

Mobile Bay National Estuary Program
CCMP Work Plan
Year 13
Fiscal Year 2009



prepared May, 2008

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Part One: The Program, Accomplishments, and Goals for 2009

PREFACE

This document provides annual financial and task-based information to meet U.S. Environmental Protection Agency (EPA) National Estuary Program Work Plan requirements. The focus of this Work Plan continues to be the implementation of the Comprehensive Conservation and Management Plan (CCMP), approved by EPA on April 22, 2002.

On June 3, 2005, Suzanne Schwartz, Director of the Oceans and Coastal Protection Division of the EPA issued guidance for the development of the FY 05-06 Work Plans and related reporting requirements. This guidance applies to FY 09 Work Plans as well. These assistance agreement policies include:

EPA Order N. 5700.7-- Environmental Results under EPA Assistance Agreements

This order ensures that EPA assistance agreements are results-oriented and aligned with EPA's strategic goals, such that all annual Work Plans be aligned with the goals and objectives of EPA's Strategic Plan and the Government Performance and Results Act and include well-defined outputs and, to the maximum extent practicable, well defined outcomes.

EPA Order No. 5700.5A1- Policy for Competition and Assistance Agreements

In the event that Mobile Bay National Estuary Program (MBNEP) competes for a portion of its CWA Section 320 funds, it must comply with all Competition Order requirements.

EPA Order No. 5700.8- EPA Policy on Assessing Capabilities of Non-Profit Applicants for Managing Assistance Awards

This pre-award order establishes controls for determining the administrative and programmatic capability of non-profit organizations applying for EPA assistance agreements and enhances post-award oversight of those agreements. The pre-award order applies to all awards to non-profit organizations made on or after March 31, 2005. There is a \$200,000 threshold above which a pre-award review for administrative capability is required.

In addition to the above policies, EPA issued two other policies recently. Those include:

EPA Order No. 5700.6A2- Policy on Compliance, Review, and Monitoring

This order went into effect January 1, 2008 and describes policies regarding 1) Agency standards for the oversight, monitoring, and closeout of EPA assistance agreements, and 2) requirements for the review of compliance with applicable grants management policy and regulations.

EPA Policy 5700(2)(01) Sub-awards under EPA Assistance Agreements

The purpose of this Directive is to strengthen the management of sub-awards made by recipients under Environmental Protection Agency (EPA) assistance agreements, *i.e.*, grants and cooperative agreements. Areas addressed include the establishment of an administrative national term and condition, eligibility, special considerations for specific types of sub-awards, sub-award competition, and distinctions between procurement contracts and sub-awards.

This is the Year Thirteen Annual Work Plan for MBNEP. It describes the work items to be carried out for Fiscal Year 2009 under grant # CE96456906. It also includes continuing tasks that are part of a prior grant (# CE 97491303) as well as projects funded through other external grant sources.

The FY2009 Plan covers the third year of a three year EPA grant. This Work Plan provides for tasks that support implementation of actions identified throughout the past two years and for new projects identified

for the coming year. The Management and Program Administration sections support all CCMP Action Plans and the continuance of support for the Management Conference.

The organization of this work plan is designed to allow easy comparison with the MBNEP CCMP Strategic Plan 2007 - 2010. This organization allows a reader to quickly understand how the work items proposed for this year will contribute to the accomplishment of CCMP objectives. A review of the tables included is key to understanding this Work Plan. These tables, taken as a whole, satisfy the requirements of the funding guidance.

- **Table 1: Budget Status of EPA and Externally Funded Existing Projects** provides budget, expenditure, and balance information on all open projects currently being managed by MBNEP.
- **Table 2: Narrative Status of Existing Projects** provides further detail about those projects that are in progress.
- **Table 3: 2008-09 Projects Budget** provides budgetary information on projects to be initiated this coming year with EPA 2008-2009 funding.
- **Table 4: Local Entity Support** provides information on MBNEP contract awarded to local non-profits, professional service, or science researchers to further activities of the CCMP.
- **Table 5: Non-Federal Match Sources** provides detailed information about which activities have generated match and what type of match is expected during the coming program year.
- **Table 6: Administration Budget** provides detailed information on the program office funding for the 2008-2009.
- **Table 7: Travel Summary** provides a log of all travel activities of program staff for 2007-2008.
- **Table 8: Funding Table** provides funds received for Years 11, 12, 13
- **Table 9: CCMP Activities by EPA Cost Category** breaks funding out by cost categories stipulated by EPA.

The MBNEP Program Office is located at 4172 Commanders Drive, Mobile, Alabama, on the Brookley Campus of the University of South Alabama. As of March 1, 2002, the Dauphin Island Sea Lab / Marine Environmental Sciences Consortium (DISL) became the EPA grantee in its role as administrative sponsor of the MBNEP. This change in grantee was made pursuant to the direction of the Management Conference and the particulars are detailed in a three party Memorandum of Agreement between the State of Alabama, DISL, and the MBNEP. The activities outlined in this work plan were approved by the Executive Committee of the Management Conference on May 5, 2008 and are available to the public upon request.

Mobile Bay National Estuary Program Overview

Purpose, Goals, Objectives

The Mobile Bay National Estuary Program's (MBNEP) mission is to lead the wise stewardship of water quality and living resources of Mobile Bay and Tensaw Delta. Established as part of the Clean Water Act and funded by the U. S. Environmental Protection Agency (EPA), MBNEP serves as a catalyst for activities of estuary stakeholders, building community-based organizational capacity for sound resource management and leveraging commitment and investment to ensure the estuary's sustainability.

MBNEP's purpose is to encourage a community-based approach to watershed management by empowering citizens, grassroots organizations, government agencies, and educational establishments to work together to address local environmental challenges. MBNEP's objectives are to 1) engage these groups in the development and implementation of a Comprehensive Conservation Management Plan (CCMP), 2) act as a catalyst to leverage greater funding for the implementation of this CCMP, and 3) educate the communities surrounding the estuary about how to best treat Mobile Bay and its surrounding watersheds to ensure their 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. This plan capitalizes on their insight.

Economic opportunities must be available - Our coast is an economic engine, creating well over three billion dollars in wealth for our state each year through such activities as trade through the Port of Mobile, commercial fishing, tourism, hunting, and coastal homebuilding. This plan incorporates economic impacts and promotes smart growth practices wherever and whenever possible.

Environmental Stewardship efforts depend on each other - The Mobile Bay estuary benefits from the efforts of many diverse partnerships, collaborations, consortiums, and associations. These groups of disparate interests come together, in part through the MBNEP's watershed based management process, to develop comprehensive solutions to challenges that threaten the estuary's sustainability. This plan promotes this "watershed-based management" cooperation, acknowledging the need for multiple purpose programming.

It happens in the river, in the sea, and on the street - Involvement of citizens in carrying out environmental activities aimed at improving the Bay and its watersheds is paramount to ensuring the long-term health and vitality of the Mobile estuary. This plan encourages citizen input, involvement, and education, recognizing that, ultimately, 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.

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.

Federal Resources

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 13 Work Plan (2008-2009) is \$591,750. This third year of funding will be added to Year 12 Work Plan funding (\$418,000) and Year 11 (\$492,600) for a total of \$1,502,350. EPA requires that this total allocation be matched with non-federal dollars in a 1:1 ratio, or an additional \$1,502,350 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 \$3,004,700 for Year 13.

Gulf of Mexico Program (GOMP)



The GOMP 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 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 managing a \$136,022 GOMP grant to support a real time water quality monitoring throughout Mobile Bay. Currently MBNEP has applied for funding of two projects with the GOMP: 1) \$205,965) to develop an interactive educational video that would travel throughout the Gulf states that addresses issues of environmental concern, and 2) \$270,365 to continue funding of a Gulf of Mexico Regional Collaborative effort that would expand and further integrate modeling efforts that were previously developed by this group as a pilot project to help resource managers develop priorities for submerged aquatic vegetation (SAV) restoration.

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 (OCS) oil and gas development and production. Alabama received a one-time 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 OCS oil and gas producing states in fiscal years 2007 through 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 administrative entity for this funding.

During 2009, the State of Alabama will receive funding from this program in the amount of \$16,600,000/yr, Mobile County will receive \$4,950,000/yr, and Baldwin County will receive \$3,990,000/yr for the next two fiscal years once their plan has been approved by MMS. MBNEP is currently working with county governments as well as the Alabama Department of Conservation and Natural Resources, State Lands Division, Coastal Section (ADCNR) to develop projects under this program.

Mississippi Alabama Sea Grant Consortium (MASGC)



The MASGC 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. The MASGC provides technical expertise, program development assistance, and valuable research and is a leader of many initiatives related to CCMP objectives. During the coming year, MBNEP will partner with MASGC to co-fund a Coastal Resource specialist position.

NOAA Restoration Grants/ Gulf of Mexico Foundation (GOMF)



The NOAA Community-based Restoration Program administered by the GOMF 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: (\$38,500) to restore marshlands at Helen Wood Park and (\$26,450) to stabilize the shoreline and conduct park improvements at Dog River/Luscher Park.

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



The USACE actively participates in the implementation of many of the actions of the CCMP. The USACE has completed two Preliminary Restoration Plans (PRP) valued at approximately \$10,000 each: one for the restoration of an area on Isle aux Herbes (Coffee Island) and a second for a habitat restoration along Dauphin Island (DI) Causeway. The USACE has requested Section 204 funding to continue to implement the Isle aux Herbes restoration. A combined planning and design report, valued at over \$80,000 was completed for the DI Causeway Restoration and USACE has secured \$439,000 to begin construction. However, due to a lack of suitable material and cost prohibitive staging issues, the funding has been transferred to the Isle aux Herbes project. As part of the ongoing planning for Isle aux Herbes, MBNEP completed a living resources characterization of the island to assist with the USACE combined planning and development phase. Another project at Helen Wood Park (along the Dauphin Island Parkway) to break wave energy and reduce 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 (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 \$240,000 (\$60,000 per year) over the past four years and anticipates a continuation of this funding stream. 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 \$340,000 to date. MBNEP is currently under contract to produce an SAV status and trends report that will be completed by December, 2008.

State of Alabama



MBNEP met with the head of the Alabama Department of Economic and Community Affairs (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 season, MBNEP expects this amount to be reduced to \$100,000.

Local Resources

Municipalities/Counties

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 investment from municipalities includes:

City of Mobile	\$ 50,000 (requested)	City of Daphne	\$ 3,000
City of Fairhope	\$ 3,000	Mobile County	\$26,500
Baldwin County	\$17,000		

Private Funding

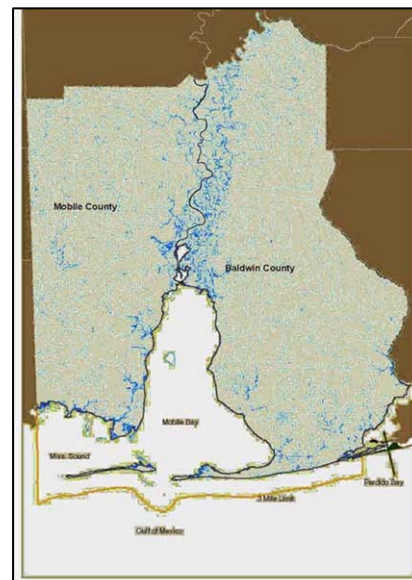
During the Year 13 program year, MBNEP anticipates developing a stronger private sector funding based on recommendations of the Finance Committee. The goal of this committee is to raise additional private resources as a local investment (match) toward the implementation of the CCMP. During the 2006-2007 program year, MBNEP received \$7,645 in private donations, including \$5,000 from the Coastal America Foundation. Other contributors included Alabama Power, AMEC, Ecosystems, and Holcim, Inc.

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 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 environmental 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

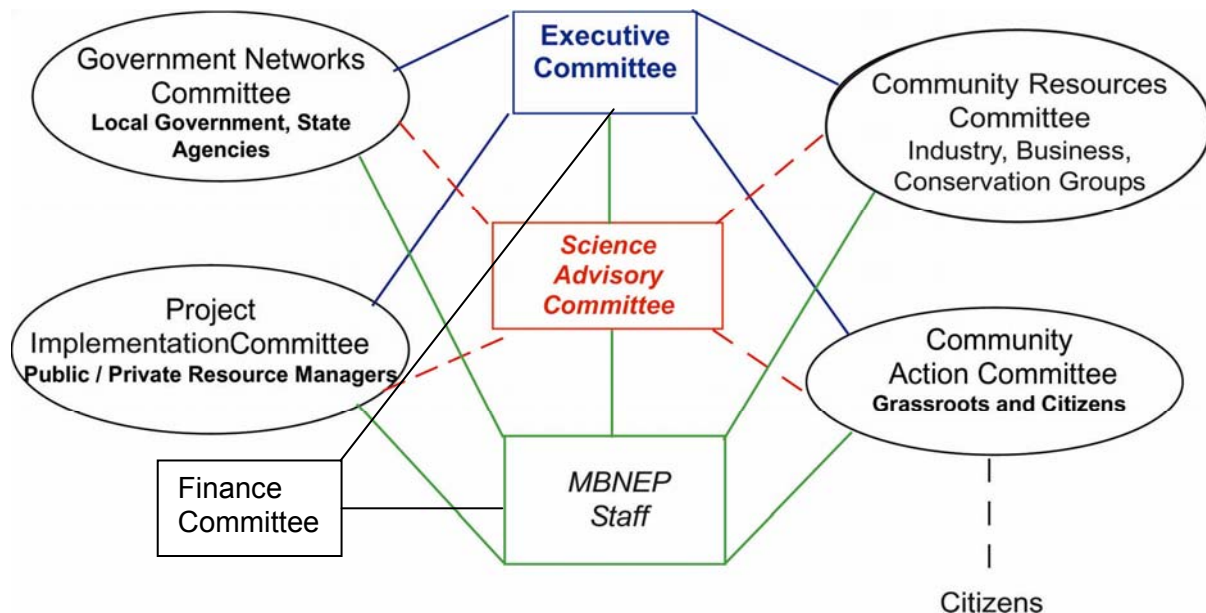
Although the actual watershed for Mobile Bay encompasses more than two thirds of the State of Alabama and portions of Georgia, Mississippi, and Tennessee, MBNEP’s primary target area is limited to southern Alabama, including all of Mobile and Baldwin Counties, from the eastern edge of coastal Alabama 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 boarder. 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; the Intracoastal Waterway; Wolf and Perdido Bays; and Little Lagoon.

Community Partnerships: 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 provide 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.

A 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.

Other Partners

National Aeronautics and Space Administration (NASA) *Mapping and Assessing Land Use-Land Cover changes in Baldwin and Mobile Counties from 1972-2007.* The NASA Stennis Space Center Applied Science Coastal Program uses local interest and coastal community science needs to guide development of a three to five year Strategic Plan. NASA is seeking feedback from the Gulf of Mexico coastal management community to determine which issues are important to the region over the next few years. 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 program. During a previous iteration of requirements identification, led capably by the Gulf Sea Grant programs, several project areas and research needs were identified as priorities. MBNEP also participated actively in this requirements assessment. 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 1972-2007, a period of rapid development and growth, using Landsat and other imagery data. The project will be completed in September 2008, and products will include: change detection maps in static (multiple formats available) and digital format for several specific time intervals coinciding with specific anthropogenic and natural events (e.g. completion of interstate highway infrastructure, major tropical cyclones, etc.); Land Use-Land Cover change geospatial statistics; and a final project report. 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. It will also allow us to better educate our coastal communities about these impacts and options for future planning.

