a climate vulnerability assessment for lower Three Mile Creek. The project may include the development of inundation maps for normal tidal conditions for next 20-30 years (including sea level rise), storm surge for hurricane conditions (at least categories 1 and 3) and address conditions that exacerbate impacts such as where, when and how the storm hits for 50 and 100 year rainfall events (recognizing that these events may occur at the same time a hurricane strikes). In addition the project may include mapping of land uses and critical facilities (hospitals, residences, industries, landfills, critical transportation corridors, etc.) along with elevation information; population characteristics (age, vulnerability); and temperature profiles.

The deliverables expected inundation mapping, land use and facilities mapping, and a draft and final vulnerability assessment. In addition, we will undertake a similar VCAP process to what will take place on Dauphin Island to complement the development of the above deliverables as a community outreach component.

## 4. PROJECT DETAIL: PROGRAM IMPLEMENTATION

Description	Total Activity Budget	2012-2013 Budget (Yr 17)	2011-2012 Reprogram (Yr 16)	2011-2012 Budget (Yr 16)	2010-2011 Reprogram (Yr 15)	2010-2011 Budget (Yr 15)	External Grants	Past Year Grant Funds
CCMP Development	69,800			13,800	(44,000)	100,000		
CCMP Database	10,000				10,000			
Newsletter	24,000	6,000		6,000		6,000	6,000	
Video Production	300,482	10,000		50,717		10,000	229,765	
Community Awareness Campaigns	46,000	15,000	5,480	10,000				15,520
Partnership Cultivation	4,000				4,000			
Community Awareness-Promotional Materials	65,235	11,000	-	22,500	(7,265)	39,000	-	-
Community Outreach Special Events	30,000	15,000			15,000			
Signage	30,506	14,258	5,000	5,000	1,300	-	-	4,948
Signage-Brooks Park, Chickasaw			5,000					
Signage-Reading Park, Prichard								4,948
Signage-D'Olive Watershed					1,300			
Signage- Steele Creek Lodge Satsuma				5,000				
	580,022	71,258	10,480	108,017	(20,965)	155,000	235,765	20,467
Administration	1,223,017	454,442	(12,564)	427,457	(46,235)	399,917		
DISL Indirect Costs (15% of expenses)	339,008	104,355		106,272		128,381		
	1,562,025	558,797	(12,564)	533,729	(46,235)	528,298		

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 current CCMP. At its most recent retreat, the EC formally initiated the next phase of CCMP planning by developing a vision, purpose, and goals for the program:

**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

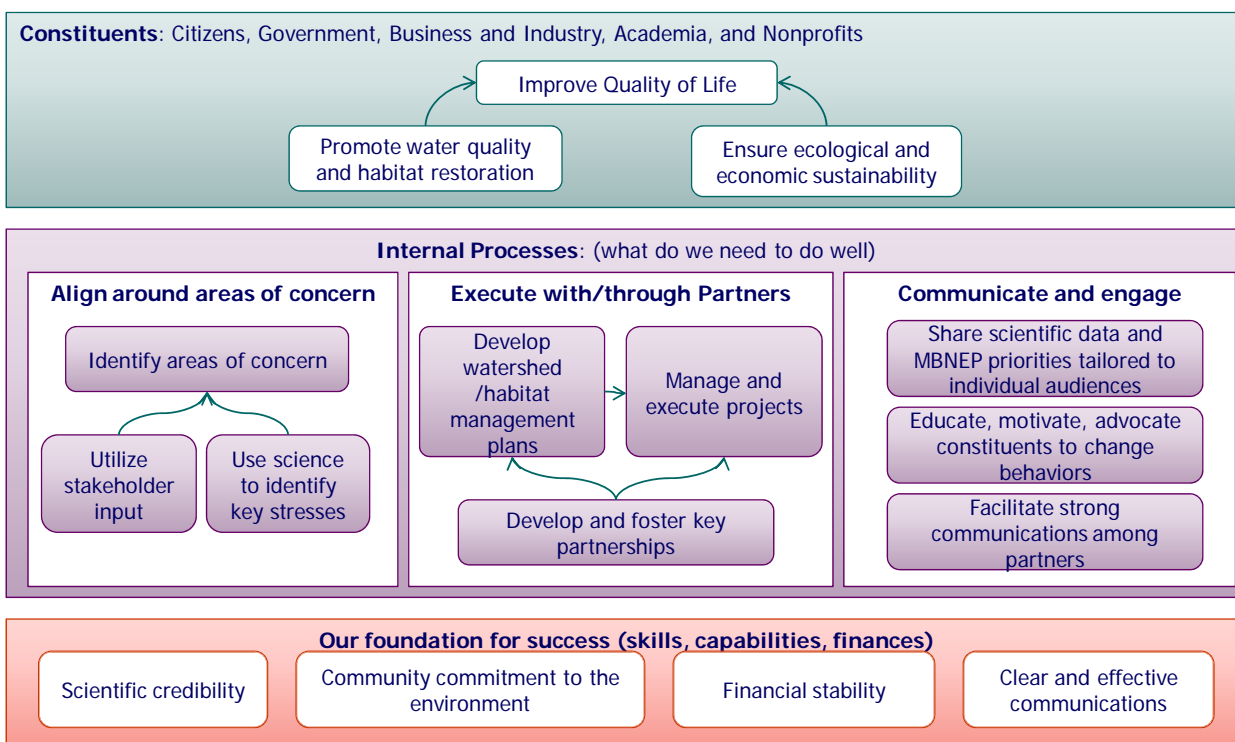
## Goals:

- 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.

## Mobile Bay NEP draft strategy map

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



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During the next fiscal year, MBNEP will continue to promote greater coordination and participation of Management Conference members during the re-writing of the CCMP, and improving program transparency, communications, and community awareness. This will be done by initiating a community process for re-writing the CCMP for the next 10-year period, development of a communications plan for community outreach, coordination of two cultivation events to expand MBNEP partnerships, development of a public awareness campaign to highlight emerging environmental issues, promotion of the public education film shorts, “*A Redfish Tale*,” and “*Fish Slap*” and continuously improving and expanding our website to provide more interactivity and highlight management conference efforts.

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

## PIR: COMPREHENSIVE CONSERVATION PLANNING FOR MOBILE BAY ESTUARY

<b>Project Number</b>	PIR01
<b>Title</b>	Comprehensive Conservation Planning for Mobile Bay Estuary
<b>CCMP Objective</b>	WQ, LR, HM, HU, EPI
<b>Purpose</b>	Create new strategic framework for regional growth and resiliency that balances the needs of the human system with protection and sustainability of the natural system
<b>Performing Organization(s)</b>	MBNEP Management Conference/Consultant
<b>Outputs/Deliverables</b>	A Comprehensive Conservation Management Plan for the next ten years
<b>Outcomes</b>	Improved ecosystem function and protection; Improved community management of ecosystem restoration and protection activities; expanded community engagement and ownership
<b>Clean Water Act Relevance</b>	Support water quality standards; Improve water quality monitoring, Support TMDL implementation, Improve monitoring of wetland function and coverage
<b>10- 11 EPA Funding</b>	\$56,000 (\$ 100,000 budgeted, \$44,000 reprogrammed)
<b>11-12 EPA Funding</b>	\$13,800
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 0
<b>Total Funds</b>	\$69,800
<b>Match/Leverage</b>	

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 this study was a Public Participation Geographic Information Systems (PPGIS) mapping activity that is used to conduct a spatial analysis of local values, perceptions of threats, and development preferences.

For this PPGIS mapping activity, we asked participants to use ¼ sticker dots to identify places that they think are important on a 24 in. by 36 in. full color satellite map of the Mobile Bay region (including nearby Wolf Bay), which was displayed at a scale of 1:150,000. The sticker dots were color coded to correspond to a range of 18 cultural values, watershed ecosystem service values, wildlife habitat maintenance sites, pollution threats, development preferences, and special places. Additionally, respondents were asked to use another sticker dot to identify the location of their most recent recreation activity within the region.

During this program year, MBNEP will partner with Auburn to conduct an analysis of the results of the above work as it relates to the area served by the Mobile Bay National Estuary Program (MBNEP). Respondents' maps will be digitized into a GIS database for spatial analysis, which is used to identify where these places of landscape values, threats, and development preferences cluster and how different values are spatially linked. GIS software will be used to create maps showing these features for all of the points identified by MBNEP subset of respondents in the database, and can be filtered to only show points associated with a specific landscape value or development preference. Additionally, the information gathered in other sections of the survey will be stored in the attribute tables of these points in the GIS database, thus providing them with context and allowing the points to be filtered to create new maps displaying only the points identified by people with certain characteristics (e.g. socioeconomic status, occupation, race, etc.).



## PIR: CCMP ACCOMPLISHMENTS DATABASE

<b>Project Number</b>	PIR
<b>Title</b>	CCMP Accomplishments Database
<b>CCMP Objective</b>	MPA
<b>Purpose</b>	To conduct a periodic inventory of actions that have been taken to implement the CCMP
<b>Performing Organization(s)</b>	MBNEP
<b>Outputs/Deliverables</b>	Online Database of Accomplishments
<b>Outcomes</b>	Increase community understanding of efforts undertaken to protect our coastal resources
<b>Clean Water Act Relevance</b>	
<b>10- 11 EPA Funding</b>	\$10,000
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13 EPA Funding</b>	\$ 0
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$10,000
<b>Match/Leverage</b>	

Starting in 2004, MBNEP began to catalog actions that had been taken by the various members of the management conference to implement the CCMP. This catalog evolved into an online database organized by objective area: Water Quality, Living Resources, Habitat Management, Human Uses, and Education and Public Involvement. Please note: This database is a work in progress, and has not been updated since 2006. We will continue to develop this and encourage other management conference members to assist in providing information activities to build this inventory of community environmental accomplishments.

## PIR: COMMUNITY OUTREACH: NEWSLETTER

<b>Project Number</b>	PIR02
<b>Title</b>	Community Outreach Program-Newsletter
<b>CCMP Objective</b>	EPI
<b>Purpose</b>	Publish semi-annual newsletter to highlight emerging issues, project progress and other issues of interest
<b>Performing Organization(s)</b>	MBNEP, ADCNR State Lands Division
<b>Outputs/Deliverables</b>	2 Newsletters
<b>Outcomes</b>	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors; Increased knowledge of activities being undertaken to protect estuarine resources
<b>Clean Water Act Relevance</b>	
<b>10- 11 EPA Funding</b>	\$6,000
<b>11-12 EPA Funding</b>	\$6,000
<b>12-13-EPA Funding</b>	\$6,000
<b>Other Funds</b>	\$6,000 (ADCNR)
<b>Total</b>	\$24,000
<b>Match/Leverage</b>	

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.

## PIR: VIDEO PRODUCTION

<b>Project Number</b>	PIR
<b>Title</b>	Video Production
<b>CCMP Objective</b>	EPI
<b>Purpose</b>	To educate children and adults on the effects of nutrients and runoff to watersheds, estuaries and seas.
<b>Performing Organization(s)</b>	MBNEP
<b>Outputs/Deliverables</b>	Two educational videos, Three portable kiosks, A kiosk distribution plan
<b>Outcomes</b>	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors
<b>Clean Water Act Relevance</b>	
<b>10-11 EPA Funding</b>	\$ 10,000
<b>11-12 EPA Funding</b>	\$ 50,717
<b>12-13 EPA Funding</b>	\$ 10,000
<b>Other Funding</b>	\$ 229,765 (US EPA Gulf of Mexico Program)
<b>Total</b>	\$ 300,482
<b>Match/Leverage</b>	DISL, Americorps, NASA, Volunteers

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 is producing a second video, “Fish Slap,” that will highlight 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, will 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 have been delivered and the first kiosk has been installed at the Dauphin Island Sea Lab Estuarium. Plans call for the other two kiosks to be rotated throughout museums and visitor attractions in the Gulf Coast area. “Fish Slap” is due out early this summer.

## PIR: COMMUNITY AWARENESS CAMPAIGNS

<b>Project Number</b>	PIR
<b>Title</b>	Stormwater Demonstrations and Education Campaign
<b>CCMP Objective</b>	EPI
<b>Purpose</b>	To educate the residents of Baldwin and Mobile Counties about ways to decrease harmful stormwater runoff
<b>Performing Organization(s)</b>	MBNEP
<b>Outputs/Deliverables</b>	Production of educational materials to be distributed at community meetings, raise awareness by conducting 3 demonstration workshops
<b>Outcomes</b>	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors
<b>Clean Water Act Relevance</b>	
<b>10-11 EPA Funding</b>	\$4,000
<b>11-12 EPA Funding</b>	\$15,480
<b>12-13-EPA Funding</b>	\$15,000
<b>Other Funding</b>	\$15,520 (Cities of Foley, Summerdale, Magnolia Springs, and Baldwin County)
<b>Total</b>	\$50,000
<b>Match/Leverage</b>	Weeks Bay NERRS, Mobile BayKeeper, AUMERC, AL Clean Water Partnership, Local Municipalities and Counties

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.

In the past year the MBNEP has worked with organizations working in the downtown Mobile area in an effort to raise awareness of water quality issues in the Threemile Creek Watershed. These efforts culminated with “Clean Up the Bottom”, a volunteer community clean-up centered in a historically African-American neighborhood off Martin Luther King Ave known as “The Bottom” and the adjacent One Mile Creek.

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: COMMUNITY OUTREACH PROMOTIONAL MATERIALS

<b>Project Number</b>	PIR
<b>Title</b>	Community Outreach Promotional Materials
<b>CCMP Objective</b>	EPI
<b>Purpose</b>	To educate the public about water related issues relevant to Mobile Bay
<b>Performing Organization(s)</b>	MBNEP
<b>Outputs/Deliverables</b>	
<b>Outcomes</b>	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors
<b>Clean Water Act Relevance</b>	
<b>10-11 EPA Funding</b>	\$ 31,735
<b>11-12 EPA Funding</b>	\$ 22,500
<b>12-13 EPA Funding</b>	\$ 11,000
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$ 65,235
<b>Match/Leverage</b>	

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.

## PIR: COMMUNITY OUTREACH SPECIAL EVENTS

<b>Project Number</b>	PIR
<b>Title</b>	Community Outreach Special Events
<b>CCMP Objective</b>	EPI
<b>Purpose</b>	To educate the public about water related issues relevant to Mobile Bay
<b>Performing Organization(s)</b>	MBNEP
<b>Outputs/Deliverables</b>	Create an Outreach and Communications plan, Sponsor 5 community events, Conduct 3 public meetings/workshops
<b>Outcomes</b>	Increase public awareness of environmental issues; Increased knowledge of environmental issues and stressors
<b>Clean Water Act Relevance</b>	
<b>10-11 EPA Funding</b>	\$15,000
<b>11-12 EPA Funding</b>	\$ 0
<b>12-13 EPA Funding</b>	\$15,000
<b>Other Funding</b>	\$ 0
<b>Total</b>	\$30,000
<b>Match/Leverage</b>	

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.

## PIR: EDUCATIONAL/INFORMATIVE SIGNAGE

<b>Project Number</b>	PIR
<b>Title</b>	Educational/Informative Signage
<b>CCMP Objective</b>	EPI
<b>Purpose</b>	Educate community about watershed, ecosystem characteristics and project components
<b>Performing Organization(s)</b>	MBNEP
<b>Outputs/Deliverables</b>	Educational/Informative Signage at Brooks Park, Reading Park, D'Olive Watershed, Steele Creek Lodge
<b>Outcomes</b>	Increase public awareness of environmental issues
<b>Clean Water Act Relevance</b>	
<b>10-11 EPA Funding</b>	\$1,300
<b>11-12 EPA Funding</b>	\$10,000
<b>12-13 EPA Funding</b>	\$ 14,258
<b>Other Funding</b>	\$4,948 (Past EPA funding)
<b>Total</b>	\$ 30,506
<b>Match/Leverage</b>	

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 and Dog River Park and a third set is already under development 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.



## PIR: ADMINISTRATION AND INDIRECT COSTS

<b>Project Number</b>	PIR	
<b>Title</b>	Program Administration	Indirect Costs (15%)
<b>CCMP Objective</b>	MPA	
<b>Purpose</b>	Develop standardized mechanisms for planning, financing, and tracking activities	Leverage resources to streamline program implementation
<b>Performing Organization(s)</b>	MBNEP	DISL
<b>Outputs/Deliverables</b>	Improved financial tracking system; new time allocation system	27.6% unrecovered administrative costs contributed to program as non-Federal share from DISL
<b>Outcomes</b>	Improved program management and administration	
<b>Clean Water Act Relevance</b>		
<b>10-11 EPA Funding</b>	\$ 353,682	\$ 128,381
<b>11-12 EPA Funding</b>	\$ 414,893	\$ 106,272
<b>12-13-EPA Funding</b>	\$ 454,442	\$ 104,355
<b>Total</b>	\$ 1,228,017	\$ 339,008

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
Communications Coordinator	Kathy Eddy	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
Program Administrator	Brenda Lowther	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/Website Manager	Brian West	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.
Special Projects Coordinator / Americorps	Kelly Barfoot	Project Assistance as needed; Community engagement	Provides assistance to other staff in executing projects. Assists with grant reporting; engages community through special projects.

## TRAVEL

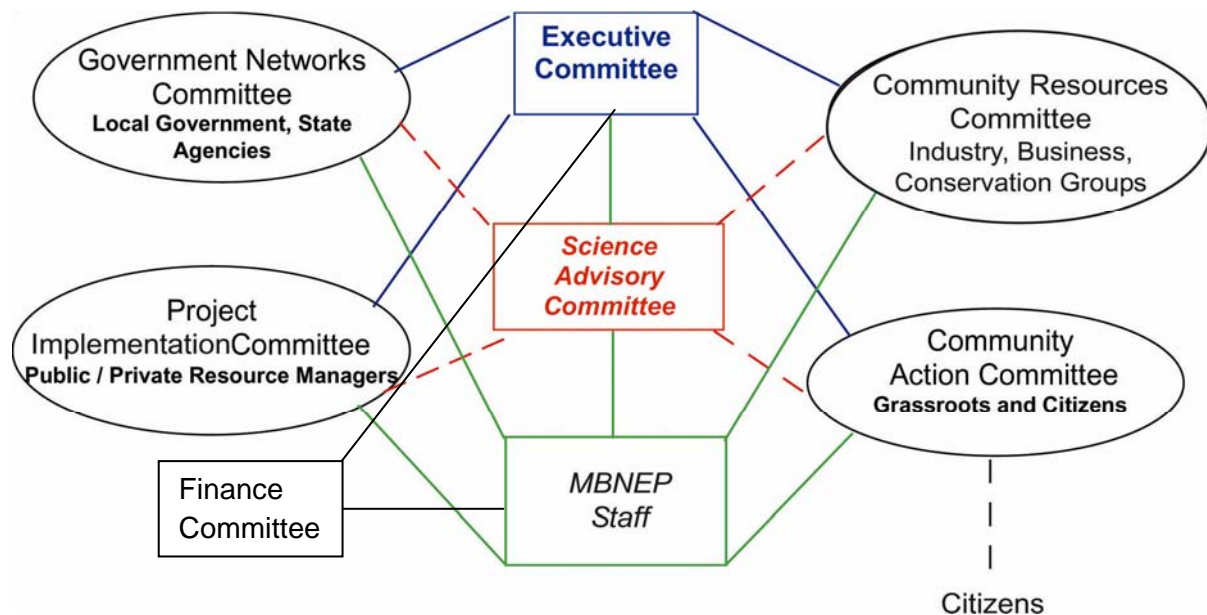
In addition, this amount includes \$16,000 (\$13,000 as required by EPA) for travel related to outreach and technology and information transfer. Program staff will participate in regional, state, and national conferences and meetings relevant to estuarine management. Attendance at Association of National 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 43%. The un-recovered indirect of 28% 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 for non-Federal share.

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 2011-2012 program year, MBNEP will continue to review the efficiency of this management structure as part of an overall assessment of the program and re-writing of 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. The allocation for the Year 16 Plan (**2011-2012**) is **\$598,800**. This second year of funding will be added to the Year 15 allocation (**2008-2009**) **\$800,000** for a total of **\$1,398,800**. EPA requires that this total allocation be matched with non-Federal dollars in a 1:1 ratio, or an additional \$1,398,800 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 combined total amount of resources that will be available to further implement the CCMP will be valued at \$2,797,600 for Year 16.

### 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 is in its second year of managing a **\$239,925** GOMP grant to support a real time water quality monitoring throughout Mobile Bay and **\$229,765** GOMP grant to develop an interactive educational video that would travel throughout the Gulf states addressing issues of environmental concern.

### 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. MBNEP is currently working with county governments as well as the Alabama Department of Conservation and Natural Resources- Coastal Section develops projects under this program for the next CIAP Plan.