National Oceanic and Atmospheric Administration (NOAA) *OHC/CSC/TNC Cooperative Habitat Protection Partnership Pilot Project, Mobile Bay, AL.* A joint project of the NOAA Office of Habitat Conservation (OHC), the NOAA Coastal Services Center (CSC), and The Nature Conservancy Global Marine Initiative (TNC GMI) will provide technical support and seed funding to help communities form new and diverse local partnerships for coastal and marine habitat conservation planning and implementation. Because natural areas are converted to other uses parcel by parcel at the local level, approaches to conservation are needed that are motivated by local needs, yet grounded in holistic assessments of the ecological value of protected lands at scales ranging from regional to watershed to community. Working through the Cooperative Habitat Protection Partnerships (CHPPs) program of the NOAA OHC, this project will help community-based groups build technical capacity for spatially explicit and regionally ground-truthed conservation planning and implementation of on-the-ground and in-the-water habitat protection projects. In 2004-2005, MBNEP worked with TNC to develop an Acquisition and Restoration Priorities Plan for Mobile and Baldwin Counties. The plan is being used actively to guide acquisition in the area, but lacks a spatial component. That, and the fact that the area is changing so rapidly (steel mill and other growth pressures), underscore the need to improve and update this plan. They also did not engage NOAA Fisheries in the earlier effort. In the coming year, MBNEP will partner with these agencies to update and expand this habitat priorities plan. Updating this plan through

improved data and tools and expanding functionality would provide an opportunity to guide conservation and restoration activities in the area by adding interactive capabilities for ongoing planning applications.

This pilot will be a specific effort to improve and update a plan that is already being used to guide acquisition in Mobile Bay. The pilot project should connect to the Gulf of Mexico Alliance (GOMA) priorities and be informed by several conservation plans that have been developed for Mobile Bay, including TNC's Ecoregional Assessment, the Coastal and Estuarine Land Conservation Program (CELCP) plan, and the CCMP. Partners include: local TNC, NERRS, Sea Grant, OR&R, Mobile Bay NEP, NOAA Fisheries, Baldwin County and Mobile County and academia, Alabama Coastal Area Management Program, GOMA. Current resources devoted are estimated at: \$60,000 plus staff support from several partners.

Gulf of Mexico Regional Collaboration (GoMRC) *End user tools for priority coastal management issues in the Gulf:* GoMRC was established to provide natural resource managers and policymakers in the United States and Mexico with a growing set of tools to manage the Gulf's marine and coastal environment. The integrated data and decision support tools accessible through GoMRC will help end users – from federal coastal restoration scientists to county land use planners – to identify and test options for natural resources planning and management. The GoMRC system will address a wide range of resource management issues and enable analysis at multiple scales.

During 2007, GoMRC developed a set of search, analysis and visualization tools that can be used to explore a preliminary set of coastal and marine topics. Discussion with the MBNEP indicated one of their high priorities was SAV loss and restoration and harmful algal blooms (HABs) in the MBNEP Study Area. GoMRC developed a tool set to help resource managers and other stakeholders better understand factors that influence SAV habitat and support the implementation of appropriate SAV restoration decisions. GoMRC also developed a preliminary conceptual model of the causes and effects of HABs in the Gulf of Mexico and implemented a domain-specific search capability. Working with MBNEP, GOMRC held a regional meeting of resource managers from Alabama, Florida and Mississippi in December 2007 and invited other Gulf NEPs so that GoMRC could demonstrate an integrated, operational, prototype information technology (IT) infrastructure for ecosystem science, data, and models for the Gulf region currently under development.

Mobile Bay serves as GoMRC's demonstration project area to illustrate how resource managers can apply a Coastal Habitat Restoration Prioritization Model for SAV. The demonstration area includes the Alabama coastline around Mobile Bay and extends out to the offshore barrier islands. It examines freshwater SAV as well as marine SAV species in the outer region of the Bay. With continued funding, GoMRC plans to work with regional managers in the Gulf of Mexico to address a broader set of natural resource issues such as sea level change and air quality. MBNEP's Habitat Database is included in the tool set for this prototype IT structure. Eventually, we hope to see this type of tool help populate the PHINS database being constructed by the Gulf Alliance. This will enable policy makers and resource managers to make more informed and timely decisions about resource issues in the Gulf of Mexico and will in turn enhance and sustain the environment and economy of the region. GoMRC is a partnership of [Battelle](#), [The University of Alabama in Huntsville \(UAH\)](#), the [NASA Marshall Space Flight Center \(MSFC\)](#), and [Oregon State University](#).

NORTHERN GULF INSTITUTE (NGI) The NGI is a [NOAA](#) cooperative established in October, 2006 which develops, operates, and maintains an increasingly integrated research program focused on filling priority gaps and reducing limitations in current northern Gulf of Mexico awareness, understanding, and decision support. The institute is a partnership between five academic institutions and NOAA which is led by Mississippi State University ([MSU](#)) and includes the University of Southern

Mississippi ([USM](#)), Louisiana State University ([LSU](#)), Florida State University ([FSU](#)) and the Dauphin Island Sea Lab ([DISL](#)). The four 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, and Coastal Hazards and Resiliency.

The Mobile Bay National Estuary Program has interest in all four areas and in fact has submitted a joint proposal for studying the resiliency, sustainability and impacts of land use/ water quality on Alabama fisheries to the NGI with the University of Alabama and Malcolm Pirnie Inc.

Program Accomplishments and Transferable Success Stories 2007-2008

MBNEP currently has two EPA grants open for implementing CCMP activities. The first grant includes work plan activities for federal fiscal years 2004-2006. It is anticipated that this grant will be closed out by March, 2009. The second open grant covers years 2007-2009. During 2007, in addition to available funding of over \$1.3 million, the MBNEP was included in the State Budget for an amount of \$250,000 state dollars as a non-federal matching share to the program. In addition to these funds, MBNEP regularly receives funding from the following entities: Mobile County- \$26,500, City of Mobile- \$32,000 and Baldwin County- \$17,000. Added to these funding sources, MBNEP has been very successful in securing local funding for projects and applying for grants related to specific projects.

Steady and substantial progress is on going for this grant, and expenditures are maintaining pace with progress. Due to the fact that the MBNEP staff is currently working on projects identified in both work plans, the following section, Programmatic Goals Achieved during 2007-2008 will address both grants. The Mobile Bay National Estuary Program had some notable successes this year.

Notable accomplishments include:

Water Quality

Sub-Estuary Monitoring MBNEP continues its commitment of support to monitoring activities throughout the estuary. Through a contract with the Alabama Department of Environmental Management (ADEM), water quality assessments of three sub-estuaries along the perimeter of Mobile Bay are being undertaken. ADEM monitored parameters including, but not limited to, in situ water chemistry, turbidity, ammonia, DRP (orthophosphates), chlorophyll a, and pathogens. In addition, sediment sampling was conducted for approximately 15 metals of concern, polyaromatic hydrocarbons, and pesticides. During the 2007 program the Bayou La Batre watershed was completed and the Dog River watershed was begun. This program will be complete by the end of 2008.

Mobile Bay Real-time Water Monitoring During the year 2007, all sites - Meaher Park, Dauphin Island, and Mobile Bay - are now up and running, and information generated can be viewed at www.mymobilebay.com. In the coming year, this website will be connected to a larger network of stations as part of the Gulf Coast Ocean Observing System. Research reports, maps, and other information will be made available to the public.

Eight Mile Creek The MBNEP, working with Mobile Engineering LLC, aka Mobile Group, Inc., completed the Eight Mile Creek project. The report, Source Assessment Report for Eight Mile Creek Watershed, provides a detailed baseline of information on the sewer network for this community, as well as information on watershed boundaries, 3-D surface hill shade, existing land use, soil series, hydrologic soils, and a comprehensive source assessment map.

Coastal Alabama Clean Water Partnership MBNEP holds the contract with the Alabama Clean Water Partnership to host the Coastal Alabama chapter. During this past year, the facilitator presented one workshop to government officials, investigated opportunities for funding pathogen source identification at Juniper Creek, and began a project to develop an informational kit that would provide information on the economic benefits of conserving the natural landscape of a community. The target date for completion of this packet is summer, 2008.

Clean Marina Program The Alabama-Mississippi Clean Marina Program was developed as a voluntary program and implemented by the MASGC and its partners (ADCNR, State Lands Division, Coastal Section, ADEM, Auburn University Marine Extension and Research Center (AUMERC), Mississippi Department of Marine Resources, Mississippi Department of Environmental Quality, and the MBNEP) to promote environmentally responsible marina and boating practices. The program was initiated in Alabama in 2004, and two marinas completed the designation process at that time. In 2007 an effort was made to regenerate interested in the program. As of the end of 2007, the following marinas were visited and evaluated for their interest in pursuing this program: Zeke's Landing, Dog River Marina and Boatyard, Dauphin Island Marina, Gulf Shores Marina, Home Port Marina, Eastern Shore Marina and Boatyard, River Delta Marina, Bear Point Marina, Sportsman Marina, Orange Beach Marina, and San Roc Cay Marina. Results of this assessment included the designation of River Delta marina which will happen during the summer of 2008.

Living Resources

Oyster Gardening During the 2007 Oyster Gardening season, 33 volunteers grew 63,352 oysters which were planted on Boykin and Shellbanks reefs in Mobile Bay. Specifically, Mobile County volunteers raised 21,658 oysters and Baldwin County raised 41,694.

Habitat Management

The Mississippi-Alabama Habitats Database During the summer of 2005, MASGC and MBNEP worked with the DISL to develop an online habitat conservation, restoration, and enhancement database to track habitat conservation activities in the eleven coastal counties of Mississippi and Alabama. A mechanism was thereby established for tracking data such as 1) habitat projects planned, in progress, or completed along the northern Gulf of Mexico; 2) types of habitat conserved; 3) conservation techniques employed; 4) the variety of funding sources used; and 5) the locations of such projects. The database's development was funded by MASGC, and it resides on a Microsoft SQL server managed by the DISL at <http://restoration.disl.org/database>.

During 2007, MBNEP hired a contractor to "mine data" for this database, resulting in 75 different projects in the database representing over 92,596 acres of restoration and conservation activities.

Habitat Mapping The U.S. Geological Survey's (USGS) National Wetlands Research Center (NWRC) has collaborated with the MBNEP through cooperative agreements for the past five years. These agreements have been for the NWRC to acquire aerial photography of Mobile County and to produce Digital Orthophoto Quarterquads of Mobile County, and Digital Quadrangles for Baldwin County from aerial photography for use by the USGS, the State of Alabama, Mobile and Baldwin counties, and the MBNEP. The agreements have also included the mapping of wetlands and uplands of Mobile and Baldwin counties from the aerial photography acquired to add to the USGS Gulf of Mexico database, and the National Wetlands Inventory (NWI) geodatabase. In 2007, the MBNEP and the NWRC continued the collaboration of all parties in the development of a series of products from the completed mapping, and the development of an accuracy assessment of the wetland and upland habitat mapping. This is the first year of a two-year effort for the NWRC to produce a Status and Trends Report of the wetlands and uplands of the Mobile Bay Estuary.

Coastal Bird Assessment

In the spring and summer of 2007 MBNEP and ADCNR joined forces with the National Audubon Society through its 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 included: 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. The sites surveyed included: Bon Secour National Wildlife Refuge, Dauphin Island, West Dauphin Island, Isle Aux Herbes, Pelican Island, Cat Island, Gulf State Park, and Barton Island Peninsula. The total number of breeding birds per species located are as follows: Snowy Plover 10 pairs, Wilson's Plover 13 pairs, American Oystercatcher 12 pairs, Least Tern 63 pairs, Gull-billed Tern 30 pairs, Common Tern 9 pairs, and Black Skimmer 56 pairs.

Little Dauphin Island Vegetation Restoration

Little Dauphin Island, part of the Bon Secour Wild Life Refuge System, is a fragile barrier feature along the rapidly developing Alabama Gulf Coast. It is a diverse assemblage of beach, coastal dunes and associated uplands, salt marsh, and wetlands at the mouth of Mobile Bay. These habitats support a variety of threatened and endangered species, including the piping plover, sea turtles, and more than 370 species of migratory birds.

During the latter part of 2007, MBNEP partnered with the Bon Secour Refuge to conduct a dune planting along the eastern end of the island to stabilize sand and promote increased shore accretion to support piping plover habitat. A few months later, 40 volunteers planted 325 native trees to restore migratory bird habitat. In addition to providing habitat, these trees will serve to stabilize this dynamic island landscape which protects the northern shore of Dauphin Island from the impact of storms and flooding.

Human Use Issues

D'Olive Creek

D'Olive and Tiawasee Creeks were studied during the summer of 2007 by the Geological Survey of Alabama (GSA) in partnership with ADCNR, State Lands Division, to assess the impacts of land-use change in this quickly developing area. This study determined sedimentation rates in streams in this watershed including those that receive sediment from construction sites. Sediment loads were determined by direct measurement of suspended and bed sediment for a range of discharge events from ten sampling stations. This data revealed more than two- to over 200-fold greater annual sediment loads in most of these streams when compared to estimated natural geologic erosion rates (without human impact or alteration). However, sediment loads in D'Olive and Tiawasee creek were similar to those of 25 other streams with anthropogenic erosional impacts throughout Alabama. Sediment loads estimated for five of the eight streams that drain into Lake Forest carry an estimated 1,977 tons of sediment annually, equating to 180 dump truckloads of dirt.

Regional Stormwater Management

The Baldwin County Storm Water Working Group, led by MBNEP, includes the Weeks Bay National Estuarine Research Reserve (NERR) and the Alabama Coastal Foundation (ACF), and 12 of the 13 municipalities in Baldwin County as well as the County Commission. To date, the 12 of 13 incorporated municipalities in Baldwin County and the Baldwin County Commission have passed resolutions supporting creation of enabling legislation for a regional stormwater utility in Baldwin County. In 2007, the Baldwin County legislative delegation introduced House Bill 929 in the Alabama legislature which would allow Baldwin County to hold a local referendum to create a regional stormwater management authority.

Coastal Community Planning

During the 2007 period, MBNEP provided technical assistance and funding to the Town of Dauphin Island in partnership with MASGC and ADCNR to assist the Town with the creation of a Strategic Plan to ensure the long-term community, economic, and environmental

sustainability of the island. The Town hired 5E's, a consultant firm based in Seattle, WA, who completed a community driven process for addressing infrastructure; economic opportunities including tourism; housing needs/opportunities; recreation, public access, and beach stabilization; environmental sustainability and smart growth land management; and government financing and revenue streams. The Town is now in the preliminary stages of implementing components of this plan, including actions to address its working waterfront.

Outreach and Education

State of the Bay Report

In 2005, the Mobile Bay National Estuary Program initiated a process to identify a set of indicators that would provide the data necessary to assess the health of the Mobile Bay estuary. This program included surveying over 271 community members to assess the community's environmental concerns. The identified issues were translated into a series of focus questions that were used by over 70 scientists, environmental professionals, resource managers and citizens to determine what indicators, or sets of data, would provide the information needed to answer those questions. The final result of this process was a list of 51 such indicators.

After much review, data investigation, and discussion among the Science Advisory Committee for the MBNEP, MBNEP engaged in the development of a report that would provide information on 15 indicators selected to provide insights into environmental changes that have occurred over the past five to ten years throughout our Mobile Bay estuary. Several of the original 51 are included as subcategories of the 15 used to describe the State of the Bay because data sets existed or collection is ongoing as part of an established monitoring program to support the trends describing human impacts, habitat changes, species richness, and water quality. The analysis of these indicators sheds light on how community growth has impacted coastal Alabama - how we have altered the coastal environment where we live, work and play. This document is currently in draft form and is being reviewed by several agencies, resource managers, and scientists. It will be released to the public during the summer of 2008.

Stormwater Education

In 2008, a stormwater education campaign was initiated by the Community Resources Committee, resulting in the preparation of an informative color pamphlet, *Clean Water is Everybody's Business – Protecting our Water Quality from Stormwater Begins at Home* – and an educational Powerpoint presentation - *Stormwater Runoff and Mobile Bay – “What Does it Have to Do With Me?”*. The pamphlet is being distributed at various locations in the study area and at local events, and the Powerpoint presentation has been presented at various service club meetings, schools, and continuing education venues in part to support efforts by the Baldwin County Stormwater Working Group.

Events

MBNEP facilitated, organized, and/or participated in a number of events during the 2008 period, including: Earth Day, Coastal Clean-up, Coastal Kids Quiz, Discovery Day, Coastal Alabama Birdfest, Derelict Crab Trap Recovery, The Dog River Paddle, Baldwin County Groundwater Festival, Environmental Studies Center Open House, the Ducks Unlimited picnic, among others. Attendance varied widely from 300 to nearly 5,000 participants.

The Management Conference

MBNEP's reorganization of the Management Conference consists of the following committees: Community Action Committee, Community Resources Committee, Government Networks Committee, and Project Implementation Committee; a Science Advisory Committee; a Finance Committee; and an Executive Committee. During 2008, the following activities took place:

- The Community Action Committee - This group organized, identified volunteer water quality monitoring as their main focus, developed a grassroots organization-based mini grant program, and conducted the first round of this peer reviewed funding program. The first projects to be undertaken in 2008 are Little Lagoon Preservation Society - signage, educational speaker, and lab equipment; Wolf Bay Watershed Watch - automated water monitoring instrument; and Dog River Clear Water Revival - Dog River Park Restoration
- The Community Resources Committee - The CRC worked diligently to produce several outreach materials addressing issue of Stormwater Runoff, including fact sheets, brochures, and a power point presentation. With these materials, MBNEP staff have given several presentations to community groups and school classes.
- The Government Networks Committee- One meeting was held to bring local government leaders together and introduce them to environmental issues impacting coastal Alabama. Another meeting of this group is in the planning stages.
- The Project Implementation Committee- This group identified two focus areas for further study with the goal of achieving environmental results: Big Creek Lake watershed and Fish River watershed. Both of these areas contain water bodies that are currently on the State's 303(d) list of impaired water bodies. In the coming year, this committee will undertake activities in the Fish River to identify sources of pathogens and to conduct a shoreline characterization.

A 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. During the last year, this committee developed a list of estuary indicator areas that are in the process of being used to generate a State of the Bay Report. The Finance Committee has developed a community investment plan for soliciting the non-federal matching share that is required for the EPA grant received. The Executive Committee – made up of representatives from each of the four main committees, an EPA Region IV representative, a representative from the Science Advisory Committee, and a minimum of three at-large members – approved new by-laws for the management conference and drafted an executive order for governor execution establishing the new management conference.

Major Goals and Focus for 2008-2009

Overall: A Watershed Focus

MBNEP will engage in activities to implement the CCMP with a focus on activities in targeted watersheds in addition to its ongoing activities, in an effort to effect comprehensive environmental results. The major target area for the 2009 program year will be Fish River, which is on the EPA 303(d) list of impaired water bodies.

MBNEP conducted an open request for proposals to solicit projects community wide that would assist with the implementation of the CCMP. The projects receiving funding through grants during the coming year range from interpretive signage to salt-marsh restoration strategies and identification of pathogen sources.

Water Quality: Targeting Impaired Water bodies

During the 2009 program year, MBNEP will support projects that address non-point source pollution, including the Clean Marina Program, sediment loading analysis for Magnolia River, and a trash curtain for Moore and Montlimar Creeks. In addition, MBNEP will support a comprehensive project along Fish River to identify sources of pathogens and conduct a characterization of the river's shoreline.

MBNEP will complete a three-year partnership with ADEM to conduct sub-estuary monitoring with a focus on completing Dog River sampling and final reports on Bayou La Batre and Dog River. MBNEP will investigate other options for funding Atmospheric Deposition monitoring over the long-term by seeking out opportunities within other public organizations to adopt this monitoring as part of an ongoing program. MBNEP will continue to support real time water monitoring throughout the bay and has received a two year grant to support those activities.

Living Resources: Improved Monitoring of Living Resources

Over the course of the past year, MBNEP has provided extensive support for the development of an Alabama Aquatic Nuisance Species Management Plan through participation on a Governor's appointed Task Force and its steering committee, assistance with website development, and contractor management. During 2009 program year, MBNEP looks forward to completing this plan for public distribution.

MBNEP will support monitoring of key living resource species by supporting a study of the West Indian manatee population in Mobile bay. This project will include the expansion of a manatee watch website that engages the public in the monitoring efforts.

Human Uses: Regional Solutions for Stormwater, Waste Water Public Access

Human impacts on our coastal environment have become a very important issue to address throughout coastal Alabama. During the 2009 program year, MBNEP will support five different projects related to human uses including: a comprehensive interpretive signage program along and adjacent to a scenic byway; a shoreline assessment of Fish River that includes graphical tools to educate the public and a major volunteer recruitment initiative to get residents into the environment; continued education of developers and other land use professionals regarding innovative low impact designs and environmentally sensitive methods for using land in a development; community conservation planning in Bayou la Batre, and shoreline stabilization activities at a public boat ramp in Satsuma, AL.

Habitat Management: Wetlands and SAV Status and Trends

The USGS' NWRC has collaborated with the MBNEP through cooperative agreements for the past six years as described under Habitat Management above. During this program year, USGS NWRC will complete an **accuracy assessment** of the wetland and upland habitat mapping and produce a Status and Trends Report of the wetlands and uplands of the Mobile Bay Estuary.

MBNEP will work with the DISL to develop salt-marsh restoration strategies to optimize use by the blue crab and will study methods for shoreline stabilization at Helen Wood Park. In addition, MBNEP will support a second year of surveying beach nesting birds in partnership with the National Audubon Society.

Finally, MBNEP will work with a contractor to acquire imagery for SAV mapping for Mobile and Baldwin Counties based on the results of a multi-year effort to identify and map SAV in Mobile and Baldwin Counties for the second time in five years.

Education and Public Involvement: Catalyzing Action

In the 2009 program year, MBNEP will continue to improve its website, participate in area events, seek out opportunities to educate public officials about estuary issues, and support educational opportunities that target builders, realtors and others that engage in construction activities along the coast. In addition, MBNEP will publish and distribute a State of the Bay Report.

Part Two: MBNEP Work Plan 2008 - 2009

Overview

During the summer of 2005, MBNEP initiated a strategic planning process that included an assessment of the original CCMP including its five issue areas: Water Quality, Living Resources, Habitat Management, Human Uses, and Education/Public Involvement; the 29 sub-objectives within those five areas; and the various activities included to implement those sub-objectives. The assessment included modifications, streamlining, and in some instances, deletion of certain actions included in the original document. In addition, the 29 sub-objective areas were prioritized, and target output/outcomes for them were developed. Although this Strategic Plan is currently in draft format, MBNEP anticipates its official adoption by the Executive Committee of the Management Conference this summer. Therefore, the MBNEP Work Plan for 2008 is based on this Strategic Plan.

The MBNEP CCMP identifies its work plan activities within the five issue areas, the 29 sub-objectives, and the actions associated with those objectives. The numbering (i.e., WQ A1.1) for each activity associates with the Strategic plan as follows: WQ- Water Quality, A1- the sub-objective under Water Quality, and .1- relates to the action outlined for that section. This document contains the 29 sub-objectives of the Strategic Plan in summary format. The entire document can be viewed at <http://www.mobilebaynep.com>.

Available EPA Funding for the 2008 Work Plan

EPA Grants # CE 97491303-2 (417) and CE 96456906-0 (435)

At present MBNEP is managing two EPA grants:

CE 97491303-2 - This grant covers Years 8 (2004), 9 (2005), and 10 (2006). This grant is significantly underway and is anticipated to be closed out by December, 2008

CE96456906-0 - This grant covers year 11 (2007) and 12 (2008) and will be amended to cover year 13 (2009) in this Work Plan.

The first table included in the appendix to this document is Table 1: Budget Status of Existing EPA Grants. This table outlines the current budget, expenditures, and existing balances of all ongoing activities from both EPA grants as of 3/30/2008. In large part, these balances reflect the execution of multi-year projects, including Atmospheric Deposition, Real Time Monitoring, the development of an Aquatic Nuisance Species Management Plan, and ongoing participation in area events.

Table 2 in the appendix, Ongoing Projects (through March, 2008) - Narrative Status, provides an update in narrative form of milestones achieved, any delays that have occurred, and any notable products available related to all projects underway.

During the Fiscal Year 2009/Year 12 the following base funding will be available to implement projects:

(417) EPA Grant CE 97491303-2: Balance as of 3/30/2008	\$52,038	
(417) Matching Funds Available for CE97491303-2	\$69,763	
(435) EPA Grant CE 96456906-0: Balance as of 3/30/2008	\$304,154	
Subtotal		
(435) Matching Funds Available for CE 96456906-0	\$553,952	\$979,908
(435) EPA Grant CE96456906-1: Funding added for 2008	\$591,750	
(435) Match Projected to be available for CE 96456906-1	\$246,500	

Grand Total base funding (including match) projected available 2009

\$1,805,010

MBNEP Work Plan: Project Detail 2009

This section is divided into five main subsections, 1) Water Quality, 2) Living Resources, 3) Habitat Management, 4) Human Uses and 5) Education/Public Involvement. Each subsection is introduced by stating the objective for that issue area. Individual activities are then listed under the appropriate sub-objectives. Some activities may contain elements that contribute to other issue area objectives. The activity is listed under the issue area for which it is most relevant.

I. Water Quality

Attain and/or maintain water quality sufficient to support healthy aquatic communities and designated human uses by 2010.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-A1	Assess Data to Identify Water Quality Problems	*Atmospheric Mercury *NPDES Loadings *Sediment Chemistry *Tissue Chemistry *Enterococcus Monitoring *Harmful Algal Blooms *Fecal Coliform *Chlorophyll a *Secchi Depth *Dissolved Oxygen *Light Attenuation	* Increase in understanding of Water Quality Issues *Improved identification of and response to point and non-point sources of pollution that negatively impact water quality *Decrease concentrations of toxic substances	ongoing

WQ-A1.2 Real-Time Water Monitoring in Mobile Bay-Continuing

Performing Organization	DISL
Project Lead	Mike Dardeau
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$45,223
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$45,223
Match	donated labor hours- \$10,000
Leverage	GOMP- \$136,022- (\$68,011 x 2 years)
NEP Prior Year Funds	\$34,777
Prior Year Match	
Prior Year Leverage	\$25,000 MBNEP CIAP, \$40,000 WBNERR, \$30,000 USA/ACES Oyster Restoration funding in FY04 for monitoring instrumentation
Related Priority Issue(s)	All
MBNEP Coordinator	Director

This is a continuation of the Water Monitoring Program begun in the Year Seven (FY 2003) Work Plan and funded by CIAP. The Water Monitoring Program consists of developing and implementing a

comprehensive, bay-wide, water quality monitoring 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 parameters plus dissolved oxygen, salinity, water temperature, pH, turbidity, and fluorescence transmitted to an internet web site every 15 minutes); 2) appropriate information management, processing, and delivery (transmitted data via cellular modem will enter the data management center server and be made available on the internet web site); and 3) real-time communication of information to the public through www.mymobilebaynep.com and lab analyzed water samples with results reported in the local newspaper. The 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. During the 2009 program year, MBNEP will investigate the installation of an additional site at a location along the Intracoastal Waterway.

Project Objectives: Implement a multi-faceted approach for comprehensive water quality monitoring for the Bay and establish additional monitoring sites; establish agreed upon sample collection, handling, storage, and analysis protocols for implementing the monitoring plan; collect water quality samples at designated sampling sites consistent with agreed upon protocols; and maintain analyses results in a database and report them on a prescribed basis to MBNEP Data Information Management Support (DIMS), ADEM, the general public, or any other appropriate agency, and place them in EPA’s Storet water quality data management system.

WQ-A1.2 Sub-Estuary Monitoring- Continuing

Performing Organization	ADEM
Project Lead	Mark Ornelas
FY 07 NEP Funding (11)	\$0 (40,000 reprogrammed- cancelled due to capacity limitations)
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$0
Match	
Leverage	
NEP Prior Year Funds	\$162,500 (Bon Secour, Bayou La Batre, Dog River)
Prior Year Match	
Prior Year Leverage	\$
Related Priority Issue(s)	All
MBNEP Coordinator	Deputy Director

This program would have expanded a three year effort of ADEM to conduct water monitoring in tributary streams for Mobile Bay as outlined and identified in the accepted MBNEP Monitoring Plan. The original three-year effort will be complete by 12/31/08. Monitoring activities have been completed for Bon Secour and Bayou La Batre and are currently being undertaken in Dog River. This Task is identified in prior year Work Plans as “Monitoring Program Implementation”.

Project Objectives: Project Expansion cancelled.

WQ-A1.2 Installation of Trash Barriers: Moore & Montlimar Creeks (NEW)

Performing Organization	Dog River Clear Water Revival/City of Mobile
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$20,324
Total Current Plan Funds	\$20,324
Match	\$20,324 donated labor, equipment
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	Human Uses
MBNEP Coordinator	Science Coordinator

Dog River and its tributaries drain most of the City of Mobile as well as function as an important recreational waterway. Sixty percent of the Dog River watershed is located within the City of Mobile and forty percent in unincorporated Mobile County. Many factors have severely degraded the quality of this important water body. A major factor is the litter problem. In 2006, the citizen action group, Dog River Clearwater Revival, raised the funds necessary to install a trash barrier along Esclava Creek. This group asked for and received support from the City of Mobile for maintaining/emptying the curtain. The City of Mobile has pledged their support for the installation of a second barrier and has agreed to clean out the barrier on a regular basis.

Project Objectives: Reduce trash inputs to Dog River tributaries as a method of improving water quality. Support community efforts to monitor water quality.

WQ-A1.5 Air Deposition Monitoring - Continuing

Performing Organization	National Atmospheric Deposition Program
Project Lead	ADEM
FY 07 NEP Funding (11)	\$35,000 (match dollars)
FY 08 NEP Funding (12)	\$35,000
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$70,000
Match	
Leverage	\$22,000 (ADEM personnel)
NEP Prior Year Funds	\$109,000
Prior Year Match	Un-recovered but allowable indirect costs (DISL), cash
Prior Year Leverage	ADEM Personnel (Federal) \$33,000 (\$11,000/3yrs)
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Director

Continue operation of two sites in Mobile and Baldwin Counties for mercury and nutrient monitoring which will complement data gathered at a new NOAA funded site at Grand Bay. These funds support a contract with the University of Illinois and the National Atmospheric Deposition Program to provide

chemical analysis of air samples collected at these sites to identify problems related to toxic chemicals and nutrient and/or organic enrichment from various sources to further promote water quality improvements within the MBNEP area. During the 2009 program year, MBNEP will investigate partnership opportunities with the NGI to assist with identifying potential collaborative scientists who can share local ecological knowledge and data along with data on mercury concentration to further research mercury deposition and impacts on coastal waters and living resources.