#### 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.

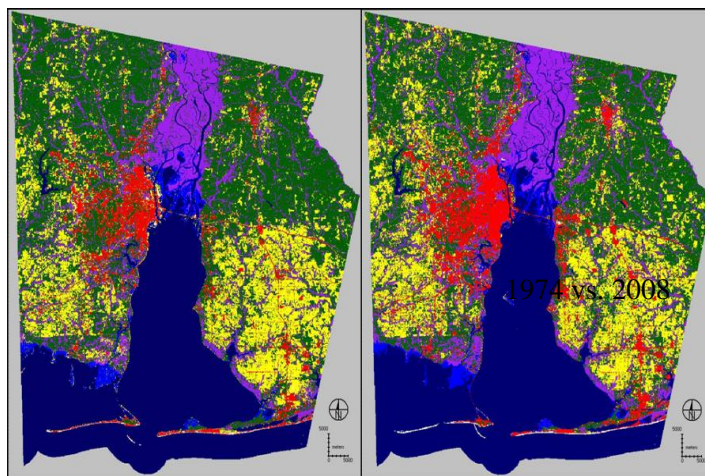
#### NOAA RESTORATION GRANTS/ GULF OF MEXICO FOUNDATION (GOMF)



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. In 2003, MBNEP received funding for derelict crab trap removal and creation of shellfish habitat (\$42,981), in part used to support oyster gardening. In 2004, MBNEP received a Five Star Grant (\$9,100) to further support our oyster gardening program. In 2007, a Five Star Grant (\$23,000) was awarded to MBNEP to conduct an SAV Gardening project in Little Lagoon. In addition, MBNEP received two Community Based Restoration Partnership grants: 2007- (\$38,500) to restore marshlands at Helen Wood Park and 2008-(\$26, 450) to stabilize the shoreline and conduct park improvements at Dog River/Luscher Park. In 2011, the MBNEP received a Gulf of Mexico/NOAA grant (\$58,451) to undertake habitat restoration and enhancement along Mobile Bay's western shoreline.

#### 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 is now 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 will be of inestimable value in helping us assess coastal change due to development and its impact on water quality, habitat and living resource populations.

#### 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 \$360,000 (\$60,000 per year) for the past six years and will receive \$70,000 per year beginning with the 2010 - 2011 fiscal year. In addition, through its various divisions, ADCNR has provided funding for Habitat Mapping, workshops, newsletters, Isle aux Herbes Restoration Planning, DI Public Access Feasibility study, wetlands status and trends and others on the order of \$346,000 to date.

During this past year, MBNEP completed SAV imagery as part of an ongoing effort to track trends related to this valuable resource. MBNEP receives \$6,000 per year 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. For the 2008 MBNEP received a reduction in this funding, or \$91,000. For the 2009 -2010 year, MBNEP received \$88,334. In 2010-2011 MBNEP received \$ 79,942 or \$68,332.

## 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. At present MBNEP is cultivating Prichard, Satsuma, Chickasaw, Bayou La Batre, Spanish Fort, Dauphin Island, Gulf Shores and Foley. Past annual investment from municipalities includes:

City of Mobile \$ 28,800

City of Daphne \$ 3,000

City of Fairhope \$ 3,000

City of Gulf Shores \$ 3,000

City of Spanish Fort \$2,000

Baldwin County \$15,000

Mobile County \$ 28,350



## **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 2011-2012

MBNEP currently has two EPA grants open for implementing CCMP activities. During the program year the EPA grant covering Federal fiscal years ending 2007-2012; and the EPA grant covering the Federal fiscal year ending 2013. Steady and substantial progress is ongoing for these grants with expenditures maintaining pace with progress. MBNEP had some notable successes this year, including:

#### PROGRAM IMPLEMENTATION AND COMMUNITY REPORTING

##### Management Conference

The events resulting from the explosion, burning, and sinking of the Deepwater Horizon oil platform during the week of April 19, 2010 consumed the energies of a significant portion of the MBNEP Management Conference over the last 365 days. Despite the loss of eleven lives and release of 210 million gallons of oil into the Gulf of Mexico, the well was capped over a month before optimistic projections and impacts to coastal habitats in Alabama and neighboring Gulf states were far less devastating than most feared. However, activities at Unified Command and efforts related to the Natural Resource Damage Assessment, the Alabama Coastal Recovery Commission, and the Gulf Ecosystem Restoration Task Force took precedence over “normal” operations for many key MBNEP partners.

Planned activities for the MBNEP Management Conference during the past year included promotion of greater coordination and participation of Management Conference members by initiating a re-write of the CCMP. This process has begun. The **Executive Committee** has drafted mission, vision, purpose, and goals as a framework for revision to the CCMP. A Community Attitudes Questionnaire, is undergoing final revision before being posed to 550-600 recipients randomly sampled by zip code to provide a “first cut” of community input on perceived environmental problems, aspects of our coastal environment that are particularly valued, community perception of the NEP and its role, and community perception of environmental management responsibilities. This activity, (supported by non-EPA funds) represents the first phase of CCMP planning, and, coupled with the **Science Advisory Committee**’s work towards developing a Biological Condition Gradient (BCG) framework, will provide the guidance needed to develop a thoughtful and responsive updated CCMP.

The **Project Implementation Committee** and Coastal Alabama Clean Water Partnership have gathered data sets for use in the development of Watershed Profiles for selected 12-digit hydrological unit codes (HUCs).

#### ECOSYSTEM STATUS AND TRENDS

##### Ensuring Biological Integrity

MBNEP continues to lead efforts towards the development of indicators of estuarine health using available biological, physical, and chemical information for the Mobile Bay system. In May, 2010, Tampa Bay NEP Director Holly Greening participated in the MBNEP SAC meeting, present how Tampa Bay developed indicators for their estuarine system. Coined “Restore the Balance,” their approach compared historical extent

and distribution of habitats that support important faunal guilds from an agreed-upon reference condition and time to those that currently exist. The assumption of this approach was that in restoring habitats in the same proportion, those habitat assemblages would sustain the mosaic of floral and faunal guilds represented in the area.

MBNEP SAC has been evaluating how to best communicate indicators of estuarine health since publication of the 2008 State of the Bay report. In addition to the Restore the Balance approach, it began investigating the Biological Condition Gradient Framework as a method back in 2009 for communicating the connection between biological condition and stressors to those conditions. In 2010, with assistance from EPA Region One (New England) the SAC continues to pursue use of this methodology. The Region One assistance included retaining Barry Vittor and Associates to help develop a BCG Model for the Mobile Bay Estuary. *(A BCG model is a tiered system of aquatic life use designation along a gradient that describes how biological attributes change in response to increasing levels of human disturbance. The gradient used to describe the ecological state of the attributes is divided into six tiers or levels of condition, ranging from a natural/native condition (one) to severe changes in the structure of the biotic community and major loss of ecosystem function (six).)*

#### Mobile Bay Real-Time Water Monitoring

With ongoing funding, (4<sup>th</sup> year) received from the Gulf of Mexico Program in 2010, all sites, Meaher Park, Dauphin Island, Weeks Bay, and Mobile (Middle) Bay, are up and running and information generated can be viewed at [www.mymobilebay.com](http://www.mymobilebay.com). The 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. In the future, the website will be connected to a larger network of stations as part of the Gulf Coast Ocean Observing System, and research reports, maps, and other information will be made available to the public.

## ECOSYSTEM RESTORATION AND PROTECTION

#### Steele Creek Lodge Shoreline Stabilization

The western shore of the Steele Creek Marina in Satsuma is experiencing rapid erosion and recession caused by a combination of storm water runoff and boat wakes. The City of Satsuma approached the MBNEP in 2009 requesting \$10,000 and guidance to remediate the shoreline and reduce the impacts. In 2010, Dr. Bret Webb of the Civil Engineering Department of the University of South Alabama delivered conceptual plans to not only stabilize the existing shoreline, in an effort to prevent further erosion, but to provide some level of mitigation for the loss of habitat in the vanishing riparian buffer. The plan was developed so that the city could use its own equipment and personnel to perform construction activities and provide in-kind match for the grant which would be used to purchase riprap to build a toe and clean sand fill to construct a perched terrace, which will be planted with native riparian vegetation with the help of the Satsuma High School Grasses in Classes Program. Construction activities are pending.

#### Oyster Gardening

MBNEP continues to support the Mobile Bay Oyster Gardening Program overseen by AUMERC. In 2010, 62 volunteer oyster gardeners working from 43 different docks/locations produced 17,500 oysters for placement on/supplementation to existing oyster reefs. Reduced production in 2010 was the result of reduction in

stocking capacity by 50% related to the Deepwater Horizon Oil Spill. This number was sufficient to cross the 400,000 plateau of total oyster production and planting by the Program.

#### *Dog River Park Shoreline Stabilization*

In 2010, with installation of educational signage at Dog River Park in Mobile, implementation of the shoreline stabilization project along the erosion impacted Park shoreline was completed. Three signs were installed at the sight, each describing a different facet of the project – the first shows “Where you are in the watershed,” the second discussed implementation activities involved in the project, and the third describes ecosystem services and wildlife beneficiaries of the project.

### TECHNICAL ASSISTANCE AND CAPACITY BUILDING

#### *Coastal Alabama Clean Water Partnership*

The CACWP received a grant from the World Wildlife Fund to promote residential rainwater harvesting in Mobile and Baldwin Counties. Five workshops have been conducted (three in Daphne, one in Dauphin Island, and one in Weeks Bay), with approximately 20 participants per workshop receiving rain barrels (provided by Coca Cola Bottling) and storm water education. Residential Low Impact Development Demonstration Sites are near completion at Daphne City Hall and at Lake Forest.

A residential septic tank maintenance workshop, funded by as part of a 319 grant to implement a watershed action plan in Juniper Creek, was held in October, 2010 and attended by 25 participants. The Mobile Area Water and Sewer System provided free disposal to participants. Partners included MAWSS, ADEM, the Mobile County Soil and Water Conservation District, and the Mobile County Department of Public Health.

#### *D’Olive Watershed Comprehensive Watershed Management Plan*

Funded by MBNEP, U. S. EPA, ADEM, Mississippi-Alabama Sea Grant Consortium (MASGC), Alabama Power Co., Baldwin County, the Cities of Daphne and Spanish Fort, and the Lake Forest Property Owners Association, the CWMP for the D’Olive Creek, Tiawassee Creek and Joes Branch Watersheds was published in August, 2010. Thompson Engineering organized and managed the work of the Consultant Team, which included Tetra Tech, Inc., Barry A. Vittor and Associates, Hand Arendall LLC, and the ACF. Release followed a public meeting at the 5 Rivers Delta Resource Center Theater and a 30-day comment period. The Plan includes a watershed description, watershed conditions, identification of critical areas and issues, watershed management goals and objectives, conceptual management measures and cost estimates, implementation strategies, financing alternatives, community outreach and public education, and monitoring recommendations. Implementation is underway with the restoration of Joes Branch in Spanish Fort and a series of rain barrel workshops throughout the watershed.