Project Objectives: Maintain the monitoring sites to include sample collection and analysis according to standard protocols. Sampling includes: Ca, Mg, Na, K, NH₄, NO₃, Cl, SO₄, pH, inorganic nitrogen, and total mercury. Report analyses results on a prescribed basis to EPA, ADEM, the general public, and any other appropriate agency through NADP website. As appropriate, deliver this information to the public.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-A2	Incorporate Loadings Information Into Non Pollutant Discharge Elimination System	NPDES Loadings	*Improved NPDES *Decrease concentrations of toxic substances	ongoing

MBNEP has no activities planned this period.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-A3	Maintain Groundwater Quality	*NPDES Loadings *Sediment Chemistry *Fecal Coliform	*Improved groundwater quality *Decrease concentrations of toxic substances *Increase safety of water for body contact	ongoing

MBNEP has no activities planned this period.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-A4	Ensure Protection and Maintenance of High Quality Waters	*Entrococcus Monitoring *Harmful Algal Blooms *Fecal Coliform *Chlorophyll a *Secchi Depth *Dissolved Oxygen *Light Attenuation	*Increase in # of classified Outstanding Alabama streams and waterways	

MBNEP has no activities planned this period.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-B1	Reduce Excessive Nutrient Loading Within the MBNEP area	*Dissolved Oxygen *Chlorophyll a *Turbidity	*Improved water quality to sustain aquatic life *Improved management of stormwater	ongoing

WQ-B1.1 Storm Water Management - Continuing

Performing Organization	Baldwin County Commission/Mayors Association
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$22,500 (\$2,500 add reprogram)
FY 08 NEP Funding (12)	\$22,500
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$45,000
Match	\$41,650 (Cities, County, WBNERR, AL Coastal Foundation)
Leverage	
NEP Prior Year Funds	\$5,000
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	
MBNEP Coordinator	Director

MBNEP will continue to work with local governments in Baldwin County to develop alternatives for stormwater detention and retention in order to reduce nutrient and/or organic loadings. During the 2007 program year, an assessment of the feasibility of forming a regional stormwater authority was conducted. This study was followed up with the Baldwin County Stormwater Working Group (BCSWG), (representing 12 municipalities, the County, and other stakeholders), generating support throughout the community for enabling legislation to form such an entity. During the 2008 Alabama legislative season, House Bill 929 was passed, providing enabling legislation that would allow citizens of Baldwin County to vote on the establishment of a regional stormwater authority.

During the 2009 program year, the BCSWG, with assistance from MBNEP, will engage in a coordinated public education campaign to raise awareness of the problem and educate voters about the need for a regional stormwater solution. In addition, the BCSWG will continue to define the organizational options, funding, and function recommendations for this new entity.

Project Objectives: Coordinate Baldwin County and its cities for the purpose of assessing the feasibility of developing a storm water management authority and act to establish such an entity.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-B2	Address Upstream Nutrient & Sediment Inputs (and other sources of non-point source pollution)	*Sediment Chemistry/ loadings *Harmful Algal Blooms *Chlorophyll a *Secchi depth *Dissolved Oxygen *Light Attenuation	*Improve safety of water for body contact *Improve water quality to sustain aquatic life	

WQ-B2.1 Comprehensive Sediment Loading Analysis for Magnolia River (NEW)

Performing Organization	Town of Magnolia Springs
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$34,250
Total Current Plan Funds	\$34,250
Match	\$34,250 donated labor, equipment, cash
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	Human Uses
MBNEP Coordinator	Director/Deputy Director

Changes in land use have dramatic impacts on water quality. South Baldwin County has experienced a tremendous increase in development. Housing starts, new businesses, and new industry, along with concomitant roadwork, all have an impact on sedimentation in the Magnolia River. As a result, turbidity in the river has significantly increased. Volunteers from this community along with the Weeks Bay NERR have been sampling water quality in the Magnolia River for over 10 years and compiled water quality data during that time that indicate an increase in turbidity at more frequent intervals with less intense rainfall events. This project will identify point sources including man-made and natural drainage ways that contribute significant sources of sediment loading to Magnolia River.

Project Objectives: Identify significant sources of sediment loading and recommend engineering solutions; quantify seriousness of sediment loading at target locations; educate community in methods of volunteer monitoring

WQ-B2.1 Study of Land Use Impact on Fish River- Auburn University (NEW)

Performing Organization	Auburn University
Project Lead	Mississippi Alabama Sea Grant Consortium
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$ 20,000
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$20,000
Match	
Leverage	Mississippi Alabama Sea Grant
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	Human Uses
MBNEP Coordinator	Director/Deputy Director

Weeks Bay, one of only three designated *Outstanding National Resource Waters* in the State of Alabama, is under stress due to population growth and urbanization in its watersheds. High proportions of impervious surface, a typical consequence of urbanization, can lead to increased nutrient and sediment loading into streams. Urban developments have also been shown to increase heavy metals, bacteria loadings, and stream temperatures. The assessment of the impact of land use land cover changes and build out on the quality of its major water supplier, the Fish River, is therefore of paramount importance for the future management of the Bay area.

During the 2009 program year, MBNEP will partner with MASGC and Auburn University to undertake a two-year research project to implement an interdisciplinary approach to quantify the impact of land use/cover changes on the water quality parameters, NO₃-N, Total-P, and TSS, in the Fish River Basin, and disseminate this knowledge to local community and decision makers through outreach activities to preserve and improve the environmental and ecosystem health of the Weeks Bay area.

Project Objectives: Collect flow and water quality data (NO₃-N, Total-P, and TSS) from Fish River sub-watersheds to be combined with data collected in past to identify linkage between water quality and land use/land cover (LULC); post-validate an existing model (SWAT - developed under another project) with new data to appraise credibility in estimating the impact of LULC alteration on water quality; estimate future water quality conditions based on future build-up and LULC scenarios; educate citizens about water quality problems and solutions; and demonstrate use of low-impact design strategies.

WQ-B2.3 Facilitation of Coastal Alabama Clean Water Partnership- (NEW)

Performing Organization	MBNEP
Project Lead	ADEM/NRCS
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$
Match	
Leverage	\$55,361 (ADEM-EPA)
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	Human Uses
MBNEP Coordinator	CACWP Facilitator/Coastal Specialist

The Alabama Clean Water Partnership Project is a coordinated effort of public and private stakeholders to restore and protect the state's river basins in accordance with the goals of the Clean Water Act. The national Clean Water Action Plan, announced in February 1998 and coordinated in the state of Alabama by ADEM and the Natural Resource Conservation Service (NRCS), encourages the involvement of local citizens to address the protection and restoration of our nation's water resources. One key action in this plan is to use a watershed management approach to safeguard water quality. Clean Water Partnership facilitators have been identified to carry out this process, coordinating activities in the Coosa, Black Warrior, Tallapoosa, Cahaba, Alabama-Tombigbee, Tennessee, Chattahoochee/Choctawhatchee/Chipola/Upper Perdido-Escambia, and Coastal basins. In Mobile and Baldwin Counties, the NRCS has partnered with MBNEP to host the Coastal Alabama Clean Water Partnership (CACWP) facilitator.

During the 2009 program year, the CACWP facilitator will continue to be a part of the MBNEP staff as part of a new position within the office and co-funded by the MASGC that will focus on coastal issues related to non-point source pollution and waterfront sustainability issues.

Project Objectives: Create new co-funded position that leverages the work of the CACWP facilitator with other non-point source pollution initiatives.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-C1	Reduce Opportunities for Pathogen Introduction	*Enterococcus Monitoring *Fecal Coliform	*Improve quality and safety of water for body contact	ongoing

WQ-C1.1 Impaired Water Bodies- Pathogen Source Identification- Redirected

Performing Organization	ADEM/Private Contractor
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$ 20,000 (add 20,000- subtract 40,000)
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$ 0
Match	donated labor, equipment
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	Human Uses
MBNEP Coordinator	Director/Deputy Director

Section 303(d) of the Clean Water Act and EPA’s Water Quality Planning and Management Regulations (40 CFR Part 130) require states to identify water bodies which are not meeting their designated use and to determine the Total Maximum Daily Load (TMDL) for pollutants causing the use impairment. TMDLs are the sum of individual waste load allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources including natural background levels, and a margin of safety (MOS).

Juniper Creek, in Mobile County near Fairview, Alabama, lies within the Upper Big Creek sub-watershed of the Escatawpa River Basin. Its use classification is Fish & Wildlife (F&W). Juniper Creek was put on the State of Alabama’s §303(d) use impairment list in 1996 for pH. However, pH was removed from the 1998 list because low pH values are due to natural conditions caused by acid clay soils and tannic acid from decaying vegetation which are typical of coastal blackwater streams. Juniper Creek has been on the State of Alabama’s §303(d) use impairment list since 1998 for Pathogens (Fecal Coliform).

During the spring of 2008, the CACWP submitted a grant under the state’s 319 program to conduct pathogen source identification at Juniper Creek. This grant was awarded in June, and as a result, MBNEP is reallocating these funds. MBNEP will continue to be involved in this project through the CACWP facilitator who is on MBNEP staff.

Project Objectives: Project funding cancelled.

WQ-C1.1 Impaired Water Bodies- Pathogen Source Identification- FISH RIVER (NEW)

Performing Organization	Weeks Bay Foundation/WBNERR
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$22,000
Total Current Plan Funds	\$22,000
Match	\$26,000 donated labor, equipment
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	Human Uses
MBNEP Coordinator	CACWP Facilitator/Deputy Director

Fish River in the Weeks Bay watershed, Baldwin County, Alabama, is included on the Clean Water Act 303 (d) list for pathogen contamination. Pathogen contamination in the river and the potential human health threat associated with these bacteria is identified as an environmental problem in the Weeks Bay Watershed Management Plan. The Weeks Bay Foundation has funded bacterial monitoring in cooperation with the volunteer water monitoring group, Weeks Bay Water Watch, and the Weeks Bay Reserve. Current fecal coliform monitoring includes locations spanning much of the accessible reaches of Fish River and several tributaries. Counts of bacteria in the upper Fish River remain periodically high and violate the limits of its water use classifications, Swimming and Fish and Wildlife (ADEM). These high counts are typically present after rain events. This project will identify likely sources of pathogens at base flow and high water events in the upper Fish River in an effort to develop better management decisions.

Project Objectives: Establish sampling sights; measure rain fall events to sample pathogens at base flow and high water events, sample pathogens in upper Fish River under base flow conditions and during high water events; identify likely sources of *E. coli* during both base flow and high water events; and confirm presence of source using alternative indicator bacteria- enterococcus and bateroidetes.

WQ-C1.1 Clean Marina Program- Continuing

Performing Organization	MASGC/Contractor
Project Lead	MASGC
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$10,000
Total Current Plan Funds	\$10,000
Match	
Leverage	\$10,000 (Auburn University/MASGC)
NEP Prior Year Funds	\$10,000
Prior Year Match	volunteer labor
Prior Year Leverage	
Related Priority Issue(s)	
MBNEP Coordinator	Coastal Specialist

Alabama and Mississippi joined other states concerned with water quality by establishing the Alabama-Mississippi Clean Marina Program. This unique bi-state effort is a voluntary, non-regulatory program that promotes responsible marina operating practices in the interest of protecting the environmental resources that support their business. It is led by MASGC in partnership with many other groups, including ADCNR, ADEM, AUMERC, Mississippi Department of Marine Resources, Mississippi Department of Environmental Quality, and the MBNEP. The program will help marinas protect the very resource that provides livelihood and enjoyment for the Gulf Coast: clean water. Over time, the Clean Marina program will help to encourage marina operators to use more responsible practices, inform boaters of environmentally sensitive practices, and create better communication of existing laws by offering recognition for creative and proactive marina operators implementing these practices.

In the program's first year, Alabama designated two marinas as Clean Marinas: Zeke's Landing Marina in Orange Beach (which has since shut down due to Hurricane Ivan) and Dog River Marina in Mobile. There were several more marinas in Alabama pledged to work towards becoming Clean Marinas within the second year. However, Hurricanes Ivan and Katrina damaged most of these, including those that had the designation already.

Since the hurricanes, few have renewed their Clean Marina status. The City of Orange Beach also attempted to require by ordinance that all the marinas in the city participate in this program. However, this was later put on hold since the Clean Marina program is an entirely voluntary activity. Many others are rebuilding their marinas to conform to the Clean Marina standards and barring any major hurricane activity in the next year, the program anticipates designating an additional three marinas. In the interim, the program is conducting an evaluation of its activities to date and potential future directions.

Project Objectives: Recruit 3 new marinas over the course of next year; provide workshops and boater education at least 3 times a year.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-D1	Assess Problems Related to Sediment Quality	*Atmospheric Mercury *Sediment Chemistry *Tissue Chemistry *Turbidity *Chlorophyll A	*Decrease in concentrations of toxic substances and pollutants in water	ongoing

MBNEP has no activities planned this period.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
WQ-D2	Provide for Safe Disposal of Hazardous Waste	NPDES Loadings	*Decrease in concentrations of toxic substances and pollutants in water	ongoing

MBNEP has no activities planned this period.

II. Living Resources

Maintain native populations within historical ranges and natural habitat and restore populations that have declined.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
LR-A1	Improving Monitoring of Key Living Resources	*Birds- pelicans, waterfowl, neotropical migrants; *Bottom Dwelling-blue crabs, oysters, flounder; * Mid-Water- largemouth bass, red drum, mullet *Number of osprey, eagles; *Number of species listed on special concern list; *Number of species listed on threatened/endangered list; *Acreage of land converted to alternate use * HABs *Chlorophyll A	*Improve the stability of fish and wildlife populations *Improve the populations of threatened and endangered species *Increased Citizen awareness, accessibility to data, and improved management and coordination of local activities	ongoing

LR-A1.1 West Indian Manatees in Mobile Bay, AL: Research and Public Outreach (NEW)

Performing Organization	DISL
Project Lead	Dr. Ruth Carmichael
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$29,726
Total Current Plan Funds	\$29,726
Match	\$31,526 labor and supplies
Leverage	
NEP Prior Year Funds	\$
Prior Year Leverage	
Related Priority Issue(s)	
MBNEP Coordinator	Deputy Director/Science Communicator

Once common along the Gulf of Mexico coast, populations of the endangered West Indian manatee (*Trichechus manatus*) are now confined largely to peninsular Florida and southeastern Georgia in the winter, with poorly defined migrations north and east during summer. In recent years, there have been a greater number of manatee sightings in areas west of Florida, suggesting increased use of fringe habitats. Knowledge of manatees in fringe habitats has become increasingly important in recent years as

extralimital populations may be the first to show measurable responses to a variety of natural and human induced environmental changes. Knowing when and how manatees use fringe habitats is highly important to immediate and longer-term conservation, management, and monitoring efforts.

During the 2009 program year, MBNEP will support a pilot study of manatees in Mobile Bay by extending an existing collaboration that the DISL has established with the Wildlife Trust (WT) in Florida. This support will allow the operation of the Mobile Manatees Sighting Network to continue and will allow for greater data collection and public education and outreach.