#### *Fish Slap*

“Fish Slap,” an educational movie produced by New Point Media and MBNEP and funded through a grant from the Gulf of Mexico Program will be finished in June of 2012. This film short, the second in the series, features a pair of animated redbfish, Jimbo and Thibodeaux, who explain the concepts storm water runoff and watershed dynamics to an elementary through middle school audience. Envisioned to stimulate contributions of environmentally-themed video productions from viewers for cataloguing and availability on the MBNEP website, the film will be distributed to area schools, libraries, and educational venues, available on the

MBNEP website ([www.mobilebaynep.com](http://www.mobilebaynep.com)) and feature the concepts and characters at interactive kiosks across the Gulf Coast.

#### Web Site Redesign

A redesigned MBNEP website, [www.mobilebaynep.com](http://www.mobilebaynep.com), was launched in July, 2010 and has significantly improved navigation and enhanced web-based communication capabilities. The addition of photo and video galleries and links has added educational opportunities to the site. With the addition of the Information Technology Coordinator to the staff, the MBNEP is able to keep the website updated daily. An expanded social media presence includes an MBNEP Facebook site.

#### Newsletter

The format and distribution frequency of the *Alabama Current Connection*, the newsletter of the Alabama Department of Natural Resources, State Lands Division, Coastal Section and the MBNEP were changed in 2010. Formerly the eight-page *Current Connection* was printed in two colors on 70-lb, royal white fiber paper and distributed quarterly. The new, glossy, updated 16-page version is printed in four colors on 80-lb dull white text and distributed biannually.

#### Community Events

MBNEP facilitated, organized, and/or participated in a number of community events during the 2011 period, including Coastal Cleanup, Coastal Kids Quiz, Baldwin and Mobile County Water Festival, Discovery Day, Coastal Alabama Birdfest, Dog River Clearwater Revival Dog Paddle, and Earth Day.

Of special interest, the MBNEP worked with Alabama PALS and ADCNR to end the distribution of single use plastic bottles at the Coastal Cleanup event in 2011. The MBNEP co-sponsored reusable plastic bottles with the educational slogan “25 years ago we didn’t need single-use plastic bottles to get a drink of water” along with the Coastal Cleanup logo printed on them. Last year, over 3,700 people participated in Coastal Cleanup, meaning at least 3,700 single-use plastic bottles did not enter the waste cycle on that day! Alabama PALS, ADCNR, and MBNEP will team up again to continue this project.

## IMPLEMENTATION PROGRESS

Attached:

Budget Detail

Administration Budget

Expense Detail (All Grants) through 3-31-12

Community Outreach Budget

Match Status through 3-31-12

Cost Category

Contracts with Local Entities

Travel Detail

Narrative Status Detail (All Grants) through 3-31-12

**Mobile Bay National Estuary Program  
Amended Budget for Year 17- Proposed**

<b>Description</b>	<b>Total Activity Budget</b>	<b>2012-2013 Budget (Yr 17)</b>	<b>2011-2012 Reprogram (Yr 16)</b>	<b>2011-2012 Budget (Yr 16)</b>	<b>2010-2011 Reprogram (Yr 15)</b>	<b>2010-2011 Budget (Yr 15)</b>	<b>External Grants</b>	<b>Past Year Grant Funds</b>
BCG Support/Mapping	50,000	<b>25,000</b>		25,000	(75,000)	75,000		
NEW: Mobile Bay Hydro & WQ Model	63,785		63,785					
Sediment Budget for Mobile Bay	100,000				82,326			17,674
ALDOT-D'Olive Sediment Study	18,800						18,800	
Watershed Sediment Studies	47,150	<b>20,000</b>			17,674			9,476
Land Use Land Cover Change Analysis (NASA)	22,725						22,725	
Manatee Monitoring Network	6,790		(8,210)	15,000				
Annual Alabama Shorebird Assessment	5,000			5,000				
Real Time Meteorological Monitoring	239,925						239,925	
	<b>554,175</b>	<b>45,000</b>	<b>55,575</b>	<b>45,000</b>	<b>25,000</b>	<b>75,000</b>	<b>281,450</b>	<b>27,150</b>
D'Olive Watershed: Joe's Branch Restoration	845,600						845,600	
D'Olive Mgt Plan-Implementation	40,903	<b>25,000</b>	2,903		13,000			
Local Ecosystem Restoration Partnership	296,215	<b>45,000</b>	(63,785)	90,000	-	225,000	-	-

**Mobile Bay National Estuary Program  
Amended Budget for Year 17- Proposed**

<b>Description</b>	<b>Total Activity Budget</b>	<b>2012-2013 Budget (Yr 17)</b>	<b>2011-2012 Reprogram (Yr 16)</b>	<b>2011-2012 Budget (Yr 16)</b>	<b>2010-2011 Reprogram (Yr 15)</b>	<b>2010-2011 Budget (Yr 15)</b>	<b>External Grants</b>	<b>Past Year Grant Funds</b>
<i>City of Chickasaw-Brooks Park Restoration</i>	20,000					20,000		
<i>City of Fairhope- Volanta Watershed Restoration</i>	50,000					50,000		
<i>City of Foley- Wolf Creek Restoration</i>	82,500					82,500		
<i>City of Orange Beach- 161 Wetlands Restoration</i>	27,500					27,500		
<i>City of Daphne- LID Green Infrastructure Regs.</i>	15,000					15,000		
<i>City of Orange Beach- Canal Rd. overlay district</i>	30,000					30,000		
Mon Louis Island	161,493	<b>20,000</b>		10,000			118,450	13,043
Stream Restoration								
Prichard's Reading Park	22,995						22,995	
Shoreline Stabilization								
Satsuma Steele Creek	10,000							10,000
Oyster Gardening	4,371		4,371					
Three Mile Creek Restoration	63,720	<b>30,000</b>	3,020	5,000	5,700		20,000	
	<b>1,445,297</b>	<b>120,000</b>	<b>(53,491)</b>	<b>105,000</b>	<b>18,700</b>	<b>225,000</b>	<b>1,007,045</b>	<b>23,043</b>
Clean Water Partnership Facilitation	53,500		10,000	3,000			40,500	
Estuary Corps	25,000	<b>5,000</b>		10,000		10,000		
Community Outreach Cost Share	-		(10,000)	10,000				



**Mobile Bay National Estuary Program  
Amended Budget for Year 17- Proposed**

<b>Description</b>	<b>Total Activity Budget</b>	<b>2012-2013 Budget (Yr 17)</b>	<b>2011-2012 Reprogram (Yr 16)</b>	<b>2011-2012 Budget (Yr 16)</b>	<b>2010-2011 Reprogram (Yr 15)</b>	<b>2010-2011 Budget (Yr 15)</b>	<b>External Grants</b>	<b>Past Year Grant Funds</b>
Climate Ready Estuaries	102,500	<b>60,000</b>		12,500			30,000	
	<b>337,118</b>	<b>65,000</b>	-	<b>35,500</b>	-	<b>10,000</b>	<b>70,500</b>	-
CCMP Development	69,800			13,800	(44,000)	100,000		
CCMP Database	10,000				10,000			
Newsletter	24,000	<b>6,000</b>		6,000		6,000	6,000	
Video Production	300,482	<b>10,000</b>		50,717		10,000	229,765	
Community Awareness Campaigns	46,000	<b>15,000</b>	5,480	10,000				15,520
Partnership Cultivation	4,000				4,000			
Community Awareness-Promotional Materials	65,235	<b>11,000</b>	-	22,500	(7,265)	39,000	-	-
Community Outreach Special Events	30,000	<b>15,000</b>			15,000			
Signage	30,506	<b>14,258</b>	<b>5,000</b>	<b>5,000</b>	<b>1,300</b>	-	-	<b>4,948</b>
<i>Signage-Brooks Park, Chickasaw</i>			5,000					
<i>Signage-Reading Park, Prichard</i>								4,948
<i>Watershed</i>					1,300			
<i>Signage- Steele Creek Lodge Satsuma</i>				5,000				
	<b>580,022</b>	<b>71,258</b>	<b>10,480</b>	<b>108,017</b>	<b>(20,965)</b>	<b>155,000</b>	<b>235,765</b>	<b>20,467</b>
Administration	1,223,017	<b>454,442</b>	(12,564)	427,457	(46,235)	399,917		
DISL Indirect Costs (15% of expenses)	339,008	<b>104,355</b>		106,272		128,381		
	<b>1,562,025</b>	<b>558,797</b>	<b>(12,564)</b>	<b>533,729</b>	<b>(46,235)</b>	<b>528,298</b>		
	<b>4,478,637</b>	<b>860,055</b>	-	<b>827,246</b>	<b>(23,500)</b>	<b>993,298</b>	<b>1,594,760</b>	<b>70,660</b>

**Mobile Bay National Estuary Program  
Administrative Budget 2010-2013**

	<b>Year 15 Budget Detail</b>	<b>Year 16 Budget Detail</b>	<b>Year 17 Budget Detail</b>	<b>Total</b>
<b>Program Planning and Administration</b>				
<b>Salaries</b>	<b>185,190</b>	<b>290,445</b>	<b>298,530</b>	
Director	43,265	85,000	90,950	219,215
Program Administrator/Support	40,000	37,000	39,590	116,590
Watershed Project Coordinator	53,000	53,000	56,710	162,710
Communications/Website Management	24,445	37,445	28,080	89,970
Administrative Support			5,200	5,200
Community Outreach Coordinator	24,480	22,000	43,000	89,480
VISTA/Interns		21,000		21,000
DISL Salary		35,000	35,000	70,000
				-
<b>Fringe</b>	<b>93,789</b>	<b>109,931</b>	<b>119,412</b>	323,132
<b>Staff Support</b>	<b>22,800</b>	<b>27,244</b>	<b>16,000</b>	
Professional Development		5,000	5,000	10,000
Professional Services/Contract Support	3,800	5,244	4,000	13,044
Conferences & Meetings	3,000	1,000	2,000	6,000
Travel	16,000	16,000	5,000	37,000
<b>Program Supplies</b>	<b>18,403</b>	<b>15,000</b>	<b>13,500</b>	
Postage	3,000	1,000	1,000	5,000
Reproduction/Publishing	4,403	1,500	2,500	8,403
Materials & Supplies	3,000	3,000	3,000	9,000
Equipment- Computer	2,000	5,000	5,000	12,000
Subscriptions/Dues	5,000	3,500	2,000	10,500
Service Contracts	1,000	1,000	-	2,000
<b>Facility Related</b>	<b>29,000</b>	<b>1,002</b>	<b>7,000</b>	
Communications (Telephone/Internet)	6,000		5,000	11,000
Rental (Storage Unit)			1,000	1,000
Building Rent	23,000		-	23,000
Bldg/Content Ins.		1,002	1,000	2,002
<b>Total Program Planning and Administration</b>	<b>349,182</b>	<b>443,622</b>	<b>454,442</b>	<b>1,247,246</b>

	Budget	Actual Expenses/ Encumbered	Balance
<b>Ecosystem Status and Trends</b>			
<b>Assessment &amp; Monitoring</b>			
449-GMP-Real Time Monitoring	239,925.00	239,925.00	-
451-ALDOT-D'Olive Sediment	18,800.00	18,800.00	-
453-Dog River Sediment Analysis	17,673.63	17,673.63	-
453-Sediment Budget/Mobile Bay	82,326.37	82,326.37	-
452-NASA/USC-Aiding Mobile Ba	22,725.00	21,875.34	849.66
453-Total Bio Integrity Prog Yr 15	25,000.00	-	25,000.00
453-Manatee Monitoring Network	6,789.97	6,789.97	-
453-Annual AL Shorebird Assessment	5,000.00	-	5,000.00
<b>Total Assessment &amp; Monitoring</b>	<b>418,239.97</b>	<b>387,390.31</b>	<b>30,849.66</b>
<b>Total Ecosystem Status and Trends</b>	<b>418,239.97</b>	<b>387,390.31</b>	<b>30,849.66</b>
<b>Ecosystem Restoration &amp; Protect</b>			
<b>Habitats</b>			
435-Conservian	7,500.00	7,500.00	-
453-D'Olive Mgmt Plan Implementation	15,903.00	15,903.00	-
453-Brooks Park, Chickasaw	20,000.00	20,000.00	-
435-Volanta Gully, Fairhope	50,000.00	50,000.00	-
453-Wolf Creek Stream, Foley	82,500.00	82,500.00	-
453-Hwy 161, Orange Beach	27,500.00	27,500.00	-
453-City of Daphne LID Project	15,000.00	15,000.00	-
453-Canal Road Overlay, Orange Beach	30,000.00	30,000.00	-
Mon Louis Island	141,494.00	43,950.00	97,544.00
435-Mon Louis Island	13,043.00	2,693.00	10,350.00
453-Mon Louis Island	10,000.00	10,000.00	-
454-GOMF-Mon Louis Island	58,451.00	7,624.00	50,827.00
456-UFWS-Mon Louis Island	60,000.00	23,633.00	36,367.00
457-ADCNR-Section 309-Task 2-Habitat Rest.	50,000.00	38,983.00	11,017.00
457-Chris Boyd	31,483.00	31,483.00	-
457-MBNEP & Gems	11,017.00	-	11,017.00
457-Indirect	7,500.00	7,500.00	-
<b>Total Habitats</b>	<b>439,897.00</b>	<b>413,662.37</b>	<b>26,234.63</b>
<b>Healthy Communities</b>			
435-Interpretive Signage	51,000.00	51,000.00	-
435-Steele Creek Satsuma	10,000.00	10,000.00	-
453-Mobile County Watershed Restoration	26,215.00	26,000.00	215.00
459-Prichard Reading Park Streambank	22,995.00	22,995.00	-
Three Mile Creek	30,700.00	-	30,700.00
453-Three Mile Creek Restoration	10,700.00	-	10,700.00
447-WA-Three Mile Creek Restoration	20,000.00	-	20,000.00
Three Mile Creek WMP			-
<b>Total Healthy Communities</b>	<b>140,910.00</b>	<b>109,995.00</b>	<b>30,915.00</b>
<b>Living Resources</b>			
453-Oyster Gardening	2,870.66	2,870.66	-
457-ADCNR-Section 309-Task 1-Spacial Plan	55,000.00	48,250.00	6,750.00
457-GSA	40,000.00	40,000.00	-
457-MBNEP	6,750.00	-	6,750.00
457-Indirect	8,250.00	8,250.00	-
<b>Total Living Resources</b>	<b>57,870.66</b>	<b>51,120.66</b>	<b>6,750.00</b>

		Budget	Actual Expenses/ Encumbered	Balance
	<b>Water Quality</b>			
	435-Impaired Water Bodies ID Fish River	22,000.00	22,000.00	-
	435-Fly Creek/Dog River Sed.	27,150.00	27,150.00	-
	Joe's Branch	845,600.00	260,860.00	584,740.00
	460-ALDOT	200,000.00	21,429.00	178,571.00
	461-ADEM	645,600.00	239,431.00	406,169.00
	<b>Total Water Quality</b>	<b>894,750.00</b>	<b>310,010.00</b>	<b>584,740.00</b>
	<b>Total Ecosystem Restoration &amp; Protect</b>	<b>1,533,427.66</b>	<b>884,788.03</b>	<b>648,639.63</b>
	<b>Technical Assistance/Capacity</b>			
	<b>Direct Assistance</b>			
	453-Estuary Corps	20,000.00	15,000.00	5,000.00
	453-Community Outreach Cost Share Pos.	10,000.00	5,480.43	4,519.57
	CWP Facilitator	43,500.00	43,500.00	-
	453-Clean Water Partnership Facil.	3,000.00	3,000.00	-
	455-MBCS&W-Facilitator	40,500.00	40,500.00	-
	<b>Total Direct Assistance</b>	<b>73,500.00</b>	<b>63,980.43</b>	<b>9,519.57</b>
	<b>Total Technical Assistance/Capacity</b>	<b>73,500.00</b>	<b>63,980.43</b>	<b>9,519.57</b>
	<b>Program Implem. &amp; Reporting</b>			
	<b>Education &amp; Public Outreach</b>			
	435-AL Coastal Clean Oceans	3,105.51	3,105.51	-
	453-Community Outreach- CCMP Database	10,000.00	-	10,000.00
	453-Community Outreach- Community Events	15,000.00	15,000.00	-
	453-Community Outreach- Partnership Cultivation	4,000.00	-	4,000.00
	453-Community Outreach- Awareness	49,235.00	44,377.86	4,857.14
	Newsletter	43,000.00	33,550.84	9,449.16
	443-Newsletter	25,000.00	25,000.00	-
	458-Newletter	6,000.00	-	6,000.00
	453-Community Outreach- Newsletter	12,000.00	8,550.84	3,449.16
	Stormwater	25,519.57	25,519.57	-
	435-Baldwin County Stormwater Mgmt	15,519.57	15,519.57	-
	453-Community Awareness-Stormwater	10,000.00	10,000.00	-
	2012 Stormwater Summit			-
	Nutrient Video	266,682.00	249,537.50	17,144.50
	446-GMP-Video Series (Nutrient+)	205,965.00	205,965.00	-
	453-Community Outreach- Video Series	60,717.00	43,572.50	17,144.50
	Signage	11,247.81	11,197.81	50.00
	435-Reading Park Signage	4,947.81	4,947.81	-
	453-Brooks Park Signage	5,000.00	5,000.00	-
	453-Satsuma Signage	5,000.00	5,000.00	-
	453-D'Olive Watershed Signage	1,300.00	1,250.00	50.00
	<b>Total Education &amp; Public Outreach</b>	<b>427,789.89</b>	<b>382,289.09</b>	<b>45,500.80</b>
	453-Administration	1,001,633.37	891,907.42	109,725.95
	453-CCMP Development	69,800.00	23,859.55	45,940.45
	<b>Total Management &amp; Program Admin</b>	<b>1,071,433.37</b>	<b>915,766.97</b>	<b>155,666.40</b>
	<b>Total Program Implem. &amp; Reporting</b>	<b>1,499,223.26</b>	<b>1,298,056.06</b>	<b>201,167.20</b>
		<b>3,524,390.89</b>	<b>2,634,214.83</b>	<b>890,176.06</b>

**Mobile Bay National Estuary Program**  
**Community Outreach Budget**

Action	Description	Total Activity Budget	2012-2013 Budget (Yr 17)	2011-2012 Reprog. (Yr 16)	2011-2012 Budget (Yr 16)	2010-2011 Reprog. (Yr 15)	2010-2011 Budget (Yr 15)	External Grants	Past Year Grant Funds
Contracts	CCMP Development	69,800			13,800	(44,000)	100,000		
Other	CCMP Database	10,000				10,000			
Contracts	Newsletter	24,000	6,000		6,000		6,000	6,000	
Contracts	Video Production	300,482	10,000		50,717		10,000	229,765	
Contracts	Community Awareness Campaigns	46,000	15,000	5,480	10,000				15,520
Supplies	Community Awareness-Promotional Materials	65,235	11,000	-	22,500	(7,265)	39,000	-	-
Other	Partnership Cultivation	4,000				4,000			
Other	Community Outreach Special Events	30,000	15,000			15,000			
Contracts	Signage	30,506	14,258	5,000	5,000	1,300	-	-	4,948
Contracts	<i>Signage-Brooks Park, Chickasaw</i>			5,000					
Contracts	<i>Signage-Reading Park, Prichard</i>								4,948
Contracts	<i>Signage-D'Olive Watershed</i>					1,300			
Contracts	<i>Signage- Steele Creek Lodge Satsuma</i>				5,000				
<b>EPI Total</b>			<b>580,022</b>	<b>71,258</b>	<b>10,480</b>	<b>108,017</b>	<b>(20,965)</b>	<b>155,000</b>	<b>235,765</b>