Project Objectives: Determine where manatees occur and how they use habitat and food resources in Mobile Bay; to develop and carry out a comprehensive public education program that integrates primary research and outreach.

LR-A1.5 Data Information Management System (DIMS)- Continuing

Performing Organization	DISL/Contractor
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$20,000 (\$10,000 reprogrammed)
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$20,000
Match	
Leverage	Community Agency funded data set development
NEP Prior Year Funds	\$172,178
Prior Year Match	\$67,561; DISL waives administration charge on GIS/DIMS and provides 43% in-kind match, Equipment and hardware provided by DISL; Mobile Bay Watch Water monitoring Database
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	Deputy Director

This activity will involve the continued development of data management systems that capture information from a variety of agencies and activities to provide a basis for the monitoring and status reporting of living resources, water quality conditions, and CCMP activities. Two online databases have been developed: a Habitat Conservation, Restoration, and Enhancement Database is now up and running online. This database contains over 50 different habitat management projects for a variety of agencies. A CCMP Inventory Database is currently under construction to capture CCMP implementation activities community wide. In addition, www.mymobilebay.com provides real time monitoring of meteorological and hydrological parameters of selected locations in the Bay and delta. Plans are to develop a water quality monitoring database that will contain information on other water quality monitoring efforts in the Bay and throughout the estuary.

Project Objectives: Establish web and other electronic linkages to make DIMS accessible; identify Data Management needs and assess methods/organizations and/or technology needed; continue Data Management associated with Environmental Monitoring; continue development of protocols; and participate in regional data monitoring activities/organizations.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
LR-A2	Improve Monitoring of At Risk Species	*Bottom Dwelling-blue crabs, oysters, flounder * Mid-Water- largemouth bass, red drum, mullet	*Improve the populations of fisheries resources	ongoing

MBNEP has no activities planned this period.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
LR-B1	Develop Management Plan for Nuisance Species	*Frequency of occurrence of non-native species e.g. crabs, non-native submacrophytes, others	*Improve understanding of the impact of non-native species on the environment *Reduce the populations of non-native species	Initiated

LR-B1.1 City of Daphne Village Point Park: Invasive Species Control (NEW)

Performing Organization	City of Daphne
Project Lead	City of Daphne
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$ 10,000
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$10,000
Match	\$12,000 labor and supplies
Leverage	
NEP Prior Year Funds	\$
Prior Year Leverage	
Related Priority Issue(s)	
MBNEP Coordinator	Director/Deputy Director

Village Point Park-Bay Front Park is located in Baldwin County, Alabama (Township 4 South, Range 2 East, Section 37 on the west side of Scenic 98, South Main Street, in the City of Daphne. The park consists of approximately 80 acres of forested uplands, forested wetlands, cleared wetlands, coastal beach, and Yancey Branch. The “*Historic Village Point Inventory and Checklist of the Trees, Shrubs and Woody Vines*”, written by Fred Nation and Harry Larsen, documents that over one hundred different species have been found in the Village Point Park. Along with the vast array of native species, the park has a problem with invasive (exotic) species. The inventory documented that there are presently eleven invasive species in the park. During the summer of 2007, the City of Daphne entered into a partnership

with MBNEP to remove and control invasive species within Village Point Park. The City agreed to use the Village Point Park-Bay Front Park Invasive Species Plan to aid in restoring ecological relationships within the park. This partnership aims to remove and treat all documented invasive species. However, the primary focus will be on the most predominate species, which are the Popcorn Tree, Japanese and Chinese Privet, Japanese Climbing Fern, Wild Tarot, and Cogon grass.

Project Objectives: Remove the invasive species, which presently inhabit the Village Point Park; purchase Glyphos aquatic herbicide, surfactant, and dye to aid in the control of invasive species in the park; purchase a variety of native trees and shrubs species to re-vegetate the open areas which will help prevent re-growth of the invasive in the cleared areas.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
LR.C1	Efficiently measure fishing effort			

MBNEP will work with Science Advisory Committee to review additional measures that may need to be taken.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
LR-C2	Increase Fisheries Resources	*Bottom Dwelling- blue crabs, oysters, flounder * Mid-Water- largemouth bass, red drum, mullet	*Improved fisheries resources	ongoing

LR C2.1 Salt Marsh Restoration Strategies to Optimize Habitat Use by the Blue Crab (NEW)

Performing Organization	DISL
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$49,813
Total Current Plan Funds	\$49,813
Match	\$50,067
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Habitat Management
MBNEP Coordinator	Science Communicator

Salt marshes provide ecosystem services that include critical habitat for commercially important crustaceans and fish, and energy export to adjacent estuarine habitats. In the northern Gulf of Mexico, the black needlerush, *Juncus roemerianus*, dominates high marsh zones and the smooth cordgrass, *Spartina alterniflora*, is limited to fringing bands and patches along the water's edge. Marsh restoration along the Gulf Coast often involves re-planting *Spartina* with the underlying assumption that natural ecosystem

function will follow. This assumption generally has not been corroborated, nor is it clear whether planting *Juncus* is the preferable alternative.

The marsh periwinkle, *Littoraria irrorata*, is an abundant and conspicuous herbivore in *Spartina* marshes along the Gulf Coast. The blue crab, *Callinectes sapidus*, is the basis of important commercial fishery, the key predator of salt marshes, and the primary predator of *Littoraria*. By controlling *Littoraria* populations, *Callinectes* prevents cascading ecosystem effects, which can include overgrazing and loss of *Spartina* (Silliman and Zieman 2001). Coastal eutrophication, a common condition within the MBNEP study region, can magnify these effects. The long-term success of restoration depends on establishing and maintaining trophic linkages such as this *Callinectes*–*Littoraria* interaction. Conventional approaches to tracking ecosystem development in restored marshes, such as assessing faunal abundance and diversity, are costly and time-intensive, and are rarely applied following restoration. We have developed metrics of the predator–prey relationship between *Callinectes* and *Littoraria*, which integrate among-site variability and are inexpensive, time efficient proxies for assessing the development of ecological function in restored salt marshes.

The olive nerite, *Neritina reclinata*, replaces *Littoraria* as the primary herbivore in low salinity, estuarine settings dominated by *Juncus*. The ecological role of *Neritina* is similar to that of *Littoraria*, and it is frequently preyed upon by *Callinectes*.

During the 2009 program year, MBNEP will support scientists at the DISL in a study is to determine whether *Littoraria*–*Spartina* and *Neritina*–*Juncus* communities are ecologically redundant and, therefore, indistinguishable to *Callinectes*, or whether the replacement of one system by the other would have an impact on population densities of this commercially important crab species. The proposed study will enable us to cover a broad range of conditions under which marshes provide critical habitat and prey resources for *Callinectes* in the MBNEP study area. The project will include an extensive outreach component, involving field and classroom participation by K–12 students as well as a program of voluntary participation by and engagement of the community.

Project Objectives: Conduct a research program in Weeks Bay; apply our predation metrics to *Spartina* marshes in the southern half of the bay, and extend our focus northward to include monotypic stands of *Juncus* near the mouth of Fish River; study trophodynamics at existing sites; and provide a long-term (four- to five-year) data set to evaluate ecosystem development in created *Spartina* marshes.

LR-C2.2 Oyster Gardening- Continuing

Performing Organization	DISL/Contractor
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$10,000
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$10,000
Match	\$13,500 volunteer labor
Leverage	
NEP Prior Year Funds	\$30,000
Prior Year Match	volunteer labor
Prior Year Leverage	
Related Priority Issue(s)	Habitat Management
MBNEP Coordinator	Americorps Volunteer

The Oyster Gardening Program is a continuation of an initiative that was started in 2001 as a community involvement activity. Volunteers are trained to grow oysters under piers or in open waters, measure their growing progress, and harvest them for placement on Mobile Bay reefs. The purpose of the program is to teach citizens about oysters and their importance to bay water filtration and habitat creation and to restore relic oyster reefs in Mobile Bay.

During the 2009 program year, AUMERC will partner with MBNEP and Alabama’s Marine Resources Division to continue recruitment of volunteers and train and provide technical assistance to produce another harvest of oysters to be placed on Cedar Point Reef and on other reefs throughout the bay. MBNEP’s contribution to this effort will be through the auspices of an Americorps volunteer who will be charged with assisting with program implementation.

Project Objective: Engage volunteers in growing oysters for reef restoration.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
LR-C3	Manage Recreational and Commercial Fishing Effort	*Bottom Dwelling-blue crabs, oysters, flounder * Mid-Water-largemouth bass, red drum, mullet	*Improved management of fisheries to decrease stresses on recreational and commercial species	ongoing

MBNEP has no activities planned this period.

III. Habitat Management

Provide optimum fish and wildlife habitat in the Mobile Bay system by effectively preserving, restoring, and managing resources to maintain adequate extent, diversity, distribution, connectivity, and natural functions of all habitat types.

CCMP	IMPLEMENTATION ACTIVITIES (REVISED 2006)	INDICATORS	OUTCOMES	STATUS
HM-A1	Develop a Coastal Habitats Coordinating Team to prioritize conservation habitats and develop programs to encourage preservation.	*Acres of Habitat Protected or Restored *Acres of Habitat by Quantity or Type *Land Use/Land Cover Changes	Increase in the number of acres of unfragmented habitat that serves multiple species of wildlife	Initiated

HM-A1.2 CHCT Habitat Conservation Projects- (DELAYED -Rebudgeted)

Performing Organization	MBNEP
Project Lead	TBD
FY 07 NEP Funding (11)	\$30,000 (subtract 30,000)
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$ 0
Match	\$ 0
Leverage	
NEP Prior Year Funds	\$56,742
Prior Year Match	\$50,000
Prior Year Leverage	
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Director/Deputy Director

MBNEP will continue capitalization of a fund to provide non-regulatory incentives for the acquisition and/or restoration of prioritized sites of particular sensitivity, rarity, or value throughout the MBNEP focus area as identified by the Coastal Habitats Coordinating Team. MBNEP will issue requests for proposals or partner with other agencies to conduct habitat restoration projects. Selection of projects will be guided by the habitat/living resource benefit to be derived compared to cost effectiveness of the proposal. The intent of this restoration program is habitat improvement with some degree of permanence (25 years or greater).

During the 2007 program year, MBNEP partnered with Baldwin County to restore a cultural, ecological, and sociological landmark, “The Springs”, in Magnolia Springs, AL. The objectives of this project were to stabilize the existing site from further degradation due to on-site erosion and storm water infiltration and restore the wetland, riparian, and stream habitat to its natural state. The diverse array of coastal wetland and estuarine ecosystems along Alabama’s coast provide numerous ecological and economic

benefits, including improved water quality, nurseries for fish, wildlife habitat, flood buffers, erosion control, and recreational opportunities. While the sustainability of the Alabama’s coastal wetlands is under increasing pressure from erosion, subsidence, rising sea levels and land development, opportunities exist to protect and restore wetlands, marshes, bayous, and sea grass meadows. However, at this time, MBNEP is in the process of working with agencies such as NASA and NOAA to better prioritize habitats in need of restoration assistance. To that extent, this activity has been delayed.

HM-A1.2 Assessment and Facilitation of Small Tract Coastal Land Trust (NEW)

Performing Organization	Auburn University Marine Extension and Research Center
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$ 4,140
Total Current Plan Funds	\$4,140
Match	\$4,394
Leverage	
NEP Prior Year Funds	\$
Prior Year Leverage	
Related Priority Issue(s)	
MBNEP Coordinator	Director/Deputy Director

The CCMP recognizes that the Mobile Bay watershed is home to a variety of unique and important habitats, and that a leading cause of habitat loss in the area is due to development within the watershed. Such development has led to a fragmentation of habitats and makes the availability of large, contiguous parcels of habitat rare and expensive. Unfortunately, some of these parcels represent important coastal habitats and provide ecosystem functions of value to the area.

Land trusts, such as Forever Wild and The Nature Conservancy, accept large land tracts as donations and conservation easements for the purposes of long-term protection and management. However, no such entity exists to accept smaller land parcels in coastal Alabama and, specifically, Mobile County.

During the 2009 program year, MBNEP will work with Auburn University to assess the feasibility and facilitate the creation of a coastal land trust focused on accepting conservation easements on small, fragmented parcels of valuable or sensitive habitats and the management of those properties, particularly in Mobile County.

Project Objectives: Determine the infrastructure requirements to implement a coastal land trust; evaluate existing trusts, their holdings, objectives, sources of funding, and maintenance procedures; identify partners; and form land trust

HM-A1.2 Emergent Grass Restoration- Continuing

Performing Organization	MBNEP
Project Lead	TBD
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$
Match	\$
Leverage	\$25,000 (USFWS Grant)
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Science Communicator

The loss of marsh in Mobile Bay has been documented in several wetland trend studies. Marsh losses in Mobile Bay were attributed to industrial development, navigation, commercial/residential development, natural succession, and erosion or subsidence. Since 1997, the US Fish and Wildlife Service has established marsh on several tidal bars in upper Mobile Bay using a variety of species. The most successful plants utilized to date were hard-stemmed bulrush (*Scirpus californicus*), bull tongue (*Sagittaria lancifolia*) and black needle rush (*Juncus roemerianus*). This marsh establishment project is being implemented to offset previous marsh loss, provide fish and wildlife habitat, absorb nutrients, and trap sediment.

The created marsh will be utilized extensively by waterfowl, including blue-winged teal, mottled ducks, gadwall, shoveler, and widgeon, as well as a host of shore and wading birds. Fishery resources will also benefit by the creation of marshes, including shrimp, blue crab, flounder, red fish, and spotted sea trout. The proposed project is an important component of the CCMP and supports the North American Waterfowl Management Plan. This project will also have benefits to listed species under the Endangered Species or Bald and Golden Eagle Acts, including the Gulf sturgeon, manatee, bald eagle, and Alabama red-bellied turtle.

Project Objectives: To establish marsh vegetation in upper Mobile Bay.

CCMP	SUBOBJECTIVE	INDICATORS	OUTCOMES	STATUS
HM-B1	Protect or Restore SAV Habitat	*Light Attenuation *Acres of habitat protected or restored *Shoreline/Riparian changes	Increase acreage of SAV habitat	ongoing

HM-B1.1 SAV Mapping-Continuing

Performing Organization	MBNEP/Contractor
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$90,389
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$
Match	
Leverage	\$104,000 (ADCNR)
NEP Prior Year Funds	\$9,674
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Deputy Director

Since 2002 when data were collected to generate this report, no further efforts have been undertaken to map the distribution of SAV in the MNEP study area. The 2002 data were used to document historical SAV distribution in a 2005 report based upon comparisons to digitized, geo-referenced aerial photography of areas within the MBNEP study area from 1940, 1955, and 1966. Results from this investigation affirmed dramatic decreases in SAV since the mid-20th century. The prominent decline and apparently persistent disappearance in acreage since that time suggests that human activity has altered habitats capable of supporting SAV. Since 2002 increased developmental pressures have significantly impacted Mobile Bay and surrounding waters, so a proposed study will facilitate direct comparisons to ascertain current trends.

During the 2009 program year, MBNEP will, with funding assistance from ADCNR, undertake a project to gather digital benthic habitat data to document the extent and composition of SAV using the methodology and study area in the two coastal counties as the 2002 study.

Project Objectives: To create a current set of SAV maps that can be used to continue to determine status and trends of SAV in coastal Alabama.