**Mobile Bay National Estuary Program**  
**453 Match Status**

<b>Name/Description</b>	<b>Year 15 Budgeted</b>	<b>Year 15 Committed Funds</b>	<b>Year 15 Surplus/ Deficit</b>	<b>Year 16 Budgeted</b>	<b>Year 16 Committed Funds</b>	<b>Year 16 Surplus/ Deficit</b>	<b>Year 17 Budgeted</b>	<b>3 Year Total Budgeted</b>
Match Reserve Transfers			\$0.00			\$0.00		\$0.00
State of AL	\$70,000.00	\$44,148.00	-\$25,852.00	\$60,000.00	\$79,258.00	\$19,258.00	\$70,000.00	\$200,000.00
ADCNR	\$60,000.00	\$70,000.00	\$10,000.00	\$70,000.00	\$70,000.00	\$0.00	\$70,000.00	\$200,000.00
City of Mobile	\$32,000.00	\$28,800.00	-\$3,200.00	\$28,800.00	\$28,800.00	\$0.00	\$25,000.00	\$85,800.00
Baldwin Co. Commission	\$10,000.00		-\$10,000.00	\$10,000.00	\$0.00	-\$10,000.00	\$0.00	\$20,000.00
Mobile County	\$10,000.00	\$23,850.00	\$13,850.00	\$23,850.00	\$17,888.00	-\$5,962.00	\$17,888.00	\$51,738.00
City of Fairhope	\$3,000.00		-\$3,000.00	\$3,000.00	\$5,000.00	\$2,000.00	\$5,000.00	\$11,000.00
City of Spanish Fort	\$2,000.00		-\$2,000.00	\$2,000.00	\$5,000.00	\$3,000.00	\$5,000.00	\$9,000.00
City of Gulf Shores			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
City of Daphne	\$3,000.00	\$3,000.00	\$0.00	\$5,000.00	\$10,000.00	\$5,000.00	\$10,000.00	\$18,000.00
Private Donations*			\$0.00			\$0.00		\$0.00
			\$0.00			\$0.00		\$0.00
<b>435 Match TOTALS</b>	<b>\$190,000.00</b>	<b>\$169,798.00</b>	<b>-\$20,202.00</b>	<b>\$202,650.00</b>	<b>\$215,946.00</b>	<b>\$13,296.00</b>	<b>\$202,888.00</b>	<b>\$595,538.00</b>

## Mobile Bay National Estuary Program

### Cost Category

Component	Contract	Salaries	Fringe	Travel	Supplies & Equipment	Other	Indirect	Grand Totals
Ecosystem Restoration	120,000							120,000
Ecosystem Status and	45,000							45,000
Technical Assistance and Capacity Building	65,000							65,000
Program Implementation and Reporting	49,258	298,530	119,412	5,000	22,500	31,000	112,181	637,881
	<b>279,258</b>	<b>298,530</b>	<b>119,412</b>	<b>5,000</b>	<b>22,500</b>	<b>31,000</b>	<b>112,181</b>	<b>867,881</b>

# Mobile Bay National Estuary Program

## Contracts with Local Entities

Title	Organization	Project Description	Amount	Start Date	End Date	Award Funding Source
Stormwater Media Campaign	Mobile Baykeeper	to provide Mobile and Baldwin County residents with a clear understanding of stormwater, its impact and the need for improved stormwater management and encourage good stewardship of the watershed through positive personal and community (governmental) stormwater management.	\$ 31,000.00	April-12	September-12	U.S. Environmental Protection Agency
Mobile Bay Hydrodynamic and Water Quality Model	Tetra Tech	to provide professional services for the update of the Loading Simulation Program C++ (LSPC) Watershed Model through December 2011 for the watersheds adjacent to Mobile Bay up to the USGS gage 02428400 on the Alabama River and the USGS gage 02469761 on the Tombigbee River.	\$ 63,785.00	April-12	December-12	U.S. Environmental Protection Agency
Professional Engineering and Environmental Consulting Services in support of Clean Water Act (CWA) Section 319 Grant for Demonstration of Regenerative Step Pool Storm Conveyance (SPSC) Tributary to Joe's Branch, D'Olive Bay Watershed, Spanish Fort,	Thompson Engineering	to provide professional engineering, environmental consulting, and related services as needed for implementation of the regenerative SPSC and wetland restoration activities	\$170,260.00	March-12	February-13	U. S. Environmental Protection Agency
Quality and Sediment Resulting from Urban Runoff and Headward Erosion in the Joe's Branch Watershed	Geological Survey of Alabama	to characterize land-use, water quality, erosion, and sedimentation of an unnamed tributary in the upstream part of the Joe's Branch Watershed.	\$ 15,903.00	March-12	December-12	U. S. Environmental Protection Agency
2012 Estuary Corps Program	Alabama Coastal Foundation	to establish an after school enrichment program for interested middle school students to interact with professionals in myriad environmental fields while improving the quality of Alabama's coastal resources.	\$ 15,000.00	February-12	June-13	U. S. Environmental Protection Agency



# Mobile Bay National Estuary Program

## Contracts with Local Entities

Title	Organization	Project Description	Amount	Start Date	End Date	Award Funding Source
Mobile Bay National Estuary Program Strategy Map	Ascendant Strategy Management Group	to develop a strategy map for the Mobile Bay National Estuary Program.	\$ 10,000.00	December-11	February-12	U. S. Environmental Protection Agency
Professional Engineering Design Services for Mon Louis Island	South Coast Engineers, LLC	to design a living shoreline project to address shoreline erosion and create habitat along the western shore of Mobile Bay	\$ 27,500.00	December-11	June-12	U. S. Environmental Protection Agency
Design, Development, and Population of a Database for the Science Advisory Committee	Melissa Mills	to create a fully functional database consisting of data collected from the Science Advisory Committee.	\$ 4,000.00	December-11	January-12	U. S. Environmental Protection Agency
Coastal Alabama Living Shorelines Policies, Rules, and Model Ordinance Manual	Mississippi State University	to develop a "Coastal Alabama Living Shorelines Policies, Rules, and Model Ordinance Manual."	\$ 31,675.00	October-11	September-12	AL Department of Conservation and Natural Resources
Geospatial Information Systems Support	Barry A. Vittor & Associates, Inc.	to integrate the BCG effort with the display capabilities of the Habitats Tool	\$ 10,000.00	August-11	July-12	U. S. Environmental Protection Agency
Assessment of Stream Flow and Sedimentation for D'Olive Creek Interstate 10 Crossing	Geological Survey of Alabama	to prepare a proposal for monitoring and sediment load estimation for D'Olive Creek upstream from the Interstate 10 crossing.	\$18,800.00	June-10	December-11	Alabama Department of Transportation
Coastal Bird Conservation: Species Population Assessments and Survey	Conservian, Inc.	to conduct species population assessments and surveys, with the primary goal of enhancing site managers efforts to physically protect nesting areas with mapping, increased monitoring, and predator management.	\$7,500.00	July-10	June-11	U.S. Environmental Protection Agency, local funding
Assessment of Sedimentation in the Dog River Watershed, Mobile County, AL	Geological Survey of Alabama	to prepare a proposal for monitoring and sediment load estimation for ten monitoring sites in selected tributaries of Dog River.	\$27,150.00	January-11	April-12	Environmental Protection Agency, local funding

# Mobile Bay National Estuary Program

## Contracts with Local Entities

Title	Organization	Project Description	Amount	Start Date	End Date	Award Funding Source
Nutrient Education Multimedia Resource	Hamline University	to create three kiosks with multimedia, Spanish-translation-available programs installed that incorporate the MBNEP "A Redfish Tale" video components and characters, called "Too Rich for Gulf Waters".	\$74,000.00	July-11	April-12	U. S. Environmental Protection Agency Gulf of Mexico Program
Shoreline Stabilization of Steele Creek Lodge, Satsuma	City of Satsuma	to stabilize the shoreline of Steele Creek Lodge in Satsuma, AL	\$10,000.00	October-10	September-11	U.S. Environmental Protection Agency, local
Community Attitudes Study Research for Mobile and Baldwin Counties, AL	Research Strategies	to help determine the attitudes of residents in Mobile and Baldwin Counties toward Mobile Bay, the Gulf of Mexico and the Estuary.	\$19,000.00	April-11	June-11	Environmental Protection Agency, local funding
Project Corrdination Assistance- Impementation D'Olive Watershed Management Plan	Thompson Engineering	to provide assistance tho the Mobile Bay National Estuary Program to help facilitate implementation of the D'Olive Watershed Management Plan.	\$20,000.00	May-11	September-11	U.S. Environmental Protection Agency, local funding
Brooks Park Wetlands Restoration	City of Chickasaw, AL	this project will construct 300 feet of boardwalk and 1,000 feet of gravel trails allowing public access and provide public education by creating and installing signage along the boardwalk. It also involves debris removal and eradication of invasive species to improve wetlands.	\$20,000.00	June-11	May-12	U.S. Environmental Protection Agency, local funding
Low Impact Design/Grean Infrastructure Regulations	City of Daphne, AL	this project will 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.	\$15,000.00	June-11	May-12	U.S. Environmental Protection Agency, local funding

# Mobile Bay National Estuary Program

## Contracts with Local Entities

Title	Organization	Project Description	Amount	Start Date	End Date	Award Funding Source
Volanta Gulley Watershed Management	City of Fairhope, AL	to develop the Volanta Gulley Watershed Management Plan, a sustainable planning tool that promotes low impact development in a coastal community, to address nonpoint source pollution entering Fly Creek due to stormwater runoff. It will also construct at least two projects specified in the Plan to reduce stormwater volume downstream	\$50,000.00	June-11	May-12	U.S. Environmental Protection Agency, local funding
Wolf Creek Stream Restoration	City of Foley, AL	this project will reverse impacts to this section of Wolf Creek caused by urban development, provide greater habitat for increased species diversity, implement urban watershed management practices, and serve as an example of holistic watershed restoration.	\$82,500.00	June-11	May-12	U.S. Environmental Protection Agency, local funding
Highway 161 Wetland Enhancement	City of Orange Beach	address stormwater management and wetland restoration and enhancement 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 a well-established pedestrian and biking trail that runs through the project area.	\$27,500.00	June-11	May-12	U.S. Environmental Protection Agency, local funding
Canal Road Overlay District	City of Orange Beach	this project will analyze usage along Canal Road and design a plan to provide for expanded traffic usage in a way that promotes infiltration, keeps impervious pavement to a minimum, and is both pedestrian and bicycle friendly.	\$30,000.00	June-11	May-12	U.S. Environmental Protection Agency, local funding

# Mobile Bay National Estuary Program

Staff Mileage 4/1/11 - 3/31/12

Date	Destination	Reason	Expense
<b>Roberta Swann</b>			
Date	Destination	Reason	Amount
4/6/2011	Dauphin Island Sea Lab	Dr. Park- Mobile Bay Hydrodynamic Model	\$35.70
4/7/2011	Mobile Gas/Sempre	Remediation Education Committee	\$6.34
4/13/2011	Dauphin Island Sea Lab	DI Shoreline Restoration Project Meeting	\$23.97
4/16/2011	Dauphin Island Sea Lab	Discovery Day Event	\$12.24
4/18/2011	Tillman's Corner Community Center	Oxfam Meeting	\$13.26
4/20/2011	Baldwin County HWY Dept, Robertsedale	Watershed Study Fish River-Meeting	\$30.01
4/21/2011	RSA Tower-Congressman Bonner	Congressman Bonner Meeting	\$4.35
4/21/2011	Dauphin Island Sea Lab	Mobile County Municipal Dinner	\$12.24
4/26/2011	Mobile County Plaza	Commissioner Ludgood meeting	\$4.30
4/29/2011	International Trade Center	Science Advisory Committee	\$4.30
5/3/2011	TNC 55 St. Joseph St.	Oyster Project Coordination	\$4.52
5/4/2011	Five Rivers Delta Center	Project Implementation Committee	\$9.18
5/13/2011	Daphne City Hall	NEMO Workshop	\$17.85
5/24/2011	Westminster Village	Joe's Branch Restoration Meeting	\$13.06
5/26/2011	St. Rose of Lima Church	Mon Louis Island Meeting	\$10.63
5/31/2012	Bimini Bobs, Daphne	Mobile Press Register Meeting	\$12.56
6/6/2011	Daphne City Hall	Coastal Stormwater Planning meeting	\$17.85
6/9/2011	Fairhope City Hall	Volanta Gulley Project meeting	\$22.44
6/10/2011	University of South Alabama	EDPA meeting	\$12.37
6/12/2011	Louisville, KY	Mobile Chamber Leaders Exchange	\$2,500.00
6/16/2011	International Trade Center	Regional Sediment Management Meeting	\$4.30
6/20/2012	Spanish Fort City Hall	Work Session	\$13.27
6/22/2011	Five Rivers Delta Center	Marine Spatial Planning Meeting	\$9.18
6/22/2011	Westminster Village	Joe's Branch Restoration Meeting	\$13.06
6/29/2011	Mobile Area Chamber of Commerce	Leader's Exchange Orientation	\$4.30
6/30/2011	Fairhope City Hall	Budget Meeting	\$22.44
7/8/2011	Prichard City Hall	Kick of Stream Restoration Meeting	\$13.26
7/14/2011	Dearborn YMCA	Mobile Gas Community Meeting	\$4.39
7/25/2011	Mobile County Government Plaza	Commissioner Ludgood Meeting	\$4.30
7/25/2011	Atchinson Law Firm	Senator Brooks-Mon Louis Island Brief	\$13.26
7/26/2011	Five Rivers Delta Center	CACWP PIC Meeting	\$9.18
7/28/2011	Five Rivers Delta Center	Living Shorelines Meeting	\$9.18
8/5/2011	Magnolia Blossom Café	Baldwin County Commissioner Meeting	\$29.36
8/9/2011	Daphne City Hall	Stormwater - CAST meeting	\$17.85
8/11/2011	Baldwin County, Bay Minette	Baldwin County Commission Meeting	\$35.02
8/17/2011	Westminster Village	Joe's Branch Meeting	\$13.06
8/22/2011	Aimwell Baptist Church	Clean Up the Bottom Meeting	\$5.48
8/24/2011	Bluefish Design, Daphne	Website ReOrganization meeting	\$17.85
9/6/2011	Scotch Gulf Lumber	Sandy Stimpson- CUTB	\$10.57
9/7/2011	Dauphin Island Sea Lab	Fish Slap Meeting	\$35.70
9/8/2011	Five Rivers Delta Center	Estes/Ellis NASA Meeting	\$9.18
9/12/2011	Mobile Area Chamber of Commerce	Envision/CUTB	\$4.30
9/13/2011	Smith Trust- St Joseph St.	Mobile United- Natural Resources	\$4.51
9/16/2011	Prichard City Hall	Reading Park Neighborhood Meeting	\$13.26
9/20/2011	Blue Gill Restaurant, Causeway	ADEM, Daphne Meeting	\$9.51
9/20/2011	Five Rivers Delta Center	CACWP PIC Meeting	\$9.18
9/27/2011	Mobile County Government Plaza	Mobile City Council Meeting	\$4.30
9/28/2011	Five Rivers Delta Center	Regional Sediment Management Task	\$9.18
10/3/2011	Prichard City Hall	Eight Mile Creek Meeting	\$13.26
10/4/2011	Bellwether Group	CUTB Press Meeting	\$4.13
10/7/2011	Mobile Press Register	CALC- Gov. Bentley	\$4.34
10/10/2011	Bimini Bob's	Daphne/Foley ADEM Meeting Prep	\$12.56
10/17/2011	MLK Blvd. Redevelopment, Mobile	CUTB-Michael Pierce	\$4.34
10/18/2011	Mobile County Government Plaza	Mobile City Council Meeting- CUTB Proc.	\$4.30
10/19/2011	Thompson Engineering, Mobile	Baldwin County Highway Committee prep	\$5.94

**Mobile Bay National Estuary Program****Staff Mileage 4/1/11 - 3/31/12**

<b>Date</b>	<b>Destination</b>	<b>Reason</b>	<b>Expense</b>
10/20/2011	Baldwin County, Robertsedale	BC Road and Bridge Committee meeting	\$30.01
10/24/2011	Orange Beach	Protection of Perdido Islands Meeting	\$54.34
11/9/2011	Mobile Area Chamber of Commerce	Great American Clean Up	\$4.30
11/10/2011	Mobile County Government Plaza	Ray Richardson- Three Mile Creek Mtg	\$4.30
11/10/2011	Alabama Coastal Foundation	Mark Berte- Estuary Corps	\$4.13
11/17/2011	Ashbury Hotel, Mobile	PEP Breakfast- Little Bay Project	\$8.67
11/21/2011	Pelican Reef, Fowl River	Mon Louis Island Engineer Interviews	\$10.36
11/28/2011	Alabama Coastal Foundation	Mark Berte- Estuary Corps	\$4.13
12/2/2011	Holiday Inn, Tillman's Corner	Managing Multiple Projects Seminar	\$9.72
12/6/2011	Dauphin Island Sea Lab	Fish Slap Meeting	\$38.25
12/12/2011	Daphne City Hall	Work Session- Budget	\$35.70
1/20/2012	Gulf Shores, AL	Smart Coast Meeting	\$85.38
2/26/2012	Washington, DC	ANEP Meeting	\$1,749.16
3/9/2012	Five Rivers	CMSP Kick Off Meeting	\$9.09
3/22/2012	Isle Dauphine Club, DI	Sea Grant Advisory Council Meeting	\$35.35
3/28/2012	City of Mobile	Three Mile Creek Planning	\$4.04
<b>Total Travel for Roberta Swann</b>			<b>\$5,251.39</b>
<b>Tom Herder</b>			

# Mobile Bay National Estuary Program

Staff Mileage 4/1/11 - 3/31/12

Date	Destination	Reason	Expense
Date	Destination	Reason	Amount
04.16.11	Dog River Park from home (round trip)	Dog River Blueway Kick-off Celebration	\$5.61
04.18.11	Tillman's Corner Community Center	Oxfam/Christian Coalition Meeting	\$11.22
04.20.11	Point Clear	Shoreline Property Owners Meeting	\$28.05
04.16.11	Dog River Park from home (round trip)	Dog River Blueway Kick-off Celebration	\$5.61
04.18.11	Tillman's Corner Community Center	Oxfam/Christian Coalition Meeting	\$11.22
04.20.11	Point Clear	Shoreline Property Owners Meeting	\$28.05
05.30.11	Dog River Park from home (round trip)	Water bald cypress trees	\$5.61
06.02.11	Dauphin Island Sea Lab	Deliver Joey's computer	\$37.74
06.08.11	5 Rivers Delta Resource Center	ADCNR NRDA Meeting	\$9.18
07.26.11	5 Rivers Delta Resource Center	PIC/CACWP Meeting	\$9.18
07.24.11	Home-Gulf Lumber-Home	Transport kayak for trip	\$7.14
08.12.11	Home-MBNEP-MLI-Home	Community Meeting	\$26.52
09.29.11	Home-Gulf Lumber-Home	Transport kayak for trip	\$7.14
10.19.11	Home-Gulf Lumber-Home	Transport kayak for trip	\$7.14
10.21.11	Wk-Gulf Lumber-PartyStore-Wk	Prepare for Cleanup the Bottom	\$11.22
10.22.11	Home-Gulf Lumber-Home	Clean Up the Bottom	\$7.14
10.28.11	Dauphin Island Sea Lab	SAC Meeting	\$37.74
11.01.11	Fairhope Yacht Club (From Home)	Presentation to CCA	\$26.52
11.03.11	Wk-ArtCraftPress-Wk	Check out CC Proofs	\$7.14
11.15.11	1206 Hannon Ave 36605	Take info to Claude Doublet	\$7.65
12.02.11	Tillman's Corner Holiday Inn	Skill Path Seminar	\$10.20
12.13.11	Nix Center, Fairhope	Public Meeting, Volanta Gully WMP	\$21.42
12.17.11	Lawley's House on Mon Louis Island	Meeting with Engineer	\$23.46
01.17.12	Nix Center, Fairhope	Public Meeting, Volanta Gully WMP	\$21.42
02.09.12	5 Rivers Delta Resource Center	USACOE Interagency Wrking Group	\$9.18
2/27/2012	Washington, DC	ANEP Meeting	\$1,576.26
03.20.12	1206 Hannon Ave 36605	Take info to Claude Doublet	\$7.65
03.31.12	Lawley's House on Mon Louis Island	50% Meeting w/homeowners	\$23.46
<b>Total Travel for Tom Herder</b>			<b>\$1,989.87</b>
<b>Brenda Lowther</b>			
Date	Destination	Reason	Amount
1/8/2012	Corpus Christi, TX	Project Tracker Training	\$1,178.79
<b>Total Travel for Brenda Lowther</b>			<b>\$1,178.79</b>
<b>Beth Walton</b>			
Date	Destination	Reason	Amount
4/12/2011	DIP library, Mobile	Dog River board meeting	\$16.83
4/13/2011	Weeks Bay	YSI meter pickup	\$18.36
<b>Total Travel for Beth Walton</b>			<b>\$35.19</b>
<b>Kathy Eddy</b>			
Date	Destination	Reason	Amount
3/1/2012	Downtown Business Alliance	Meeting - Mardi Gras project	\$3.96
3/6/2012	Chamber of Commerce	Meeting - Great Am. Cleanup	\$4.07
3/9/2012	Chamber of Commerce	Meeting - Great Am. Cleanup	\$4.07
3/14/2012	Chamber of Commerce	Meeting - Great Am. Cleanup	\$4.07
3/16/2012	Office to Conception Street	Nancy Stoner Visit	\$42.90
3/26/2012	AMSTI	Meeting - A Redfish Tale	\$10.73
<b>Total Travel for Kathy Eddy</b>			<b>\$69.80</b>
<b>Total MBNEP Local Travel 4/1/11-3/31/12</b>			<b>\$8,525.03</b>