HM-B1.1 Little Lagoon SAV Restoration- DELAYED- Funding Rebudgeted

Performing Organization	MBNEP/Contractor
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$25,000 (subtract 25,000)
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$ 0
Match	
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Director/Deputy Director

The Little Lagoon Watershed (LLW) is located in South Baldwin County and is a portion of the much larger Wolf Creek hydrologic unit, as described by the USGS. Little Lagoon is connected to the Gulf of Mexico by an inlet that is currently maintained by an ALDOT dredging program. The lagoon encompasses 20 square miles extending west approximately 17 miles along the Fort Morgan peninsula.

SAV, historically abundant throughout Little Lagoon, has disappeared in recent years. It can be surmised that climate, human usage, and development increases have contributed to its demise. Dr. Just Cebrian of the DISL has an ongoing project in the Lagoon to restore SAV, including the planting of shoalgrass (*Halodule wrightii*) at the Bon Secour National Wildlife Refuge in Little Lagoon. Although the project initially failed due to perturbations by stingrays, it will be revamped using widgeon grass (*Ruppia maritima*), whose leaves, stems and roots are not anchored to the sediment but grow in the water-column loosely attached to the bottom. In this way the problem of sediment bioturbation created by stingrays and other organisms will be avoided. The planting will be undertaken in the same location in Little Lagoon as the first restoration effort. That area is protected from wave action and has excellent water quality conditions for SAV growth. The widgeon grass will be enclosed in stainless chickenwire cages and planted in grids to keep stingrays out.

During the 2009 program year, MBNEP will work with Dr. Cebrian through a Five Star grant to determine best planting methods for Little Lagoon in an experiment to plant 10,000 square feet of SAV.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HM-C1	Maintain and/or Improve Beneficial Wetland Function	*Acres of habitat protected or restored *Acres of habitat quantity by type *Land Use/Cover Changes *Hydrologic/bathy metric change	Improved wetland functions Increase in habitat for living resources	ongoing

HM-C1.1 Wetlands Status and Trends Report- Continuing

Performing Organization	USGS
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$30,000
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$30,000
Match	
Leverage	\$25,000 ADCNR
NEP Prior Year Funds	\$529,263
Prior Year Match	\$
Prior Year Leverage	\$ 363,000 (170,000 GOMP, \$18,000 ADEM, \$150,000 ADCNR)
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Director/Deputy Director

In 2001 MBNEP partnered with USGS to undertake habitat mapping of the MBNEP area. The focus of this project was to gather digital color-infrared geo-referenced photography of Mobile and Baldwin Counties to determine a baseline. Photography was collected and digital ortho quads were completed for Mobile County. Color infrared photography was acquired during the winter December 2003-February 2004 for Baldwin County. The photography met national map accuracy and GIS standards. The resulting photography for both counties was mapped to provide classification of wetland and upland habitats using Cowardin, et.al., wetland classification system, and uplands using Anderson/Handley level II upland classification scheme. This was a multi-year project. All habitats larger than one meter were identified.

During the 2009 program year, this data is being assessed for accuracy and will be compared to previously collected data to determine status and trends for Mobile and Baldwin Counties.

Project objectives: Complete accuracy assessment of points acquired in earlier activities; provide an accuracy assessment report for the 70 1:24,000 quadrangles for the interpreted and mapped NWI classification habitat data; and produce a report to evaluate available current remote sensing land cover data using the comparison of the 2001/02 wetland and upland habitat mapping data with the USGS 2001 Landsat derived MRLC data and the 2001 NOAA C-CAP Landsat derived data set. This report will provide a cross-walk of classification schemes between the NWI and MRLC and C-CAP.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HM-D1	Assess Beach and Dune Habitat Loss	*Acres of habitat protected or restored *Shoreline/Riparian change trends	Increase in non-fragmented habitats	ongoing

MBNEP has no activities planned this period.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HM-D2	Regional Sediment Management (previously Determine Impacts of Dredging on Coastal Habitats)	*Acres of Habitat protected or restored	Improved sediment	initiated

MBNEP has no activities planned this period.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HM-D3	Address Shoreline Erosion	*Acres of habitat protected or restored *Shoreline/Riparian Changes	Reduction of shoreline lost	ongoing

HM-D3.2 Boat Wake/Erosion Study- Cancelled

Performing Organization	USACE
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$10,000 (subtract 10,000)
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$ 0
Match	
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Director/Deputy Director

It is widely recognized by resource managers that further study must be conducted on the extent and causes of erosion along coastal Alabama. During the 2008 year, ADCNR will partner with the GSA to begin a comprehensive shoreline mapping of Mobile Bay and other estuarine shorelines. This project will start in Mobile and Weeks Bays and expand from there. Due to the long-term nature of this project, MBNEP has cancelled this program.

Project Objectives: Cancelled.

HM-D3.4 Shoreline Stabilization at Helen Wood Park (NEW)

Performing Organization	DISL
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$34,114
Total Current Plan Funds	\$34,114
Match	\$26,468 in kind services
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Director/Deputy Director

Restoration of estuarine habitats has proceeded at an accelerated pace over the last two decades and will likely expand as the public becomes more aware of the need to protect the environment. The relatively recent use of oyster reefs to actively restore estuarine habitats while adding ecological benefit is a function of the increasing recognition of the importance of oyster reefs in estuarine ecosystems. The eastern oyster, *Crassostrea virginica*, is a key component of coastal ecosystems and local economies along the Gulf coast. Reefs formed by the aggregation of this species provide habitat for numerous species of fishes and invertebrates. These reefs also serve as filters for estuarine water. Further, shallow subtidal and intertidal oyster reefs can facilitate the maintenance and expansion of emergent vegetation and SAV. For emergent shoreline vegetation like *Spartina patens* and *S. alterniflora*, nearshore reefs may reduce wave energy that would normally result in shoreline erosion.

During the 2009 program year, MBNEP will support a DISL project that will examine the potential benefit of restoration of shallow subtidal oyster reefs on adjacent near shore habitats. The project is aimed at expanding the current and ongoing efforts that began at Point aux Pines the lab and along the Dauphin Island Causeway, by adding a replicate site along a state owned shoreline that will allow the project to serve as a public demonstration site.

Project Objectives: Document changes in the shoreline configuration and the physical setting of study sites resulting from the addition of oyster reefs; quantify oyster recruitment and density on created reefs; quantify juvenile and adult fish and mobile invertebrate utilization of created oyster reefs and adjacent habitats; and quantify marsh vegetation after the removal of *Phragmites australis*.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HM-E1	Prevent Nesting Habitat Decline	*Acres of habitat protected or restored *Shoreline/riparian changes	Increase acreage of nesting habitat for colonial and migratory birds	ongoing

HM-E1.2 Nesting Habitat Creation: Vegetation Restoration Program- Continuing

Performing Organization	MBNEP/Bon Secour National Wildlife Refuge
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$3,192
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$3,192
Match	\$1,000 volunteer hours;
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$5,000 US FWS
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Science Communicator

Little Dauphin Island, part of the Bon Secour Wild Life Refuge System, is a fragile barrier feature along the rapidly developing Alabama Gulf Coast. It is host to a diverse assemblage of beach, coastal dunes and associated uplands, salt marsh, and wetlands at the mouth of Mobile Bay. These habitats support a variety of threatened and endangered species, including the piping plover, sea turtles, and more than 370 species of migratory birds.

During the 2008 program year, MBNEP worked with the Bon Secour Refuge and the U.S. Fish and Wildlife Service to conduct a dune planting along the eastern end of the island to stabilize sand and promote increased shore accretion to support piping plover habitat. This planting was followed by two upland tree plantings on the northern side of the island by volunteers. A volunteer monitoring program has been established to track success rates of the trees and shrubs planted.

During the 2009 program year, MBNEP will continue to work with the Bon Secour Refuge to identify additional planting opportunities at the Little Dauphin Island site.

Project Objectives: To restore habitat for colonial and migratory birds on Dauphin Island.

HM-E1.2 *Protecting Beach Nesting Birds on the Alabama Coast (NEW)*

Performing Organization	National Audubon Society
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$5,500
Total Current Plan Funds	\$5,500
Match	\$
Leverage	\$5,500 (ADCNR)
NEP Prior Year Funds	\$5,500
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources
MBNEP Coordinator	Science Communicator

In the spring and summer of 2007 MBNEP and ADCNR State Lands Division- Coastal Section partnered with the National Audubon Society 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 included: 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. The sites covered included: Bon Secour National Wildlife Refuge, Dauphin Island, West Dauphin Island, Isle aux Herbes, Pelican Island, Cat Island, Gulf State Park, and Barton Island Peninsula. The resulting total number of breeding birds located for each species was: Snowy Plover 10 pairs, Wilson's Plover 13 pairs, American Oystercatcher 12 pairs, Least Tern 63 pairs, Gull-billed Tern 30 pairs, Common Tern 9 pairs, and Black Skimmer 56 pairs. 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.

Pending funding for the 2008 field season, the MBNEP will support the Coastal Bird Conservation Program to conduct a second season of surveying and begin a monitoring/protective signage program.

Project Objectives: Survey breeding beach nesting birds; develop protective measures.

IV. Human Uses

Provide consistent, enforceable, regional land and water use management that ensures smart growth for sustainable development and decreases the negative impacts of growth related activities on human health and safety, public access, and quality of life by developing and implementing plans consistent with the CCMP.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HU-A1	Develop and Implement Comprehensive Land Use Planning	*Acreage of land converted to alternate use *Acreage of Impervious surface * New road construction *Shoreline modifications/hardening *# of types of development permits	Improved management of human use activities related to land use	ongoing

HU A1.2 Sustainability Planning: Bayou La Batre (NEW)

Performing Organization	Auburn University/City of Bayou La Batre
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$17,000
Total Current Plan Funds	\$17,000
Match	\$5,000 volunteer labor
Leverage	Mississippi Alabama Sea Grant, SARPC
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources, habitat management
MBNEP Coordinator	Deputy Director

The City of Bayou La Batre is at a crossroads with regard to its future. Hurricane Katrina and the importation of foreign seafood have dealt the small coastal community devastating blows. Community opinion appears divided as to how the city should address issues such as a shrinking economy and declining population. Some feel more support of the primary and secondary economic sectors, in particular the fishing and shipbuilding industries, is key to the revitalization of the city. Others advocate rebuilding the city in such as way as to draw a steady stream of tourists, new residents, and commerce into the local economy.

During the 2009 program year, MBNEP will partner with MASGC and Auburn University to engage the Bayou La Batre community in sustainability planning that addresses a diversification of the local economy and an increase in population, while fostering the history of a waterfront village that gives Bayou la Batre its unique flavor. The purpose of this partnership will be to promote the development and redevelopment of neighborhoods and commercial districts, while protecting the waterfront industry that serves as the foundation of the community.

Project Objectives: Study current and past conditions of the city of Bayou la Batre through interviews and archival research; cultivate public involvement in the planning process by conducting design workshops open to the public; analyze population projections for the area to help determine the spatial needs for residential and commercial growth; collect spatial data, then process and synthesize data in a Geographic Information System (GIS); and draft community plan and design recommendations

HU A1.1 Graphical Ecological Characterization of the Fish River (NEW)

Performing Organization	Auburn University
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$35,533
Total Current Plan Funds	\$
Match	\$35,533
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources, habitat management
MBNEP Coordinator	Deputy Director

Fish River is a small, spring-fed, coastal river in the Weeks Bay watershed in Baldwin County with relatively deep water that runs into Weeks Bay and then Mobile Bay. The watershed encompasses a rich mosaic of upland and coastal habitats that support thousands of plant and animal species. The beauty of this area continues to attract large number of new residents who seek to make their homes along the shores as well as in the woodlands and on farms in the watershed. As this estuarine environment is an important and productive ecosystem, understanding, restoring, and preserving Fish River’s important habitat is critical to protecting the long-term integrity of Weeks Bay.

According to the EPA, conducting characterization studies of sensitive estuarine habitats is key to providing community decision makers with the data necessary to address environmental management challenges. Characterization studies increase citizen ownership of a program study area and help citizens to see problems clearly and find new methods of engagement. Landscape architects and urban design planners are key players to such studies. The integration of science with community planning and landscape architecture fosters design interventions that can guide communities in creating a sustainable future.

During the 2009 program year, MBNEP will complement its support of nutrient loading and pathogen identification in the Fish River by partnering with Auburn University’s School of Landscape Architecture and ACF to conduct a comprehensive shoreline assessment along Fish River. GIS data for mapping will be provided by Baldwin County Planning.

Project Objectives: Characterize the ecosystems and shoreline conditions occurring along Fish River; propose new public access and educational opportunities for surrounding and abutting communities; inventory current land use; produce graphics on aquatic, plant, animal and human communities; and develop recommendations for opportunities and constraints for new public access points.

HU A1.1 Shoreline Assessment and Survey of Fish River (NEW)

Performing Organization	Alabama Coastal Foundation
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$5,800
Total Current Plan Funds	\$
Match	\$5,800
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources, habitat management
MBNEP Coordinator	Deputy Director

This project is part of the project described above. The ACF will work with Auburn University and Weeks Bay Foundation in this comprehensive assessment of the Fish River.

Project Objectives: The central objective of ACF's participation in this project is to generate a product that is used in local land use planning or that is used to help manage resources at the community level.

HU-A1.1 Land Use Education for Real Estate and Development Professionals

Performing Organization	grassroots, inc.
Project Lead	Emily Sommer
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$ 5,000
Total Current Plan Funds	\$ 5,000
Match	\$ 5,000
Leverage	\$
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources, Habitat Management
MBNEP Coordinator	Director/Deputy Director

According to NOAA, an estimated 53 percent of the nation's population lives within coastal counties. With over 433 miles of shoreline, the Alabama coast and surrounding areas are experiencing increasingly rapid land development, resulting in large amounts of non-point source pollution. According to the Pew and U.S. Commission on the Ocean Report, this has become an environmental issue of great consequence. Conventional land use practices, including requirements for high levels of paved surfaces, have been identified as contributing to the decline of fragile watersheds from elevated levels of storm water runoff. Impervious cover produces 16 times more storm water runoff than a forest, causing

flooding, erosion, siltation, and contamination that increase stress not only on our watersheds but on plant and animal habitat.

During the 2009 program year, MBNEP will support *grassroots, inc.* efforts to educate land use professionals about the economic feasibility of altering land use practices to reduce storm water runoff and non-point source pollution, and promote environmental stewardship. The expected outcome is the adoption, use, and promotion of environmentally sensitive development practices by land use professionals.

Project Objectives: Implement online course for professionals; execute live courses; offer web-site; and conduct one site visit field trip

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HU-B1	Assess Hydrologic Effects of Development Practices	*New road construction * #/types of development permits *303 (D) Listed Streams *# waste water permit violations	Mitigation of impacts related to hydrologic changes due to development	

HU-B1.1 Causeway Analysis: TNC- NEW

Performing Organization	Contract
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$
Match	\$20,000 (Mott Foundation Grant to TNC)
Leverage	\$ donated labor
NEP Prior Year Funds	\$10,000
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Living Resources, Human Uses
MBNEP Coordinator	Director/Deputy Director

The Mobile-Tensaw Delta is a freshwater-dominated estuarine system at the base of the Mobile River drainage basin. Since 1930, approximately 20 large dams and other water control structures have been built on the Delta's two primary feeder streams – the Alabama/Coosa/ Tallapoosa and the Tombigbee/Black Warrior Rver systems. Within the Delta proper, a large causeway has sealed off a number of once open bays from immediate contact with the Gulf. These hydrological modifications have potentially altered the hydrology of one of North America's largest, most productive, and diverse estuaries on a local- and system-wide basis. It is hypothesized that these modifications have dramatically altered the productivity of ecological communities within the lower Delta via reduced water exchange and altered circulation patterns, changes in nutrient cycling, and increased incidences of exotic and invasive plant species.

In 2004 MBNEP and partners began funding a multi-year study to collect preliminary data assessing potential impacts of the Causeway on altered freshwater outflow and saltwater interchange on the ecology of the lower Delta. The partnership, which included DISL, TNC, Alabama Power Company, and Mobile BayKeeper, acted on concerns of altered hydrology of the estuary due to the construction of the long Causeway that connects the west and east sides of Mobile Bay. Since that time a second year of study by Dr. John Valentine of DISL has been funded by the EPA's GOMP through Mobile BayKeeper and the MBNEP. TNC also conducted analysis of river flow information collected through these projects. The results of these two studies and first three parts of the Delta/Causeway Study are on the MBNEP website.

In 2007, Dr. Valentine was funded for the third and final year of study, considered necessary to answer questions related to the advisability of changing the hydrology of the lower Delta/upper Bay once again by increasing openings in the Causeway. This year of study is funded through the ADCNR, Marine Resources Division. Discussions with Dr. Valentine indicate that additional analysis of habitat, landform, and vegetation change would be useful adjuncts to more fully characterize the impacts of the altered hydrology caused by the Mobile Bay Causeway.

During the 2008 and 2009 program years, the MBNEP in partnership with TNC (using a Mott Grant) will complete an analysis of vegetation change in the lower Delta using recently completed habitat maps and data provided by USGS to the MBNEP. This project will look above and below the Mobile Bay Causeway, within embayments and along river streams to determine if the Causeway has impacted water quality, macro invertebrate and fish composition, and sediment loading and to gather other pertinent data to determine what impact structural changes have had on the Mobile Bay ecosystem. The results of this study will be translated into an action plan for a demonstration project.

Project Objectives: Investigate wetland and aquatic habitat changes in the Mobile Delta using comparative analysis with other Gulf coast river systems and summarize and present to Alabama Power in a Power Point presentation the results of the hydrologic analyses of inflows and the influence on water quality in the Delta.

HU B1.1 Causeway Outreach related to TNC Analysis (NEW)

Performing Organization	To be determined
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$10,000
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$ 10,000
Match	\$
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources, habitat management
MBNEP Coordinator	Deputy Director

This project complements the above study. Once TNC has completed its analysis, MBNEP will work with others to develop an outreach and education campaign to targeted audiences to present the data, gather input, and develop strategies for implementing an action plan.

Project Objectives: Establish an outreach distribution plan and engage in small group, one-on-one, and general public meetings

HU B1.1 Public Access: Helen Wood Park (Continuing)

Performing Organization	Alabama Coastal Foundation
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$4,240
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$4,240
Match	\$
Leverage	\$38,500 (GMF- CRP Grant)
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources, habitat management
MBNEP Coordinator	Deputy Director

In 2006, MBNEP partnered with the City of Mobile to improve Helen Wood Park, a triangular eight-acre tract immediately to the north and east of Dog River Bridge. The restoration included removal of pavement, re-paving with permeable materials, and construction of a boardwalk. The property occupies part of a low, flat, wet salt marsh peninsula bordered by Dog River to the west and south and by Mobile Bay to the east. The second phase of the project involves the restoration of a wetland area located along the western/northwestern side of developed area of Helen Wood Park. These wetlands receive tidal flows directly from Mobile Bay through two small tidal guts and from Dog River through a culvert under

Dauphin Island Parkway which connects to a tidal creek on the west side of the parkway. The area is approximately 3.5 acres in size and is heavily infested with *Phragmites* with some Chinese Tallow Trees (Please see Figures 2 and 5).

During the 2009 program year, MBNEP will complete the second phase of the Helen Wood Park Project which will involve three phases: removing existing invasive species, reducing the elevation of the area, and replanting of native species.

Project Objectives: Conduct a prescribed burn to a 3.5 acre section of the park; lower the elevation of the shore area to six to eight inches; monitor the area and where re-infested with *Phragmites* and treat with a glyphosate-type herbicide approved for use in wetland areas; plant native vegetation; and install educational signage throughout the park using volunteers and neighborhood groups.

	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HU-B2	Restore Natural Hydrologic Conditions	*Acreage of land converted to alternate use *Acreage of Impervious surface *new road construction *shoreline modifications/hardening *Acreage of functional wetland restored, enhanced, created	Reduction of hydrologic impacts of natural habitats Reduced sediment loadings into Mobile Bay Increased SAV Restoration of function of lake as detention basin	ongoing

HU-B1.2 Three Mile Creek Restoration-Delayed

Performing Organization	Contract
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$
Match	\$
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Living Resources, Human Uses
MBNEP Coordinator	Director/Deputy Director

The Three Mile Creek Industrial Canal originates in the extreme eastern portion of the sub-watershed and is a channelized canal, a little over one mile in length, emptying northward into Three Mile Creek about one half mile upstream of the confluence of Three Mile Creek and the Mobile River. Water flow in Three Mile Creek has been altered due to a channel modification that was constructed for flood damage reduction, and as a result primarily all water flow bypasses a portion of the old channel. Minimal flow entering the original creek channel between Conception Street Road and Martin Luther King Avenue has altered the aquatic community found in and adjacent to the stream. Minimal flows have reduced water

quality in the original stream of Three Mile Creek. The original creek channel currently has minimal to no water flow directed into it.

During the 2009 program year, MBNEP will continue to monitor activities with the City of Mobile, the USACOE, Mobile Area Water and Sewer Service (MAWSS), and others regarding the development of a project to examine feasibility of restoring natural flow in an old streambed and creating a greenway along other portions of Three Mile Creek. TMDLs have already been developed by ADEM for Three Mile Creek.

Project Objectives: Restore a portion of an altered channel back to its natural state.

HM-B2.3 D'Olive Bay Stream Restoration- Continuing

Performing Organization	MBNEP/Contractor
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$ 25,000
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$ 25,000
Match	\$
Leverage	\$ ADCNR/GSA project dollars
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	
Related Priority Issue(s)	Living Resources, Human Uses
MBNEP Coordinator	Director/Deputy Director

D'Olive Bay has served as the "poster child" for the impacts of increased storm water run-off and sediment loading in coastal Alabama since the mid-1970s. Accelerated erosion within the watersheds of D'Olive and Tiawassee Creeks in Daphne and Spanish Fort has contributed to this problem. Negative environmental impacts resulting from the development of one of Alabama's largest subdivisions (Lake Forest) have stimulated CCMP actions to address them. The CCMP prescribes a comprehensive biological, hydrologic, and engineering study of D'Olive Bay that would be used to develop a stepwise strategy for returning the area to a more natural hydrologic condition.

MBNEP will continue to provide leadership and resources to the D'Olive Bay/Lake Forest sub-watershed Task Group. This group now includes the NRCS, ADCNR, Baldwin County, City of Daphne, City of Spanish Fort, ADEM, the U. S. Fish & Wildlife Service (F&WS), USACOE, members of the Baldwin legislative delegation, Lake Forest Property Owners Association, MBNEP, CACWP, and others. We will support technically and financially (as funds become available) the continued systematic approach to addressing erosion and sedimentation issues associated with three contributing streams as well as the current partially-filled condition of Lake Forest. Systematically addressing this larger regional problem will help us address sediment loadings into a portion of the upper Mobile Bay and may serve as an exportable model for other communities to use in addressing similar local problems.

The GSA conducted long-needed watershed assessment and streambed analyses, monitoring 13 sites for bedload and suspended load in the watersheds of D'Olive and Tiawassee Creeks and Yancey Branch. Early results are identifying areas that may be candidates for stream restoration using Rosgen stability curves and methodologies.

During the 2009 program year, MBNEP will work with project partners to continue community involvement and effort to: reduce upstream sediment inputs into the Lake Forest/D'Olive/Tiawasse system, remediate and restore past effects of these sediment loads, reduce outgoing sediment loads into D'Olive Bay and the Mobile Bay Estuary, and mitigate future impacts of development in the watersheds where feasible. Specifically, during this program year, a conceptual management plan for the reduction of sediment inputs will be prepared.

Project Objectives: Raise funds to an amount of up to \$60,000 to support a conceptual plan; develop request for proposals; and implement project to develop conceptual plan.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HU-B3	Improved Control of Erosion and Sedimentation	*New road construction *Shoreline modification/hardening *turbidity *light attenuation *Sediment loads	Reduction of non-point source pollution	ongoing

HU-C1.2 MAWSS Source Water Protection/Recreational Access Impacts- Cancelled

Performing Organization	MBNEP, TPL
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$5,000 (add. \$5,000 reprogrammed)
FY 08 NEP Funding (12)	\$20,000
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$25,000
Match	Match
Leverage	\$
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$10,000 ADCNR; \$6,000 Auburn, \$4,000 DISL
Related Priority Issue(s)	Living Resources, Habitat Management
MBNEP Coordinator	Director/Deputy Director

J.B. Converse Lake, referred to as Big Creek Lake, is a 3,600 acre, man-made reservoir in western Mobile County that is used as a source of drinking water for the city of Mobile while providing recreational fishing for residents of the area. The surrounding watershed of the lake is predominantly rural; however, residential and commercial development is anticipated to increase as a result of the construction of new roads and the establishment of a large tourist attraction to the northeast. Although the Big Creek Lake watershed was identified as a target area by the MBNEP Project Implementation Committee, there are no plans at the current time to undertake any projects in this area.

During the 2009 program year, MBNEP will work to develop a stronger working relationship with the Alabama Department of Transportation as it expands Route 98, in an effort to improve activities that could negatively impact the area.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
HU-C1	Increase Public Access and Eco-Tourism Opportunities	*Number of types of development permits *Population Growth/Changes *Functional wetland protected, restored or created ****(#'s of people using access points-not identified in workshop)	Increase in the importance of protecting the Estuary and its environment	ongoing

HU-C1.2 Improving Public Access Opportunities- Continuing

Performing Organization	MBNEP, ADCNR
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$10,000 (\$10,000 reprogrammed)
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$10,000
Match	\$
Leverage	\$26,450 (ANEP-CRP Grant)
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$10,000 ADCNR; \$6,000 Auburn, \$4,000 DISL
Related Priority Issue(s)	Living Resources, Habitat Management
MBNEP Coordinator	Director/Deputy Director

This funding will be provided for the development of public access opportunities including boat launches, native planting, and recreational park development in Mobile County. Three different sites will be further evaluated for improvements, and at least one site will be improved. These sites include: Heron Bay Cutoff, Bay Front Park, both located in south Mobile County, and Luscher Park, located in the City of Mobile. Additional public access feasibility is planned for Baldwin County sites. During the 2008 program year, improvements at Heron Bay Cutoff were put on hold pending approval of the State's CIAP plan.

During the 2009 program year, Luscher/Dog River Park will be improved including shoreline stabilization and wetland planting.

Project Objectives: Secure external funding; assess shoreline stabilization options; conduct project to secure southern portion of shoreline; and conduct wetland planting

HU-C1.2 Improving Public Access Opportunities- Satsuma

Performing Organization	MBNEP, ADCNR
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$10,000
Total Current Plan Funds	\$10,000
Match	\$ 10,000
Leverage	\$
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources, Habitat Management
MBNEP Coordinator	Director/Deputy Director

The City of Satsuma is located just south of the intersection of I-65 and Hwy. 43 in Mobile County, at Latitude 30.85 & Longitude -88.06.

During the 2009 program year, MBNEP will partner with the City of Satsuma to make renovations and improvements at Steele Creek Park by assisting the city with stabilizing the shoreline at this access point. The park currently provides public access to Steele Creek, a tributary of the Mobile-Tensaw Delta. This project will consist of shoreline stabilization and improvements to stormwater drainage.

Project Objectives: Work with City of Satsuma to conduct shoreline stabilization and investigate opportunities for living shoreline activities

HU-C1.2 Interpretive Signage to Support the Scenic By-Way (NEW)

Performing Organization	Wolf Bay Watershed Watch, GCVB
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$51,000
Total Current Plan Funds	\$51,000
Match	\$55,000 (land value, other in-kind)
Leverage	\$
NEP Prior Year Funds	\$
Prior Year Match	\$
Prior Year Leverage	\$
Related Priority Issue(s)	Living Resources, Habitat Management
MBNEP Coordinator	Director/Deputy Director

Ecotourism is key to expanding stewardship of our coastal resources. To expand ecotourism opportunities, the Alabama Gulf Coast Convention and Visitors Bureau is working to establish a coastal connection scenic byway that would promote and educate visitors and residents about the waters, ways, and wildlife of Alabama's Gulf Coast. While the intrinsic qualities and attractions along the byway are

varied, the creation of a scenic byway will bring these varied resources together to create a sense of place, a destination, where coastal Alabama's natural, historic and recreational assets are all a part of an enjoyable and educational experience for visitors and where the spirit and importance of coastal stewardship are encouraged.

To market Alabama's scenic byway and create a sense of destination, the byway will have coordinated interpretive signage installed at key points that will visually and conceptually present the byway as an entity to travelers and identify and promote its natural attractions and intrinsic qualities. Key areas along the more than 100 miles of Alabama's Coastal Connection scenic byway will be marked. These signs, along with additional marketing materials, will be the critical foundation on which byway partners can begin consistent promotion of the byway through their own marketing programs, leveraging all efforts.

The signs will offer descriptive and interpretive information describing the surroundings and the environmental and cultural heritage of the area. The signage will also help clearly mark the route, guiding travelers along the byway and promoting it as a destination in itself.

During the 2009 program year, MBNEP will work with the Cities of Orange Beach, Foley, and Elberta; the Alabama Gulf Coast Convention Visitors Bureau; and the Wolf Bay Watershed Watch to create a coordinated design template for the interpretive signage so that signage across both coastal counties is integrated.

Project Objectives: Design signage template; construct and install signs (proposed locations for the signs include: Bayou La Batre waterfront; Coden/Mon Luis Island; Dauphin Island Ferry landing and Estuarium; Fort Morgan Ferry Landing and birding area; Bon Secour National Wildlife Refuge; Gulf State Park; Perdido Pass; Orange Beach Waterfront park; Orange Beach Canoe Trail; Foley Eco-Park; Elberta Parks; Wolf Bay locations; Weeks bay NERR/Mouth of Fish River; Gator Alley/Eastern Shore Trail; and the Fairhope Pier).

IV. Education and Public Involvement

Increase awareness of natural resource issues and promote understanding and participation in conservation and stewardship activities.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
EPI-A1	Enhance Public Education and Outreach	*# of k-12 teachers who have implemented curriculum units based on completed environmental training *# of adults volunteering for environmental activities/monitoring *# of professionals who have implemented concepts based on environmental training *# of k-12 students who have participated in long term environmental projects at school that pursue advanced environmental education or jobs *# of Environmental Organizations *# of Environmental Activities	Increase knowledge and importance of estuary	ongoing

EPI-A1.1 Alabama Coastal Clean Oceans Initiative (NEW)

Performing Organization	Southeastern Wildlife Conservation Group
Project Lead	ADCNR/MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$5,814
Total Current Plan Funds	\$5,814
Match	\$ 5,814
Leverage	
NEP Prior Year Funds	
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	Science Communicator

In 1997, 6.4 million tons of garbage were estimated to reach the marine environment every year. A United Nations Environment Program Study reported estimates of 46, 000 pieces of plastic litter floating per square mile of ocean (UNEP 2006). Additionally, according to other studies, approximately 136,000 metric tons of plastic lines and nets are lost annually by commercial fishermen; 3,000 miles of commercial fish netting are lost annually; and 5 million plastic containers are tossed overboard from ocean-going vessels every day. These quantities do not include plastics and other pollution entering into the marine ecosystem from the general public from our beaches, rivers, streams or items thrown from cars and making it into storm sewer drains. These pollutants eventually make it into the marine ecosystem.