**Mobile Bay National Estuary Program  
Project Narrative Status**

Description		Cash Balance as of 3/31/12	Summary of Deliverables	Associated Milestones 2010-2013	Estimated Completion/ Delivery Date	Organization Lead	Partners
ERP HM	Wolf Creek Stream Restoration, Foley	30,500	to reverse impacts to this section of Wolf Creek caused by urban development, provide greater habitat for increased species diversity, implement urban watershed management practices, and serve as an example of holistic watershed restoration.	Contract in progress	June-12	City of Foley	MBNEP
ERP HM	Mon Louis Island	97,554	to engage multiple private property owners in the design and implementation of a project to offer shoreline protection and provide ecosystem services from installed	Contract in progress	December-12	MBNEP	GOMF, USFWS
ERP HM	Section 309 of the Coastal Zone Management Act of 1972	87,000	to establish a functional Coastal Marine Spatial Planning Committee to draft goals and objectives for a geographical scope, to update the AL Comprehensive Inventory of Coastal GIS Resources, and to update and revise GEMS sites with the final product being hosted on the MBNEP website and available on CD/DVD	established the CMSP committee, contracted with GSA to complete the GIS resource update, and contracted with MSU to update and revise the GEMS site list	March-13	MBNEP	ADCNR
ERP HM	Hwy 161 Wetland Enhancement, Orange Beach	20,235	address stormwater management and wetland restoration and enhancement 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 a well-established pedestrian and biking trail that runs through the project area	Contract in progress	June-12	City of Orange Beach	MBNEP
<b>Ecosystem Restoration - Habitat Management Total</b>		<b>235,289</b>					

**Mobile Bay National Estuary Program**  
**Project Narrative Status**

Description		Cash Balance as of 3/31/12	Summary of Deliverables	Associated Milestones 2010-2013	Estimated Completion/ Delivery Date	Organization Lead	Partners
ERP HC	Brooks Park Wetlands Restoration, Chickasaw	4,184	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 along the boardwalk. It also involves debris removal and eradication of invasive species to improve wetlands	Contract in progress	June-12	City of Chickasaw	MBNEP
ERP HC	Volanta Gulley Watershed Management, Fairhope	20,000	to study, develop, and implement low impact stormwater management projects and practices in Fairhope. Specifically, this project will result in the Volanta Gulley Watershed Management Plan, a sustainable planning tool that promotes low impact development in a coastal community, to address nonpoint source pollution entering Fly Creek due to stormwater runoff. It will also construct at least two projects specified in the Plan to	Contract in progress	June-12	City of Fairhope	MBNEP
ERP HC	LID/Green Infrastructure Regulations, Daphne	15,000	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	Contract in progress	June-12	City of Daphne	MBNEP
ERP HC	Canal Road Overlay District, Orange Beach	30,000	to analyze usage along Canal Road and design a plan to provide for expanded traffic usage in a way that promotes infiltration, keeps impervious pavement to a minimum, and is both pedestrian and bicycle friendly	Contract in progress	June-12	City of Orange Beach	MBNEP
<b>Ecosystem Restoration - Human Uses Total</b>		<b>69,184</b>					



**Mobile Bay National Estuary Program**  
**Project Narrative Status**

Description		Cash Balance as of 3/31/12	Summary of Deliverables	Associated Milestones 2010-2013	Estimated Completion/ Delivery Date	Organization Lead	Partners
ERP LR	Oyster Gardening	2,842	oysters will be grown and placed onto local reefs	researchers from Dauphin Island Sea Lab checked Baldwin County planting locations and monitored progress. In Mobile County, the planting site was selected based on supporting conditions.	ongoing	MBNEP	Auburn University, MASGC, ADCNR-MRD, ADPH
<b>Ecosystem Restoration - Living Resources Total</b>		2,842					

**Mobile Bay National Estuary Program**  
**Project Narrative Status**

Description		Cash Balance as of 3/31/12	Summary of Deliverables	Associated Milestones 2010-2013	Estimated Completion/ Delivery Date	Organization Lead	Partners
ERP WQ	Storm Water Education	15,480	to educate and engage the public through grassroots organizations and public service advertisements regarding the problems and solutions surrounding stormwater management.	Contracted with Mobile BayKeeper to conduct a Stormwater Media Campaign that will engage local place-based, grassroots organizations.	ongoing	Mobile BayKeeper	ACF, Weeks Bay Reserve, twelve municipalities of Baldwin County, Baldwin County
ERP WQ	Joe's Branch	584,740	to slow stormwater velocity, reduce its volume, and stabilize and restore ecological function to the impacted tributary by constructing a step pool conveyance.	received \$845,000 in cumulative grant money to construct step pool conveyance, contracted with Thompson Engineering to provide engineering	February-13	MBNEP	ADEM, ALDOT, Westminster Village, Cities of Spanish Fort and Daphne, Baldwin County
ERP WQ	Three Mile Creek Restoration	13,720	to restore flow in the original creek channel to improve the aquatic ecosystem	develop resources to prepare design and construction specifications; construct	ongoing	MBNEP	Waterkeeper Alliance
ERP WQ	Coastal AL Clean Water Partnership	13,000	to provide funding for a watershed facilitator to coordinate outreach efforts, meetings, data, environmental indicators, funding received, corrective action project implementation schedules, success stories, and recommendations for further action.	coordinated and facilitated quarterly basin meetings, coordinated local watershed planning efforts and participated in extension outreach activities. worked with local marina operators to institute best management practices which improve coastal water quality through participation in the Mississippi-Alabama Clean Marina Program.	ongoing	MBNEP	Mobile & Baldwin Counties Water and Sewer Boards
<b>Ecosystem Restoration - Water Quality Total</b>		<b>626,940</b>					

**Mobile Bay National Estuary Program**  
**Project Narrative Status**

Description		Cash Balance as of 3/31/12	Summary of Deliverables	Associated Milestones 2010-2013	Estimated Completion/ Delivery Date	Organization Lead	Partners
EST	Ensuring Biological Integrity	\$ 25,000.00	Review of previously identified indicators to identify those that could be recommended as supporting BCG and biological monitoring; Biological Integrity Profile for certain priority habitats; Establishment of community environmental goals; list of indicators for revised monitoring program	receiving technical assistance from Vittor & Associates	ongoing	MBNEP	Vittor & Associates
EST	Sediment Budget-Mobile Bay	\$ 10,638.00	Develop sediment budget for the Bay and Delta to establish baseline sediment conditions and determine the relationship between fringe wetlands and sediment dynamics to identify positive and/or negative impacts associated with dredged material management practices, including, but not limited to: circulation impacts from dredged material mounding; beneficial uses of dredged material; and "within-bay" disposal for erosion reduction.	Contracted with Applied Coastal Research and Engineering, Inc.	August-12	MBNEP	EPA
EST	Mobile Bay Hydrodynamic Model	\$ 36,785.00	To update of the Loading Simulation Program C++ (LSPC) Watershed Model through December 2011 for the watersheds adjacent to Mobile Bay up to the USGS gage 02428400 on the Alabama River and the USGS gage 02469761 on the Tombigbee River.	contracted with Tetra Tech	December-12	MBNEP	EPA
EST	D'Olive Watershed Mgt Plan Implementation	\$ 15,903.00	to provide assistance tho the Mobile Bay National Estuary Program to help facilitate implementation of the D'Olive Watershed Management Plan.	hired Thompson Engineering: grant development in progress in progress for Joe's Branch subwatershed	ongoing	MBNEP	EPA
EST	Real Time Water Monitoring-Bay: 4 Stations	\$ 100,000.00	Continuous data on hydrological and meteorological conditions at four different stations located around the bay	continue monitoring effort of four stations throughout bay- pursue alternative funding sources for long term	ongoing	MBNEP	DISL, ADCNR, ACES,
EST	Assessment of Stream Flow and Sediment for D'Olive Creek Interstate 10 Crossing Project	\$ -	to prepare a proposal for monitoring and sediment load estimation for D'Olive Creek upstream from the Interstate 10 crossing.	GSA currently assessing stream flow and sedimentation	June-12	MBNEP	AL DOT, GSA

**Mobile Bay National Estuary Program  
Project Narrative Status**

Description		Cash Balance as of 3/31/12	Summary of Deliverables	Associated Milestones 2010-2013	Estimated Completion/ Delivery Date	Organization Lead	Partners
<b>Ecosystem Status and Trends Total</b>		188,326					
PIR	Estuary Corp	20,000	to 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 through trained volunteer members	Contracted with Alabama Coastal Foundation to develop an after school program in both Mobile and Baldwin Counties	June-13	MBNEP	DISL, ACF,
<b>TA/Capacity Building - Direct Assistance Total</b>		20,000					
PIR	Current Connections Newsletter	1,510	publication of quarterly newsletter	quarterly newsletter published	ongoing	MBNEP	MBNEP, ADCNR
PIR	Special events/awards	5,000	funding to support special events throughout area that promote environmentally responsible behavior	supports area events including Bird fest, Coastal Cleanup, Coastal Kids Quiz, Water Smart	ongoing	MBNEP	
PIR	Interactive Touring Video	25,000	to create an interactive 15 to 20 minute video about the impacts of excess nutrients on Gulf coastal ecosystems and waters for visitors and students	A Request for proposal was issued and ready for distribution: Contracted with Hamline University for kiosk development: Contract in progress for second video	September-12	MBNEP	GOMA
PIR	Signage	16,300	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.	Signs have been placed at Dog River Park and signs are currently under development for Brooks Park, Chickasaw	ongoing	MBNEP	
PIR	CCMP Database	10,000	an online inventory of activities undertaken to implement the action plans of the CCMP approved in 2002	under development	ongoing	MBNEP	
PIR	CCMP #2 Development	46,000	A Comprehensive Conservation Management Plan for the next ten years	data mining process in progress			
PIR	Management and Program Administration	109,726					
PIR	DISL Indirect Charges	101,693					
<b>Program Implementation/Reports Total</b>		315,229					
<b>Grand Total</b>		1,457,810					