Plastics and other pollutants can affect marine wildlife in two important ways: by entangling creatures and by being eaten.

During the 2009 program year, MBNEP will partner with ADCNR and the Southeastern Wildlife Conservation Group to improve the overall health of Alabama’s coastal waterways, reduce wildlife deaths, get the community involved in coastal clean-ups, and educate youth about coastal conservation through a program to promote pollution prevention and pollution removal.

Project Objectives: Install monofilament recycling containers at public access points throughout coastal Alabama and conduct targeted coastal clean ups

EPI-A1.1 Waters to the Sea: Rivers of Alabama and Georgia (NEW)

Performing Organization	Alabama Clean Water Partnership
Project Lead	Alabama Clean Water Partnership
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$10,000
Total Current Plan Funds	\$10,000
Match	\$10,000 (in-kind)
Leverage	\$393,000 (private donors)
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	Business Manager

As the demand on southeastern water resources grows, and the fresh water supply is increasingly affected by both drought and non-point source pollution, it is imperative that Alabama and Georgia citizenry, both youth and adult, alike, be armed with the appropriate knowledge on which to base future decisions affecting both water quality and quantity. *Waters to the Sea: Rivers of Alabama and Georgia* will be the newest addition to the internationally acclaimed, Waters to the Sea CD ROM series - the definitive watershed education tool for inspiring informed river and coastal stewardship in the next generation.

Waters to the Sea: Rivers of Alabama and Georgia will provide the region’s youth, teachers, and their families, as well as members of the general public, with a comprehensive watershed education resource that combines cutting-edge interactive multimedia with hands-on classroom and field-based learning and stewardship activities linked to science and social studies standards. This program targets children in grades four through eight.

During the 2009 program year, MBNEP will partner with the Alabama Clean Water Partnership to produce *Waters to the Sea: Rivers of Alabama and Georgia*.

Project Objectives: Instill appreciation of importance of the region’s waterways and resources; introduce watershed-based landscape perspective and understanding of the fundamental relationship between historical and current land-use and water quality within the region; motivate students to become active stewards; and contribute to core learning in areas of social studies, science, language arts and math.

EPI-A1.2 Indicators/Status of the Bay Report- Continuing

Performing Organization	TBD
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$15,000
FY 08 NEP Funding (12)	\$7,710
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$22,710
Match	
Leverage	\$ 2,500
NEP Prior Year Funds	\$ 15,881
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	Deputy Director

From time to time, MBNEP produces reports for the public to provide the community with information related to the health of the estuary. In 2005, MBNEP held an Indicators workshop to identify types of data that would, when analyzed, communicate whether our estuary was healthy or suffering. The workshop produced a list of 51 indicators of estuary health. During the next two years, MBNEP staff has conducted research on these and gathered data currently being collected regarding these 51 indicators from various state and local agencies. Although a significant amount of information has been amassed, there are still many gaps. To assist in making determinations about “status” based on this information, MBNEP has engaged the Science Advisory Committee of the Management Conference to take on the indicators project.

During the 2009 program year, MBNEP in partnership with the Science Advisory Committee will produce a Status of the Bay Report, that uses indicators as a basis for determining estuary health.

Project Objectives: Produce indicator report/publication.

EPI-A1.2 Government Networks Outreach Support- Continuing

Performing Organization	MBNEP
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$5,000
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$5,000
Match	
Leverage	\$750 Private Support
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	

Under its new management structure, MBNEP is establishing a Government Networks Committee that will bring high level state agency officials together with local officials to better communicate local needs/state priorities. This committee will be made up of County Commissioners, Mayors, and State Agency directors. This group would engage in the following:

- Discussions of how federal and state agencies can work with local governments to cooperatively address local issues (i.e., storm water management, public access, environmentally appropriate affordable housing, habitat protection, etc.).
- Education of local officials/other federal/state agencies about how each agency works or what the main issues are at the local level (opportunities for federal and state agencies to present what they do to the group; opportunities for local communities to discuss major issues with state agencies and other communities).
- Engagement in constructive dialogue on ways to partner state agencies with local governments or local governments with other local governments to affect positive results.
- Cooperative identification of tasks/role for MBNEP in addressing issues or galvanizing action.

This group will meet alternately in Mobile and Montgomery to ensure the highest attendance. MBNEP will cover costs associated with travel and boarding.

Project Objectives: To bring local officials together with high level state agency personnel to educate about coastal issues and challenges.

EPI-A1.3 Community Activities and Events/Stewardship Awards- Continuing

Performing Organization	MBNEP
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$11,500
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$ 1,500
Total Current Plan Funds	\$13,000
Match	
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	Business Manager

Participation in trade shows and festivals provides regular exposure for the MBNEP and can serve as an additional outlet for distribution of CCMP-related materials. It is also necessary to support other agencies and organizations that perform CCMP related events. Prior support and participation has included Hazardous Waste Amnesty Days, Coastal Kid’s Quiz, children’s fishing events, and Earth Day.

Project Objectives: Participate in and/or support area environmental events.

Events that will be supported during 2008-2009 will include but not be limited to:

Alabama Coastal Birdfest	2,000.00
Dog River Dog Paddle	500.00
ACF Coastal Kids Quiz	500.00
Grasses in Classes	250.00
Stewardship Awards	1,500.00
Coastal Clean Up	1,000.00
Groundwater Festival	1,000.00
Derelict Crab Trap Removal	550.00

EPI-A1.3 Outreach Materials-- Continuing

Performing Organization	MBNEP
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$10,000 (corrected 8/2007)
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$10,000
Match	
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	Business Manager

This fund is being established to work with community groups and educational agencies to develop curriculum units and other continuing education programs that address the water quality, living resource, human use, and habitat management issues and priorities of the CCMP.

Project Objectives: Educate the community about the issues of the CCMP in a coordinated manner and institutionalize the education of environmental issues related to our local area into the school system and other avenues of public education.

EPI-A1.3 Grasses in Classes- Continuing

Performing Organization	
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$
Match	
Leverage	\$25,000 (USFWS Grant)
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	CACWP

The Baldwin County Grasses in Classes (BCGIC) program was started in January 2005 to facilitate the establishment and maintenance of nurseries by Baldwin County school students to grow native plants for submerged, wetland and dune restoration projects. Funding from the Gulf of Mexico Community-based Restoration Partnership allowed the program to expand by providing training for interested teachers and by establishing nurseries at their high schools.

The BCGIC program provides a volunteer base for implementation of restoration projects and promotes

student involvement in community-based restoration activities. With guidance from teachers and experts, the students maintain and monitor the nursery at their school. Students also assist local scientists with monitoring the restoration sites during the school year whenever possible.

In 2006, the BCGIC projects included a dune planting at the Bon Secour Wildlife Refuge (*Panicum amarum*, *Spartina patens* and *Uniola paniculata* were planted by student volunteers on Refuge property); an invasive species removal at the Weeks Bay Reserve (*Phragmites* were removed along Weeks Bay and replaced with *Spartina alterniflora* and *Juncus roemerianus*); and an emergent wetland plants restoration at Barner Branch (*Vallisneria americana* and other emergent wetland plants were planted).

The BCGIC program promotes individual stewardship and understanding of coastal ecosystems by providing students with meaningful, hands-on activities designed to teach investigative and problem-solving skills. In recent years coastal habitats in Alabama have been damaged due to storms and/or infestation of invasive exotic plant species. In response to this damage many Federal, state, county and city restoration projects have been planned. By raising native plants to maturity and keeping half of the stock for future propagation, the BCGIC program will help defray the costs of restoration projects by providing an inexpensive source of plants as well as a volunteer base to assist with the implementation.

Based on the successful program in Baldwin County, MBNEP has partnered with the Mobile County Environmental Studies Center in 2006 to expand the Grasses to Classes program to the western shore of Mobile Bay. There are four Mobile County Public High Schools participating: Baker and Satsuma are growing smooth cordgrass (*Spartina alterniflora*) and black needlerush (*Juncus roemerianus*) and Murphy is growing panic grass (*Panicum amarum*), morning glory (*Ipomoea pes-caprae*) and sea oats (*Uniola paniculata*). Alma Bryant has begun cultivation of dune plants and intends to complete construction of a nursery for emergent vegetation.

Partners for the Mobile County *Grasses in Classes* Program include the Environmental Studies Center, F&WS, DISL, Weeks Bay NERR, ACF, ACDNR-State Lands Division, and Mobile County Parks.

Project Objectives: Promote individual stewardship and understanding of coastal ecosystems through community-based restoration activities; facilitate the establishment and maintenance of native plant nurseries by Mobile County school students; provide students with meaningful, hands-on activities which will provide investigative and problem solving experience; and provide federal, state, and local agencies with plants and a volunteer base for implementation of restoration projects

EPI-A1.3 Quarterly Newsletter Publication- Continuing

Performing Organization	MBNEP
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$
Match	
Leverage	\$6,000 (ADCNR grant)
NEP Prior Year Funds	\$
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	Science Communicator

On a quarterly basis, the MBNEP publishes a newsletter in partnership with the ADCNR. This newsletter is distributed to over 2,400 residents and visitors to the area.

During the 2009 program year, MBNEP will continue to publish this and will look for new ways of distributing it via e-mail or internet.

CCMP	SUB OBJECTIVE	INDICATORS	OUTCOMES	STATUS
EPI-B1	Develop Comprehensive Citizen Monitoring and Reporting Programs	*# of volunteer monitors *# of reports	Increase the # of citizens that are actively engaged in sustaining the estuary	

EPI-B1.1 Community Involvement: CAC Mini Grants

Performing Organization	MBNEP
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$
FY 08 NEP Funding (12)	\$21,700
FY 09 NEP Funding (13)	\$
Total Current Plan Funds	\$21,700
Match	
Leverage	
NEP Prior Year Funds	
Prior Year Match	
Prior Year Leverage	
Related Priority Issue(s)	All
MBNEP Coordinator	Outreach and Education Coordinator

Citizen volunteers are becoming increasingly involved in monitoring the quality of the waters of coastal Alabama. From a simple "creek walk" to sophisticated analyses, they evaluate water quality for a host of reasons. For some, it is because they live next to a stream and feel closely affected by it. For others, the monitoring of a stream provides a vital, practical, educational experience. Some groups use monitoring to raise awareness in the community about water quality and how it is influenced by activities and land uses within the watershed.

One of the first activities undertaken by a re-organized Community Action Committee (CAC) in early 2007 was a needs assessment to determine commonalities among its members. The top three areas of common need identified in this assessment were concern about water quality, improved communication, and assistance with organizational development. Of these three, the group has decided to address water quality issues throughout the two counties by establishing a coordinated, tiered, water monitoring program that can be implemented by grassroots organization volunteers and other citizens. A review of the activities of each of these groups indicates that over half already conduct volunteer water monitoring. However, they have been frustrated by a lack of knowledge or direction of methodology to take that monitoring to "the next level". Other groups have yet to start testing but are very interested in establishing a volunteer water monitoring program in their area.

During the 2008 program year, MBNEP will facilitate the creation of a comprehensive water monitoring program for the CAC. Partners will include Alabama Water Watch, ADEM, CACWP, and possibly others. The program concept includes the "beginner" groups being trained and learning from those groups already engaged in water monitoring activities. More experienced groups will identify causes and effects of impairments along with potential corrective actions.

The *purpose* of this project is to educate citizens about the water quality issues related to their local watersheds, who will, in the process, become better environmental stewards. The *expected outcome* is the adoption, use, and promotion of environmentally sensitive practices by citizens to protect their local waters.

The goal of this effort is to increase citizen involvement in hands-on monitoring of local waters as a mechanism for better identification of trends and causes and effects of water quality improvements or degradation.

The *objectives* of this project are to: 1) gather data on a regular basis from targeted sampling sites on water quality parameters including temperature, dissolved oxygen, salinity, nutrients, and bacterial pathogens; 2) establish baseline data and/or reveal trends for local water bodies; 3) provide ongoing information through meetings, training, publications, and web sites; and 4) identify and undertake mitigation efforts to correct negative impacts. The *educational priorities* are to build the capacity of these community organizations to lead water monitoring efforts in their local area and to connect citizens to and educate them about the water resources.

Program Management

The MBNEP Program Office works closely with all of the MBNEP Management Conference members on initiatives relating to the CCMP. The Management and Program Administration (MPA) budget will provide resources for the Program Office to continue program planning, development, implementation, evaluation, and reporting. Staff will provide organizational and logistical support for all of the Management Conference committee meetings and coordinate/communicate 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.

MPA Overall Administration/Travel

Performing Organization	MBNEP
Project Lead	MBNEP
FY 07 NEP Funding (11)	\$462,908
FY 08 NEP Funding (12)	\$527,274
FY 09 NEP Funding (13)	\$612,736
Total Current Plan Funds	\$1,602,917
Match	\$ un-recovered indirect from DISL
Leverage	
NEP Prior Year Funds	\$
Prior Year Match	in-kind value of truck DISL
Prior Year Leverage	\$
Related Priority Issue(s)	All
MBNEP Coordinator	Director

This amount includes all the necessary items for program administration including salaries, benefits, rent, supplies, equipment, phone, internet services etc.

In addition, this amount includes \$13,000/year that is specified for traveling regionally and nationally. Program staff will participate in regional, state, and national conferences and meetings relevant to estuarine management. EPA requires through an earmark \$13,000 of program funds for travel related to outreach and technology and information transfer. Attendance at Association of National Estuary Programs workshops and EPA workshops/meetings will be stressed.

Indirect Cost is charged at a rate of 15% on all cash input (grant and matching funds) to the MBNEP by DISL. 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-cases basis.

Indirect costs charged by our host institution to administer the grant are included (\$ 304,857 which equals 15% of our total projected cash resources of \$ 2,410,746.)

Staff Position	Employee	Responsibilities	Main Activities
Program Director	David W. Yeager	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.
Deputy Director	Roberta Arena Swann	Conducts activities to identify, design and develop projects that further the implementation of the CCMP	Executes strategic and organizational planning for program; conducts project design, development and implementation; assists with financial resource development and management; oversees CCMP indicator program; prepares EPA plans and reports; prepares contracts with local entities; and other activities as deemed necessary
Science Communicator	Thomas Herder	Communicates scientific data to public and conducts education activities	Translates scientific information for public media; manages program website; assists with volunteer monitoring programs; develops special educational programs that provide for technology transfer; and other activities as deemed necessary
Project Coordinator		Develops and coordinates volunteer involvement programs	Coordinates oyster gardening, crab watch volunteer programs, and Clean Water Partnership Program; other activities as deemed necessary
Business Manager	Tiffany England	Overall business and office management	Maintains budget, project files, financial record keeping, grant reporting; coordinates logistics and promotional materials for educational outreach and special events